

# BENJAMIN S. HSIAO

## CURRENT POSITION

Distinguished Professor, Stony Brook University  
Co-founding Director, Innovative Global Energy Solutions Center, Stony Brook University  
(www.igesc.org)  
Director, Center for Integrated Electric Energy Systems, Stony Brook University  
(www.sbuciees.org)

## EDUCATION

1987 Ph.D., Institute of Materials Science, University of Connecticut  
(Thesis Advisors: E. T. Samulski – Chemistry; M. T. Shaw – Chemical Engineering)  
1984 M.S., Institute of Materials Science, University of Connecticut  
1980 B.S., Chemical Engineering, National Taiwan University

## EMPLOYMENT HISTORY

2015- SUNY Distinguished Professor, Department of Chemistry, Stony Brook University  
2015- Director, Center for Integrated Electric Energy Systems, Stony Brook University  
2014- Co-founding Director, Innovative Global Energy Solutions Center, Stony Brook University  
2012-2013 Vice President for Research and Chief Research Officer (1.5 years), Stony Brook University  
2007-2012 Chair, Department of Chemistry, Stony Brook University  
2002- Professor, Department of Chemistry, Stony Brook University  
1998-2002 Associate Professor, Department of Chemistry, Stony Brook University  
1997-1998 Assistant Professor, Department of Chemistry, Stony Brook University  
1993-1997 Senior Staff Scientist, Materials Science and Engineering, Central Research & Development  
Department, DuPont Company  
1989-1993 Staff Scientist, Pioneering Laboratory, Fibers Department, DuPont Company  
1987-1989 Post-Doctoral Research Fellow, Departments of Chemistry and of Polymer Science &  
Engineering, University of Massachusetts (Advisors: R. S. Stein – Chemistry and H. H. Winter –  
Chemical Engineering)

## OTHER APPOINTMENTS

### *Academic Appointments*

2017- Affiliated Faculty, Department of Civil Engineering, Stony Brook University  
2015- Honorary Professor, Australian Institute for Bioengineering and Nanotechnology, The University  
of Queensland  
2015- Affiliated Faculty, Department of Technology and Society, Stony Brook University  
2014- Affiliated Faculty, Department of Materials Science and Engineering, Stony Brook University  
2008- Chang-Jiang Professor, Donghua University, Shanghai, China  
2009- Visiting Professor, Beijing University of Chemical Technology, Beijing, China  
2009- Consulting Professor, Tongji University, Shanghai, China  
1998- Guest Professor, Changchun Institute of Applied Chem, Chinese Academic of Sciences, China  
2000- Affiliated Faculty, Department of Biomedical Engineering, Stony Brook University  
2009-2011 Founding Member of the Stony Brook Southampton Affiliate Faculty, Stony Brook University  
1994-2000 Adjunct Associate Professor, Department of Materials Science and Engineering, University of  
Delaware

### *Photon Sciences*

2011-2012 Co-Director (together with John Parise), Joint Photon Sciences Institute between Brookhaven  
National Laboratory and Stony Brook University  
1997-2012 Spokesperson, Advanced Polymers PRT Beamline (X27C, Co-Spokesperson: Ben Chu), National  
Synchrotron Light Source (NSLS), Brookhaven National Laboratory (BNL)  
2002-2004 Spokesperson, SUNY SAXS Beamline (X3A2), NSLS, BNL  
1994-1997 Project Leader, Polymer Synchrotron Research Team; Member and Alternative Member of the  
Management Board, DND-CAT (DuPont-Northwestern-Dow Collaborative Access Team),  
Advanced Photon Source, Argonne National Laboratory

### *Entrepreneurial Activities*

2020-	Co-founder of Precision Technology Botswana, Inc. ( <a href="http://www.precisiontechnologybotswana.com/">http://www.precisiontechnologybotswana.com/</a> , based on electrospun nanofiber technology for water and air applications)
2019-	Co-founder of SWF Technology, Inc. (based on nanocellulose technology for water applications)
2017-2021	Co-founder of Sustainable Off-grid Solutions for African Economic Development ( <a href="http://www.sosaed.org/">http://www.sosaed.org/</a> )
2011-2021	Co-founder of Jieshengyuan Tech Inc. Lt. Shanghai, China ( <a href="http://www.jiesheng.cc">www.jiesheng.cc</a> , based on SBU nanofiber technology for ultrafiltration, nanofiltration and desalination applications)
2010-2021	Co-founder of Liquidity Nanotechnology, LLC ( <a href="http://www.liquico.com">www.liquico.com</a> , based on SBU nanofiber microfiltration technology for drinking water purification), the winner of the "Next Generation Technology" award in Launch: Silicon Valley 2014 - World Cup Tech Challenge; the winner of the TechCrunch Disrupt NY 2015 Startup Battlefield.
2007- 2015	Co-founder of Wuxi Zhongkeguangyuan Biomaterials CO., LTD, China (based on SBU nanofiber technology for biomedical applications), antiadhesion membranes received the Registration Certificate for Medical Device from FDA of China.
2010-2012	Co-founder of Stony Brook Technology Group, LLC (a technical consulting company on nanofiber technology)
2010-2012	Co-founder of Whirl and Associates, Inc. (a technical consulting company on ink formulation)
2007-2010	Co-founder of Stonybrook Purification, Inc.
1999-2010	Co-founder of Stonybrook Technology and Applied Research (STAR), Inc.

### **HONORS AND AWARDS**

1. University of Connecticut Doctoral Fellowship, 1985
2. SPE/ANTEC Best Technical Papers, 1994 (two), 2002 (one)
3. DuPont Young Professor Award, 1998 – 2001
4. Mentor Awards, Research Institute at Stony Brook, 2000
5. Overseas Visiting Scholarship, National Science Council, Republic of China (Taiwan), 2002, 2006
6. Fellow, American Physical Society, 2002
7. Fellow, American Chemical Society, 2011
8. Fellow, American Association for the Advancement of Science (AAAS), 2011; citation reads “for his distinguished contributions to the fields of polymer sciences and water purification, as well as to chemical research and education at Stony Brook University.”
9. Journal of Controlled Release, Most Cited Paper 2004 Award; “Incorporation and Controlled Release of Hydrophilic Antibiotics Using Poly(lactide-co-glycolide) Based Electrospun Nanofibrous Membranes”, J. Controlled Release, 98(1) 47-56 (2004)
10. Licensed Innovation Award, Research Foundation of State University of New York, 2005
11. Special Creativity Award, Division of Materials Research, National Science Foundation, 2007
12. Chang-Jiang Professor Scholarship (in Donghua University, Shanghai), Education Ministry of China, 2008
13. Applied Chemistry Lecture Series, Key Laboratory of Polymer Ecomaterials, Chinese Academy of Sciences, 2010
14. ACS recognition for "service on the ACS PRF Research Fund Advisory Board, 2006-2012", 2013
15. Patent of the Year Award, Long Island Technology Hall of Fame, 2013
16. Molecular Science Frontier Lecture Professorship, Institute of Chemistry, Chinese Academy of Sciences, 2013
17. Fellow, National Academy of Inventors, 2013
18. “Dr R A Mashelkar Endowment Lecture on Advanced Materials” at the Council of Scientific and Industrial Research (CSIR) - National Chemical Laboratory (NCL), India, 2014
19. Distinguished Professional Achievement Award, Chinese American Academic and Professional Society (CAAPS), 2014
20. Tianfu Forum for Polymer Lecture Series, State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute and College of Polymer Science & Engineering, Sichuan University, 2014
21. Fellow, Materials Research Society, 2015
22. Co-operative Research Award (shared with Andy Tsou, ExxonMobil Chemical), American Chemical Society, Division of Polymeric Materials: Science and Engineering, 2015
23. Distinguished Professor of State University of New York, Stony Brook University, 2015

24. Honorary Professor, Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, 2015
25. Invention Ambassador, AAAS-Lemelson Foundation, 2016
26. Elected Member, Academy of Distinguished Engineers, University of Connecticut, 2019
27. The Prince Sultan bin Abdulaziz International Prize for Water (PSIPW) - The Creativity Prize., 2020
28. Fellow, International Association of Advanced Materials (IAAM), 2021
29. Honorary Chair Professor in Yuan Ze University, Taoyuan City, Taiwan, 2022
30. Research.com Materials Science in United States Leader Award, 2023
31. Distinguished Alumni, Polymer Program, Institute of Materials Science, The University of Connecticut, 2024

## **SYNERGISTIC ACTIVITIES**

1. Sigma Xi, since 1985
2. Phi Kappa Phi, since 1985
3. Editor-in-Chief of the "Membrane Engineering and Applications" section in Membranes, 2019-2023
4. Editor-in-Chief of the " Membrane Applications for Water Treatments" section in Membranes, since 2023
5. Executive Editorial Board Member, Sustainability Science and Technology, IOP Publishing, since 2023
6. Member of Editorial Board for Membranes, since 2011
7. Member of Editorial Advisory Board for Macromolecules, 2010-2013
8. Member of Editorial Advisory Board for ACS Macro Letters, since 2012
9. Member of Editorial Advisory Board for Polymer, since 2003
10. Member of Editorial Advisory Board for J. Macromol. Sci. – Phys., since 1995
11. Member of Editorial Advisory Board for J. Polymer Research, since 1996
12. Member of Executive Editorial Board for High Performance Polymers, since 1996
13. Member of Editorial Advisory Board for Chinese Journal Applied Chemistry (Yingyong Huaxue), since 2001
14. Member of Editorial Board for Chinese Polymer Bulletin (China), since 2016
15. Guest Editor for J. Macromol. Sci. – Physics, B37(4), 1998
16. Guest Editor for J. Applied Crystallography, 33(3), 2000
17. Guest Editor for Journal of Materials Chemistry, a special issue on “Material for Water Treatment”, 2010
18. Guest Editor for Membrane, a special issue on “Membranes for Health and Environmental Applications”, 2011
19. Guest Editor for a special cross issue of Frontiers in Chemistry and Frontiers in Chemical Engineering on “Cellulose Functionalized Fibers for Water Remediation”, 2021
20. Member, Ad-hoc Advisory Panel for Polymer Program, Division of Materials Research, National Science Foundation, 1997
21. Member, (Polymer) Career Award Panel, National Science Foundation, 1997, 2000
22. Member, IMR/MRI Panel, National Science Foundation, 2000
23. Member, NIRT Panel, National Science Foundation, 2004
24. Chair, Small-Angle Scattering Special Interest Group, American Crystallography Association, 1998
25. Guest Professor, Changchun Institute of Applied Chemistry, Chinese Academic of Sciences, 1998
26. Visiting Professor, Beijing University of Chemical Technology, Beijing, China, 2009
27. Consulting Professor, Tongji University, Shanghai, China, 2009
28. Discussion Leader, Gordon Research Conference, Polymer Physics, New London, 2000
29. Member, Proposal Study Panel, National Synchrotron Light Source, Brookhaven National Laboratory, 1998, 2000-2006; Chair, Proposal Review Panel, X-Ray Scattering: Soft Matter/Biomaterials, 2008-2012
30. Member, CHESS Synchrotron Facility, Cornell University, Proposal Review Panel, 2006-2012
31. Member, Committee for National Synchrotron Light Source II, Brookhaven National Laboratory, since 2005
32. Member, Advisory Board for the Center for Science and Mathematics Education, Stony Brook University, 2007-2012
33. Director, Innovation and Talents Introduction Base of Advanced Manufacture Technology and Science for Fiber Materials (111 Project), Donghua University, Shanghai, China, 2008-present
34. Member, Advisory Board, American Chemical Society, Petroleum Research Fund, 2007-2012
35. Member, Emerging Information and Technology Conference (EITC) Advisory Board, 2007-2011
36. Member, BSA Board of Directors of Science and Technology Steering Committee (STSC), Brookhaven National Laboratory (BNL), 2010-2012
37. Member, Globalization Committee, Stony Brook University, 2010-2014
38. Member, Beamline Advisory Team (BAT) for the Soft Matter Interfaces Beamline, NSLS-II, 2010-2012

39. Member, Internal Advisory Board for the Stony Brook University Cancer Center, Stony Brook University, 2012-2014
40. Member, Board of Directors, Long Island High Tech Incubator (LIHTI), 2012-2014
41. Member, Advisory Board, the Confucius Institute of Stony Brook University, 2013-2014
42. Member, International Advisory Board, University Excellence Care Project (UECP), Singapore, a non-profit, global effort to strengthen scientific research, teaching and development of individuals and universities, 2014-2015
43. Member, Academic Committee of International Joint Laboratory for Advanced Fiber and Low-Dimension Materials, Donghua University, Shanghai, China, 2016-present
44. Member, Scientific and Technical Advisory Panel (STAP), ForMAX beamline, MAX IV Laboratory, Sweden, 2017-2023
45. Member, International Advisory Committee of State Key Laboratory for Modification of Chemical Fibers and Polymer Materials (SKLFMP), Donghua University, Shanghai, China, 2019-present
46. Member, SUNY Senior Vice Chancellor's Scientific Advisory Panel, State University of New York System, 2019-present
47. Member, International Advisory Board, Institute on Water Technology and Management, Amity University Noida, India, 2019-2021

### **INDUSTRIAL CONSULTANTS**

Asahi Chemical (2005-2006), Bridgestone Rubber (2005-2007), Conoco (2001-2003), DuPont (1998-2002); Dow Chemical (1998-1999, 2002-2008), Ethicon Inc. - A Johnson and Johnson Company (1998-1999, 2005-2006), Eastman Chemicals (2003), ExxonMobil Chemicals (1999-present), Estee Lauder (2001), Hybrid Plastics (2000-2001), Invista (2005), Kimberly Clark (2001-2002), Kodak (2003), Milliken (2003), Pactiv Corp. (2006-2007), Roger Corporation (1999), Toray (2004-2006), Toyobo (2005-2007), Yokohama Rubber (2005-2007), Xerox (2007-2009), The Siam Cement Group (2015-2020)

### **ORGANIZATION ACTIVITIES FOR CONFERENCES**

1. American Chemical Society Meetings
  - Symposium on "Scattering from Polymers", PMSE Session (Boston) 1998, (Chicago) 2001, (Washington DC) 2005
  - Symposium on "High-Energy Characterization of Rubber Compounds and Nanocomposites", 167th Spring Technical Meeting of the Rubber Division (San Antonio) 2005
  - Symposium on "Advances in Water Purification" (San Francisco) 2010
  - Symposium on "New Advances in Nanostructured Polymeric Membranes for Filtration, Separation and Purification" (Boston) 2015
2. American Physical Society Meeting
  - Workshop on "X-ray and Neutron Scattering from Polymers" (Pittsburgh) 1994
  - Symposium on "Crystallization, Morphology and Scattering Techniques" (Kansas City) 1997
3. Denver X-ray Conference
  - Symposium on "New Horizons in Polymer Diffraction" (Steamboat, Colorado) 1997
  - Symposium on "Polymer Diffraction" (Steamboat, Colorado) 1998
  - Symposium on "In-situ Diffraction Techniques for Polymer Study" (Steamboat, Colorado) 1999
4. NSLS Users Meeting, Brookhaven National Laboratory
  - Workshop on "Polymer Scattering" 1996, 2000
  - Workshop on "Applications for X-Ray Microbeams and Parallel Detection in Soft Matter and Biomolecular Materials" 2006
  - Workshop on "Soft and Biomolecular Materials Strategic Planning" 2008
5. Society of Plastic Engineering ANTEC Meeting
  - Symposium on "Polymer Blends and Miscibility" (Detroit) 1992
6. Materials Research Society Meeting
  - Symposium on "Degradation Processes in Nanostructured Materials" (Boston) 2005
7. Polymer Processing Society Meeting
  - Technical Session: "Process Visualization and On-line Sensing" (Yamagata, Japan) 2006
  - Technical Session: "Process Monitoring, Control & Sensors" (Salerno, Italy) 2008
8. XI International Conferences on Small-Angle Scattering (SAS-99) in Brookhaven, 1999

9. Organizer for the Stony Brook Symposium of Complex Matter – in celebration of Ben Chu's 70<sup>th</sup> Birthday at Stony Brook University, December 13-14, 2001
10. International Advisory Committee member, International Symposia on Engineering Plastics, EP'2013, Xiamen, China, August 25-28, 2013
11. Conference Program Committee member, International Union of Materials Research Societies (IUMRS) - International Conference on advanced Materials (ICAM2013), Qingdao, China, September 22-28, 2013
12. International Advisory Broad member, Synchrotron Radiation in Polymer Science (SRPS) -V, San Francisco, US, March 30-April 2, 2012; Synchrotron Radiation in Polymer Science VI, Madrid, Spain, September 7-10, 2015

### PROFESSIONAL SOCIETIES

1. Society of Plastic Engineering (1983-1997, 2002-2005)
2. The North American Thermal Analysis Society (1985-1997)
3. American Institute of Chemical Engineering (1989-1997, 2007-)
4. American Chemical Society, Polymer Chemistry Divisions (since 1984), Polymer Materials Science and Engineering Division (since 1989), Rubber Division (2003-2006)
5. American Crystallographic Association (since 1991)
6. American Physical Society, High Polymer Physics Division (since 1985)
7. American Association for the Advancement of Science (since 1990)
8. Materials Research Society (since 1989)

### TOTAL RESEARCH FUNDING

*Research Funding raised at Stony Brook University*

PI over **29 million** research funding from federal agencies (DOD, DOE, NIH, NIST, NSF, USDA, NYS) since 1997

over **5 million** research funding from industry since 1997

Co-PI over **16 million** research funding from federal agencies (DOD, DOE, NIH, NIST, NSF, NYS) since 1997

over **4 million** research funding from industry since 1997

### PERSONAL

Date of Birth: August 12, 1958

U. S. Citizen (naturalized in Philadelphia, 1992)

### COLLABORATORS (Last Four Years)

Fang, Dufei (Stony Brook University)

Geng, Li Hong (South China University of Technology)

Grubbs, Robert B. (Stony Brook University)

He, Aihua (Qingdao University of Science and Technology)

Li, Yanxiang (Chinese Academy of Sciences)

Li, Liangbin (University of Science and Technology of China)

Lindstrom, Tom (KTH)

Liu, Yanping (Zhengzhou University)

Ma, Hongyang (Benjin University of Chemical Technology)

Mahajan, Devinder (Stony Brook University)

Martin, Darren (University of Queensland)

Mao, Xinwei (Stony Brook University)

Medellin-Rodriguez, Francisco

Poliks, Mark (Binghamton University)

Rungswang, Wonchalerm (SCG Chemical)

Reichmanis, Elsa (Lehigh University)

Soderberg, Daniel (KTH)

Stafford, Christopher M. (NIST)

Venkatesan, Arjun K. (Stony Brook University)

Wang, Xuefan (Donghua University)

Wang, Zongbao (Ningbo University)

Zhang, Yaopeng (Donghua University)  
Zhong, Chuan-Jian (Binghamton University)  
Zhu, Meifang (Donghua University)

#### **VISITING SCIENTISTS**

Dr. Jerold M. Schultz (1992-1993, University Delaware)  
Dr. Aurora Nogales (1996-1997, 2000, C.S.I.C., Spain)  
Dr. Francisco Medellin-Rodriguez (1999-2000, 2018-2019 Autonomous University of San Luis Potosí, México)  
Dr. Carlos Avila-Orta (2000-2001, Zona Universitaria, México)  
Dr. Hyun H. Song (2000-2001, Hannam University, Korea)  
Dr. Daisuke Kawakami (2001-2003, Toray Company, Japan)  
Dr. Yan-Mei Wang (2001-2002, USTC, China)  
Dr. Li-Ming Zhang (2001-2002, Zong Shan University, China)  
Dr. Gad Marom (2002, 2005, Hebrew University Jerusalem, Israel)  
Dr. Sung Soo Yoon (2002, KAIST, Korea)  
Dr. Jose M. Mata-Padilla (2003, Autonomous University of San Luis Potosí, México)  
Dr. Seoul Chang (2003, Inha University, Korea)  
Dr. Daniel Dikovsky (2003, Hebrew University Jerusalem, Israel)  
Dr. Leonardo Pérez (2003, Zona Universitaria, México)  
Dr. Alejandro Sanz (2004, C.S.I.C., Spain)  
Dr. Jun Kikuma (2005-2006, Asahi Chemical, Japan)  
Dr. Ya-Sen Sun (2005, NSRRC, Taiwan)  
Dr. Sofia Vega (2006, Autonomous University of San Luis Potosí, México)  
Dr. Miguel Waldo (2006, Autonomous University of San Luis Potosí, México)  
Dr. Rossana Iervolino (2006-2007, SKF Company, Italy)  
Dr. Nobuyuki Taniguchi (2006-2007, Toyobo Company, Japan)  
Dr. Shinichi Yamazaki (2007-2008, Okayama University, Japan)  
Dr. Jie Wei (2007-2008, Beijing University of Chemical Engineering, China)  
Dr. Sureerut Amnuaypornsrri (2007, Mahidol University, Thailand)  
Dr. Zhongming Li (2008-2010, Sichuan University, China)  
Dr. Victor Cruz Delgado (2008, Autonomous University of San Luis Potosí, México)  
Dr. Adriana Espinoza Martinez (2008, Autonomous University of San Luis Potosí, México)  
Dr. Inga Elkina (2010, Liquidity Nanotech Corp)  
Dr. Xin Pan (2010-2011, National Test Center, China)  
Dr. Gang-ping Wu (2011, Institute of Coal Chemistry, Chinese Academy of Sciences, China)  
Dr. Yonglai Lu (2015, Beijing University of Chemical Technology, China)  
Dr. Huizhen Ke (2015, Jiangnan University, China)  
Dr. Guangmei Xia (2016, Institute of Chemistry, Chinese Academy of Sciences)  
Dr. Shanshan Xu (2016, Shenzhen University, China)  
Dr. Zongbao Wang (2016, Ningbo University, China)  
Dr. Ali Nederi, Research Scientist (2016-2017, Innventia, Sweden)  
Dr. Yanxiang Li (2016-2017, Chinese Academy of Sciences, China)  
Dr. Yaopeng Zhang (2016-2017, Donghua University)  
Dr. Zhan-Chun Chen (2017-2018, TaiYuan University of Technology, China)  
Dr. Guilherme Dognani (2017-2018, Universidade do Oeste Paulista (UNOESTE), Brazil)  
Dr. Aihua He (2019-2020, Qingdao University of Science and Technology, China)  
Dr. Tom Lindstrom (2016-2022, retired from RISE, Sweden).

#### **SENIOR SCIENTISTS**

Dr. DuFei Fang (1997-2012, Aqua-Tech, Shanghai)  
Dr. Raj Somani (1999-2007, ABC Laboratory)  
Dr. Tohei Moritani (2001-2003, retired)  
Dr. Shigeyuki Toki (2001-2012)  
Dr. Christian Burger (2002-2011)  
Dr. Chirakkal Krishnan (2002-2012, retired)  
Dr. Qi-Cong Ying (2005-2006, deceased)  
Dr. Tom Lindstrom (2017-present, KTH Royal Institute of Technology, Sweden)

#### **POSTDOCTORAL RESEARCHERS:**

Dr. Ravi Verma (1994-1995, Spectral Platforms Inc)  
Dr. Soenke Seifert (1996-1997, APS, ANL)  
Dr. Zhigang Wang (1997-2000, USTC, China)  
Dr. Lizhi Liu (1997-2002, Sinopec, China)  
Dr. Fengji Yeh (1997-2000, Dow Chemical)  
Dr. Weidong Liu (1998-2000, University of Dayton)  
Dr. Shaofeng Ran (1998-2002, W. L. Gore)  
Dr. Jay Young Kim (1999-2000, Samsung Fine Chemical, Korea)  
Dr. Kwang Sok Kim (2000-2004, Inha University, Korea)  
Dr. Michael Gelfer (2000-2005, Dow Chemical)  
Dr. Igors Sics (2001-2006, ALBA, Consortium for Exploitation of Synchrotron Light Laboratory, Spain)  
Dr. Xinhua “Steven” Zong (2002-2003, Symyx),  
Dr. Carlos-Alberto Avila-Orta (2002-2004, Centro de Investigacion en Quimica Aplicada, Mexico)  
Dr. In Chul Um (2002-2004, Kyungpook National University, China)  
Dr. Jinglu Chen (2002-2005, Dow Chemical, China)  
Dr. Antonios Kellarakis (2003-2005, University of Athens, Greece)  
Dr. Weidong He (2003-2005, USTC, China)  
Dr. Xuefen Wang (2003-2005, Donghua University, China)  
Dr. Jonathan Chiu (2005-2009, Princeton Review)  
Dr. Hongliang Jiang (2005-2007, Zhejiang University, China)  
Dr. Xuming Chen (2006, Dow Chemical)  
Dr. Zhaohui Tang (2006-2007, Changchun Institute of Applied Chemistry, CAS, China)  
Dr. Jeffrey McCutcheon (2007, University of Connecticut)  
Dr. Jie Zhu (2006-2009, Shanghai Synchrotron Radiation Facility, China)  
Dr. Changquan Qiu (2007-2008, ShanghaiTech University, China)  
Dr. Lixia Rong (2004-2012, Advanced Materials)  
Dr. Hongyang Ma (2005-2014, Beijing University of Chemical Technology, China)  
Dr. Tomas Rosen (2017-2019, KTH Royal Institute of Technology, Sweden)  
Dr. Pejman Hedi (2016-2019, Honeywell)  
Dr. Sunil K. Sharma, (2017-2019, Island Pyrochemical Industries)  
Dr. Kai Chi (19-2021, WestRock)  
Dr. Priyanka R. Sharma (2015-2022, Western Michigan University)

#### **DOCTORAL STUDENTS**

Dr. Ravi Verma (1994, graduated from VPI, Spectral Platforms Inc)  
Dr. Wu Wang (1996, graduated from University of Delaware, Eberspaecher North America Inc)  
Dr. Joshua Samon (2000, graduated from University of Delaware, Ethicon, J&J)  
Dr. Jing Wu (2000, graduated from University of Delaware, Och-Ziff Capital Management Group)  
Dr. Xinhua “Steven” Zong (2002, Suzhou Institute of Biomedical Engineering and Technology)  
Dr. Xuan “Bruce” Fu (2002, Industrias Negromex S.A. de C.V. (INSA))  
Dr. Ling Yang (2005, Air Products)  
Dr. Jonathan Chiu (2005, Princeton Review)  
Dr. Xuming Chen (2006, Cameron Chemicals)  
Dr. Jong Kahk Keum (2008, Oakridge National Lab.)  
Dr. Hongwen Zhou (2008, Applied Materials)  
Dr. Kyunghwan Yoon (2008, Samsung, Korea)  
Dr. Pranav Nawani (2008, Washington State University)  
Dr. Feng Zuo (2009, BASF)  
Dr. Yimin Mao (2011, NIST)  
Dr. Yan Wang (2012, graduated from Sichuan University, China, SINOPEC)  
Dr. Ran Wang (2012, IBM Research)  
Dr. Yang Liu (2012, Goldman Sachs)  
Dr. Xiaowei Li (2013, SINOPEC)  
Dr. Justin Che (2013, Air Force Research Lab)  
Dr. Xiao Wang (2013, SRI International)

Dr. Yanping Liu (2013, graduated from USTC, China)  
 Dr. Tshiang-Ming (Mason) Yeh (2013, Semiconductor Manufacturing Co., Taiwan)  
 Dr. Yanhui Chen (2013, graduated from Sichuan University, Northwestern Polytechnical University, China)  
 Dr. Rui Yang (2014, Bayer)  
 Dr. Zhe Wang (2014, NYU)  
 Dr. Ying Su (2014, Brown University)  
 Dr. Lihong Geng (2017, South China University of Technology)  
 Dr. Chengbo Zhan (2019, Harbin Institute of Technology at Shenzhen)  
 Dr. Hui Chen (2021, University of Maryland)  
 Dr. Mengying Yang (2021, Pall Corporation)  
 Dr. Qinyi Fu (2021, Applied Materials)  
 Dr. Xiangyu Huang (2021, Crystal Pharmatech Inc.)  
 Dr. Ruifu Wang (2021, ExxonMobil in Shanghai)  
 Dr. Ritika Joshi (2022, Crystal Pharmatech Inc.)  
 Dr. Nisha Sharma (2022, Intel)  
 Dr. Ken I. Johnson (2022, Dow Chemical)  
 Dr. Duning Li (2024, Intel)  
 Dr. Jiajun Tian (2024, Argon National Lab.)

#### MASTER STUDENTS

Henglin Yang (2000)	Zhi Rui Mo (2010)
Maria Yuen (2003)	Mahati Elluru (2011)
Kevin Lau (2004)	Si-Hui (Vivian) Guan (2012)
Jun Wu (2005)	Edward Lu (2013)
Priya Desai (2006)	Karabi Halder (2014)
Derya Cebeci (2006)	Ritika Joshi (2016)
Sharon Cruz (2000)	Mihdhar S. Almihdhar (2017)
Meiki Yu (2001)	Eoghan Connors (2017)
Kim Luu (2003)	Kai Liu (2017)
Charles Ching Chang (2004)	Acacia Leakey (2018)
Christopher Pang (2007)	Marc Nolan (2019)
Randy K. Ramcharitar (2007)	Yasamen Aminy (2021)
Shifeng Han (2009)	Emily Lin (2022)
Lewis Yung (2009)	Panayiota Siskos (2024)
Nan Li (2009)	Kathy Chu (2024)
Yang Liu (2009)	

#### UNDERGRADUATE STUDENTS

Robert Mou (1998)	An Song (2003)
Sangkyu Kim (1998-1999)	Alex Lodge (Grambling College, REU-2003)
Jason Lopez (1998-1999)	Luciano Santillan (Southern Michigan Tech, REU-2004)
Richard Gross (1998-1999)	Theodore Sterling (2004)
Amy Brenner (Southern Illinois State, REU-1998)	Matthew Lundwall (2004)
Chris Kopps (1998)	Christopher Pang (2005)
Anastasia Zhadina (1999)	Charles Qi-Hong Chen (2005)
Jean Julmis (2000-2001)	Joseph Gaiteri (King's College PA, REU-2006)
Nadera Osmani (2001)	Matthew Windt (Texas A&M, 2006)
Kwadwo Bonsu (2001-2002)	Ellena Soo-Jeong Kim (2006)
Alfred Adomako (2001)	Behnaz Ghahremani (2006)
Coleigne Stone (2001)	Wing-Shan Lau (2006)
Alex Chen (2001)	Eric Gokstein (2006)
Jason Liang (2001)	Karin Wang (2006-2008)
Christopher Jahns (2001-2002)	Jessica Louie (2007)
Kristen M. Belano (Darmouth College, REU-2001)	Ken-Wing Lee (2007)
Alex Mejia (2001)	Jessica Rae Levin (Cornell, REU-2007)
Laura Nollah (2001)	Dian Yang (XingHua University, China, 2007)
Avi Arora (2002)	



Kadhambari Sridhar (2007-2008)  
 Ka Fut Poon (2007-2008)  
 Shifeng Han (2007-2008)  
 Esther Kwak (2007-2008)  
 Kwong Pang Cheung (2008)  
 Nickhil Rokkam (2008)  
 Mina Shokralla (2008)  
 Juan Vasquez (2008)  
 Andrey Kopot (2008)  
 Aditi Bhagat (2008-2009)  
 Michael Mienko (2010)  
 Hae Yoon Yang (2010)  
 En Young (Emily) Cho (2010)  
 Edward Lu (2011)  
 Neil Edmands (2011)  
 Hui Gao (2011-2012)  
 Alexandra Robinson (2014)  
 Steven Yao (2014-2015)  
 Christian Fiankor (2014-2015)  
 Michael C. Paul (Bowdoin University, 2015)  
 Jesse Cole (2015)  
 Weipeng Zhou (2016)  
 Richard Antoine (2016-2018)  
 Yueli Chen (2017-2018)  
 Aaron But (2017)  
 Pauline Huang (2017)  
 Hyungbin Kim (2017)  
 Yuk Ma (2017)  
 Cameron Chino (2017)  
 Alexis Scida (2017)  
 Juhun Seo (2017)  
 Jonathan Negron (REU BS Student, Universidad  
 Metropolitana, San Juan, PR, 2017)  
 Wenqi Li (2017-2019)  
 Cheng-Wen Hsu (2017-2018)  
 Coby Yeung (2017-2018)  
 Hongrui He (2017-2020)  
 Jackie Chin (2017-2018)  
 Jackie Zheng (2017-2020)  
 Marc Nolan (2017-2018)  
 Elisabeth Van Roijen (2017-2018)  
 Chih-Yang (John) Cheng (2017-2018)  
 Anson Law (2017)  
 Simon Lin (2017-2018)  
 Visal Poornaka (2017)  
 Ian Rose (2017)  
 Honji He (2018)  
 Cristina Hleah (2017-2018)  
 Jason Man Yu (2018-2019)  
 Marcus Johnson (2018)  
 Nancy Li (2018)  
 Heidi Yeh (2017-2018)  
 Bernice Pham (2018-2019)  
 Brian Abreu-Tejada (2018-2019)  
 Min Liu (2018-2019)  
 Hao-Yen Chang (2018-2022)  
 Rangjian Cao (2018-2020)  
 Aymon Faizi (2018-2019)  
 Fatin Chowdhury (2018)  
 Aristidis Mihalos (2018)  
 Nathan Aargon (2018)  
 Yvonne Chen (2018-2021)  
 Finn Mackin (2019)  
 Hongbin Zhuo (2019)  
 Eric Fung (2019-2021)  
 Lexin Chen (2019-2020)  
 Wenjing Yang (2019-2020)  
 Md Nazim Uddin Bhuiyan (2019-2020)  
 Jialun Lu (2019-2020)  
 Nilay Sebat (2019-2020)  
 Yang Yang (2019-2020)  
 Kelemwork Yilma Mengesha (2019)  
 Xi Zhang (2020)  
 Tony Li (2019-2020)  
 Justina Varghese (2020)  
 Tong Shan (2020)  
 Xinyu Zheng (2020)  
 Jenny Gao (2020)  
 Samuel Soliman (2020)  
 Jianfeng Lin (2020)  
 Nuoping Dong (2020)  
 Jierui Ding (2020)  
 Joseph Song (2020)  
 Jacqueline Mossa (2020)  
 Emanuel von Henduck (2020)  
 Emily Lin (2020-2022)  
 Jacob Pylypciw (2020-2021)  
 Yifei Wang (2020-2021)  
 Steven Zhu (2020-2021)  
 Sidney John (2020-2021)  
 Amy Yen Phung Ngo (2022)  
 Zhi Peng Zhu (2022)  
 Hong Zhao (2022)  
 Doyong Noh (2022)  
 Nihaal Sarmad (2022)  
 Michelle Figueroa (2022-2023)  
 Marris Lindner (2022)  
 Emily Zhen (2022)  
 Kathy Chu (2022)  
 James Guinita (2022)  
 Fahmida Akter (2022-2023)  
 Zoe Chow (2022)  
 Zeynep Gungor (2022)  
 Idalia Borzone (2022)  
 Cecilia Wheeler (Smith College, REU, 2022)  
 Michelle Qiu (2022-2023)  
 Wanting Huang (2022-2023)  
 Emily Li (2022-2024)  
 Panayiota Siskos (2023)  
 Luke W. Kenny (2023)  
 Emma Lian (2023, 2024)  
 Yuzhou Xia (2023)  
 Jacky Chen (2023)  
 Jeshur Thangaraj (2023)

Andy Zheng (2023)  
Robert Kocovic (2023)  
Alejandro Vallin Oliver (2023)  
Allen Sun (2023, 2024)  
Dayna Saywack (2023)  
Patrick Killilea (2023)  
Michael Frueh (2023)  
Jinwei Li (2023)  
Sera Alexandra Picillo (2023)  
Kunlin Zhao (2023)  
Michelle V. Chung (2023)  
Elizabeth O. Collado (2023, 2024)  
Gurleen Kaur (2023, 2024)  
Gursimran Kaur (2023, 2024)

Fengya Jin (2023, 2024)  
Miral Oltulu (2023, 2024)  
Rose Shojaeian (2023)  
Saima Pasha (2023)  
Heather Janny (2023, 2024)  
Isabella Filagrossi (2023, 2024)  
Luke Beauman (2023, 2024)  
Troy E. Fiorillo (2023, 2024)  
Anthony Liyen Lin (2024)  
Maisha Hoque (2024)  
Alan Liu (2024)  
Diego Avellaneda (2024)  
Winnie Lin (2024)

### HIGH SCHOOL STUDENTS

Ravneet Kaur (Great Neck South High School, 1999)  
Stephanie Duclair (Brooklyn Technical High School, 2000)  
Douglas Bush (East Islip High School, 2000)  
James Bush (East Islip High School, 2000)  
Henry Kung (Syosset High School, 2001)  
Tien-Lun Chuang (Syosset High School, 2001)  
Brian Choi (East Islip High School, 2001)  
Adeel Khan (East Islip High School, 2001)  
Jackie Fu (East Islip High School, 2002)  
Zhen Ni Zhou (Brooklyn Technical High School, 2002)  
Michael Sherman (Wheatley High School, 2002)  
Louise Wen (Dominican Academy High School, NYC, 2003)  
Sharon Chou (Great Neck South High School, 2003)  
Matthew Windt (Commack High School, 2004)  
Jonathan Lai (Smithtown High School, 2004),  
Matthew Palatnik (Commack High School, 2004)  
Andrew Kim (Herricks High School, 2005)  
Lisa Wang (Ward Melville High School, 2005)  
Vikas Anand (Jericho High School, 2005, 2006)  
Esther Kwak (Jericho High School, 2005, 2006)  
Connie Kim (Hunter College High School, 2005)  
Jimmy Hom (Syosset Public High School, 2005)  
Jeffrey Tam (Oceanside High School, 2006, 2007)  
Linda Zhou (2006)  
Soo Jeong (Ellena) Kim (Jericho High School, 2006)  
Zachary Hollander (Great Neck North High School, 2006, 2007)  
Max Soni (Jericho High School, 2006, 2007)  
Sharon Ji (Wheatley High School, 2006, 2007, 2008)  
Michael Yang (Oceanside High School, 2006, 2007, 2008)  
Julie Zilnicki (Riverhead High School, 2007)  
Solomon V. Swartz (Jericho High School, 2008, 2009)  
Paul Wyrembak (Ward Melville High School, 2008)  
Cole Diamond (Great Neck North High School, 2008)

Katherine Zhu (Plainview-Old Bethpage John F. Kennedy High School, 2008)  
Brandon Li (Jericho Senior High School, 2008, 2009)  
Yang Liu (Jericho High School, 2008)  
Brenan Chu (Herricks High School, 2009)  
Cara Lin (Ward Melville High School, 2009)  
Matthew Kim (Commack High School, 2009, 2010)  
Deborah Boktor (Bay Shore High School, 2009)  
James Balchunas (Ward Melville High School, 2009)  
Emmanuel Kim (Ward Melville High School, 2010)  
Cassidy Werner (Plainview JFK High School, 2010)  
Shyam Venkateswaran (Herricks High School, 2010)  
Fahmida Rashid (Herricks High School, 2010)  
Nirmita Doshi (Herricks High School, 2010)  
Anna Sato (Ward Melville High School, 2010, 2011)  
Ari Turkiewicz (Plainview JFK High School, 2010)  
Yifan Zhu (Jericho High School, 2010)  
Annam Huda Baig (Smithtown High School East, 2011)  
Brian Chang (William A. Shine Great Neck South High School, 2011)  
Gregory Coman (Ward Melville High School, 2011)  
Brendan Liu (Jericho High School, 2011, 2012)  
Rajkumar Pammal (Commack High School, 2011)  
Sukhveen Soni (The Wheatley School, 2011, 2012)  
Adrian Tsou (Parkland High School, 2011)  
Jesse Xing (Ward Melville High School, 2011)  
Kristin Wong (Jericho High School, 2011, 2012)  
Jillian Knoll (Paul D. Schreiber High School, 2012)  
Cathy Wang (Ward Melville High School, 2012)  
Theo Gibbs (Ward Melville High School, 2012, 2013)  
Joseph Suk (Ward Melville High School, 2012)  
Melanie Ngo (Great Neck South High School, 2012)  
Annam Hudda Baig (Smithtown High School, 2012)  
Raymond Yin (Ward Melville High School, 2012, 2013)  
Christopher Di Preta (Manhasset High School, 2012)  
Naveen Mallangada (Jericho High School, 2012)  
Andrew Kim (Commack High School, 2012, 2013, 2014)

Michelle Moffa (Holy Spirit High School in New Jersey, 2013)  
 Ji Whan (Kevin) Yoon (Oxford Academy, CA, 2014)  
 Eric Wang (Commack High School, 2014)  
 Anu Sharma (Oak Hall School, FL, 2015)  
 Emma Feldman (Schreiber High School, 2015)  
 Alex Spelfogel (South Side High School, 2015)  
 Alexis D'Alessandro (Half Hollow Hills High School, 2015)  
 Ilana Hill (Schreiber High School, 2016)  
 Eric Fung (Half Hollow Hills High School West, 2016)  
 Vincent Li (Spackenkill High School, 2016)  
 Jessica Tian (Del Norte High School, San Diego, CA, 2016)  
 Aurnov Chattopadhyay (University High School, Irvine, CA, 2016)  
 Eleonora Recio (Roslyn High School, 2016)  
 Mutahara Bhuiyan (Jericho High School, 2017)  
 Andre Yin (Westview High School, San Diego, CA, 2017)  
 Michelle Xing (Great Neck South High School, 2017)  
 Sreyans Tanga (Lawrenceville Prep School, 2017)  
 Wesley Wang (Taipei American High School, Taiwan, 2017)  
 Hunter Levine (Grosse Pointe South High School, MI 2017)  
 Alexis McCauley-Pearl (Smithtown High School East, 2017, 2018)  
 Se Ri Lee (Choate Rosemary Hall High School, CT, 2018)  
 Akash Rathod (Okemos High School, MI, 2018)  
 Aaron Forman (Hastings High School, NY, 2018)

Dara Berman (Ward Melville High School, NY, 2018)  
 William Borges (Roslyn High School, NY, 2018, 2019)  
 Bryant Liu (Rocky Point high school, NY, 2018)  
 Sophie Zhang (High Technology High School, NJ, 2019)  
 Skyler Wu (Del Norte High School, CA, 2019)  
 Evan Wang (Unionville High School, PA, 2019)  
 Isha Brahmhatt (Ardsley High School, NY, 2019)  
 Riya Patel (Jericho High School, NY, 2019)  
 Katherine Zhang (Jericho High School, NY, 2019)  
 Lam Ashley (Herricks High School, NY, 2022)  
 Lai Ericka (Manhasset High School, NY, 2022)  
 Liu Anna (Rancho Bernardo High School, CA, 2022)  
 Sung Lindsay (Harborfields High School, NY, 2022)  
 Wang Joelynn (Jolene) (Newark Academy, NY, 2022)  
 Ian Aguilar-Hwang (Hanover High School, NH, 2023)  
 Gracelynn Hao (Bridgewater Raritan High School, NJ, 2023)  
 Esmeralda Swietelsky (Ransom Everglades High School, FL, 2023)  
 Gavin Onghai (Earl L. Vandermeulen High School, NY, 2023)  
 Andy Zhou (Newton North High School, MA, 2023)  
 Irene Ma (Commack High School, NY, 2024)  
 Mengnan (Megan) Sun (Cosumnes Oaks High School, CA, 2024)  
 Deniz Gursoy (Fayetteville-Manlius High School, NY, 2024)  
 Laasya Chevendra (Stone Bridge High School, VA, 2024)  
 Richard Chai (Smithtown High School, NY, 2024)

***Selected Notable Accomplishments***

Siemens Westinghouse Competition

2004 Semi-finalist: Vikas Anand and Esther Kwak  
 2005 Semi-finalist: Vikas Anand and Esther Kwak  
 2006 Finalist: Max Soni and Sharon Ji  
 2006 Semi-finalist: Sharon Li  
 2009 Semi-finalist: Cara Lin and Matthew Kim  
 2010 Finalist: Emmanuel Kim and Anna Sato  
 2010 Semi-finalist: Shyam Venkateswaran and Ari Turkiewicz  
 2011 Semi-finalist: Brendan Liu, Anna Sato and Kristin Wong  
 2012 Semi-finalist: Brendan Liu  
 2013 Semi-finalist: Michelle Moffa and Raymond Yin  
 2015 Semi-finalist: Anu Sharma  
 2016 Semi-finalist: Jessica Tian and Aurnov Chattopadhyay  
 2017 Semi-finalist: Mutahara Bhuiyan and Michelle Xing

Intel Science Talent Search

2007 Semi-finalist: Esther Kwak  
 2008 Semi-finalist: Sharon Li  
 2009 Semi-finalist: Katherine Zhu  
 2010 Semi-finalist: Deborah Boktor, Solomon Victor Swartz and Brandon Li  
 2012 Semi-finalist: Jesse Xing

2012 Finalist: Anna Sato  
 2013 Semi-finalist: Brendan Liu  
 2014 Semi-finalist: Michelle Moffa  
 2015 Semi-finalist: Ji Whan (Kevin) Yoon and Eric Wang  
 2016 Semi-finalist: Anu Sharma and Emma Feldman  
Regeneron Science Talent Search  
 2017 Semi-finalist: Aurnov Chattopadhyay  
 2017 Finalist: Jessica Tian  
 2018 Semi-finalist: Mutahara Bhuiyan, Sreyans Tanga, Michelle Xing and Andre Yin  
 2019 Semi-finalist: Se Ri Lee  
 2020 Semi-finalist (300 scholars): William Borges, Sophie Zhang, Isha Brahmhatt  
 2023 Semi-finalist (300 scholars): Lam Ashley, Liu Anna  
 2024 Semi-finalist (300 scholars): Gracelynn Hao

MIT THINK Science Competition

2009 National Finalist: Brandon Li  
 2010 National Finalist: Matthew Kim  
I-SWEEEP (International Sustainable World (Energy, Engineering & Environment) Project) Olympiad  
 2015 Gold Award: Ji Whan (Kevin) Yoon

LISEF (Long Island Science and Engineering Fair)

2012 First Place Grand Award: Rajkumar Pammal  
 2016 First Place Grand Award: Alexis D'Alessandro  
Intel International Science and Engineering Fair (ISEF)  
 2016 Second Prize in Environmental Engineering: Alexis D'Alessandro  
 2016 Second Prize: Michelle Xing  
 2019 Second Prize: Akash Rathod  
 2020 Finalist (competition cancelled due to COVID-19): Riya Patel

**CURRENT GROUP MEMBER:**

Prof. Hongyang Ma (Beijing University of Chemical Technology, China), Research Professor	
Dr. Dufei Fang, Senior Scientist	Nadege Durand, PhD Student
Dr. Lun Ma, Senior Scientist	Shengyu Yu, PhD Student
Dr. Rasel Das, Senior Post-Doc	Mahdi Rezaei, PhD Student
Dr. Yasmeeen Abdel Aziz, Post-Doc	Eniola Arogunyo, PhD Student
Dr. Si Ze Zheng, Post-Doc	Sanket Mhaskar, PhD Student
Madani Khan, PhD Student (joint with Dale Druckhammer)	Kathy Chu, MS Student
Grenalynn Ilacas, PhD Student (joint with Barney Grubbs)	Alan Liu, MS Student
Damian Amiruddin, PhD Student (Joint with Devinder Mahajan)	Timothy James McMahon, BS Student
Andrew Wright, PhD Student	Kevin Lin, BS Student
Kaushanie.Gunarathne, PhD Student (Joint with Dilip Gersappe)	Troy Eric Fiorillo, BS Student
Noel Womack, PhD Student	Bella Ida Filagrossi, BS Student
Rebecca Potoff, PhD Student	Jordan Roche, BS Student
	Daniel Bernard Collazo-Schiavo, BS Student
	Kristen M. McClung, BS Student
	Anthony Liyen Lin, BS Student
	Jenny Chen, BS Student

**PUBLICATIONS AND PRESENTATIONS**

**(Thomson Reuters (formerly ISI) Web of Science, total citation > 46,200, h-index: 115)**

**(Google Scholar, total citations > 63,500, h-index: 134)**

According to the Ranking of Top 1000 Scientists in the field of Materials by Research.com (<https://research.com/scientists-rankings/materials-science>) in 2024, Hsiao is ranked #210 in the world and #95 in United States. In the field of Chemistry (<https://research.com/scientists-rankings/chemistry>), he is ranked #217 in the world and #112 in United States.

Issued Patents (US and international)	<b>59</b> ( <i>US Patents - 36, Foreign Patents – 23</i> )
Published/Pending Patent Applications	<b>26</b>
Reviewed Scientific Papers:	<b>581</b>
Chapters in Books/Encyclopedias/Reviews:	<b>62</b>

Miscellaneous:	<b>20</b> ( <i>News, Tribute, Book Review, Profile, Opinion</i> )
Books (Edited):	<b>2</b>
Proceedings and Preprints:	<b>233</b>
Student Thesis	<b>34</b>
Ph.D. Thesis	<b>34</b>
M.S. Thesis	<b>23</b>
Invited Lectures	<b>371</b>
Presentations in Scientific Meetings:	<b>602</b> ( <i>Domestic and International Meetings</i> )

## PUBLICATIONS AND PRESENTATION LISTS

### 1. PATENTS AND PATENT APPLICATIONS

#### ISSUED PATENTS

1. Benjamin S. Hsiao, Benjamin Chu, Xuan Fu, Rusty L. Blanski and Sean Phillips “Blends of Organic Silicon Compounds with Ethylene-Based Polymers”, **U.S. Pat. 6569932 (2003)**.
2. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Collin Brathwaite, “Biodegradable and/or Bioabsorbable Fibrous Articles and Methods for Using the Articles for Medical Applications.” **U.S. Pat. 6685956 (2004)**.
3. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Collin Brathwaite, “Biodegradable and/or Bioabsorbable Fibrous Articles and Methods for Using the Articles for Medical Applications.” **U.S. Pat. 6689374 (2004)**.
4. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang “Apparatus and Methods for Electrospinning Polymeric Fibers and Membranes.” **U.S. Pat. 6713011 (2004)**; PCT Int. Appl. WO 0292888.
5. Benjamin Chu, Benjamin S. Hsiao, Michael Hadjiargyrou, Dufei Fang, Kwangsok S. Kim and Xinhua Zong “Cell Delivery System Comprising a Fibrous Matrix and Cells”, **U.S. Pat. 6790455 (2004)**.
6. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Collin Brathwaite, “Biodegradable and/or Bioabsorbable Fibrous Articles and Methods for Using the Articles for Medical Applications.” **U.S. Pat. 7172765 (2007)**.
7. Benjamin Chu, Benjamin S. Hsiao, Michael Hadjiargyrou, Dufei Fang, Kwangsok S. Kim and Xinhua Zong “Cell Delivery System Comprising a Fibrous Matrix and Cells”, **U.S. Pat. 7323190 (2008)**.
8. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Akio Okamoto, “Crosslinking of Hyaluronan Solutions and Nanofibrous Membranes Made Therefrom”, **U.S. Pat. 7323425 (2008)**.
9. John Ricotta, Benjamin S. Hsiao and Rajesh H. Somani, “Apparatus and Methods for Fixation of Vascular Grafts”, **U.S. Pat. 7351258 (2008)**.
10. Benjamin Chu and Benjamin S. Hsiao, “Nanocomposite Fibers and Films Containing Polyolefin and Surface-Modified Carbon Nanotubes” **U.S. Pat. 7652084 (2010)**; PCT Int. Appl. WO 2005084167 (2005).
11. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang, Akio Okamoto “Electro-Blowing Technology for Fabrication of Fibrous Articles and Its Applications of Hyaluronan”, **U.S. Pat. 7662332 (2010)**.
12. Benjamin Chu, Benjamin S. Hsiao and Dufei Fang, “Apparatus and Method for Electro-Blowing or Blowing-Assisted Electro-Spinning Technology”, **U.S. Pat. 7887311 (2011)**.
13. Benjamin Chu, Benjamin S. Hsiao, Michael Hadjiargyrou, Dufei Fang, Kwangsok S. Kim and Xinhua Zong, “Method of Cell Storage in a Delivery System Comprising a Fibrous Matrix”, **U.S. Pat. 8021869 (2011)**.
14. Benjamin Chu, Benjamin S. Hsiao and Dufei Fang, “Apparatus for Electro-Blowing or Blowing-Assisted Electro-Spinning Technology”, **U.S. Pat. 7934917 (2011)**.
15. Nobuyuki Taniguchi, Yasuo Ohta, Benjamin Chu and Benjamin S. Hsiao “Method for Producing High Strength Polyethylene Fiber and High Strength Polyethylene Fiber”, Japan Patent, JP4734556 (2011).
16. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma and Nobuyuki Taniguchi “Polyolefin Nanocomposites with Functional Ionic Liquids and Carbon Nanofillers” **U.S. Pat. 8211958 (2012)**; PCT Int. Appl., WO 2009108236 (2009).
17. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media” (also known as “High Flux and Low Fouling Nanofibrous Ultrafiltration Membranes”) (R-7760) **U.S. Pat. 8222166 (2012)**; PCT/US2005/035738 (2005).
18. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Nanofibrous Ultrafiltration Membranes”, Indian Patent, 240572 (2010).
19. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Australian Patent, 2005333585 (2011).
20. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Hong Kong Patent, HK1108860 (2012).
21. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Korean Patent, 10-1228496 or 2007-7007719 (2012).
22. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Chinese Patent, 200580034193.1 (2012).
23. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Canadian Patent, CA 2583469 (2013).
24. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, United Arab Emirates Patent, P295/07 (2013).

25. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Japanese Patent, 2011-103306 (2013).
26. Benjamin Chu, Benjamin S. Hsiao, Dufei Fang and Kwangsok S. Kim, “High Flux and Low Fouling Filtration Media”, Israeli Patent, 182165 (2013).
27. Benjamin Chu, Benjamin S. Hsiao and Kyunghwan Yoon “Surface Coating on Nanofibrous Scaffolds by Interfacial Polymerization for Ultrafiltration and Desalination Applications”, or “Articles Comprising a Fibrous Support”, **U.S. Pat. 8231013 (2013)**. Long Island Technology Hall of Fame, Patent of the Year Award.
28. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, “High Flux Fluid Separation Membranes Comprising A Cellulose or Cellulose Derivative Layer”, Chinese Patent 200880022940.3 (2013).
29. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, “High Flux Fluid Separation Membranes Comprising A Cellulose or Cellulose Derivative Layer”, Indian Patent 271247, 2175/MUMNP/2009 (2013).
30. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, “High Flux Fluid Separation Membranes Comprising A Cellulose or Cellulose Derivative Layer”, Japanese Patent, 2010-509577 (2013).
31. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, “High Flux Fluid Separation Membranes Comprising A Cellulose or Cellulose Derivative Layer”, European Patent, 08827640.7 (2013).
32. Benjamin S. Hsiao, Benjamin Chu, Jie Wei, Hongyang Ma, Feng Zuo, “Ionic liquids, functionalized particulates, and fluoropolymer composites” (R-8037), PCT Int. Appl. WO 2009146146 (2009), **U.S. Pat. 8563657 (2013)**.
33. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, “High flux fluid separation membranes comprising a cellulose or cellulose derivative layer” (R-7958), US Patent Application 12/126,732, PCT Int. Appl. WO 2009025900, PCT/US2008/064768 (2009), **U.S. Pat. 9010547 (2015)**.
34. Benjamin S. Hsiao, Benjamin Chu, Jie Wei, Hongyang Ma, Feng Zuo, “Ionic liquids, functionalized particulates, and fluoropolymer composites” **U.S. Pat. 9255195 (2016)**.
35. Benjamin Chu, Benjamin S. Hsiao, Devinder Mahajan and Tsung Ming Yeh, “Polymeric Nanofibrous Composite Membranes for Energy Efficient Ethanol Dehydration”, Filed in SUNY-Stony Brook (R-8384), U.S. Provisional Patent Application No. 61/576537, December 16, 2011, U.S. Pat. Appl. US 20130175218 (2013), U.S. Pat. Appl. US 20150080616 (2015); or “Graphene oxide-based nanofibrous composite membranes” **U.S. Pat. 9353037 (2016)**.
36. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma, “High Flux High Efficiency Membranes and Methods of Production Thereof”, Chinese Patent 200980146276.8 (2016).
37. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma, “High Flux High Efficiency Membranes and Methods of Production Thereof”, **US Patent 9511329 (2016)**.
38. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma “Functionalization of Nanofibrous Microfiltration Membranes for Water Purification”, Chinese Patent ZL2012800105515 (2016).
39. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma, “High Flux High Efficiency Membranes and Methods of Production Thereof”, Chinese Patent ZL201510155521.9 (2017).
40. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma “Functionalization of Nanofibrous Microfiltration Membranes for Water Purification”, Japan Patent 6130791 (2017).
41. Benjamin Chu, Benjamin S. Hsiao and Zhe Wang, “Modified Hydrophobic Sponges”, Filed in SUNY-Stony Brook (R-8486), U.S. Provisional Patent Application 61/899,349, September 10, 2012, PCT Int. Appl., WO 2014127179, PCT/US14/63788 (2014); WO 2015066665 (2015), **US Patent 9724669 (2017)**.
42. Benjamin S. Hsiao, Benjamin Chu and Priyanka Sharma, “Production of carboxylated nanocelluloses”, Canadian Patent, CA 3005140 (2017).
43. Benjamin Chu, Benjamin S. Hsiao, Devinder Mahajan and Tsung Ming Yeh, “Polymeric Nanofibrous Composite Membranes for Energy Efficient Ethanol Dehydration”, **U.S. Pat. 9862665 (2018)**.
44. Benjamin Chu, Benjamin S. Hsiao and Zhe Wang, “Modified Hydrophobic Sponges”, **US Patent 9931611 (2018)**.
45. Benjamin S. Hsiao, Benjamin Chu, Jie Wei, Hongyang Ma, Feng Zuo, “Novel Elastomeric Fluoropolymer Nanocomposite Containing Modified Carbon Nanofillers”, European Patent 2361144 (2018).
46. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma “Functionalization of Nanofibrous Microfiltration Membranes for Water Purification”, Filed in SUNY-Stony Brook (R-8327), December 22, 2010, PCT Int. Appl. WO 2012094407 (2012). PCT Patent Application No. PCT/US12/20206, U.S. Patent Application 14/362,028, **US Patent 9968892 (2018)**.

47. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma “Functionalization of Nanofibrous Microfiltration Membranes for Water Purification”, Indian Patent Appln. No.: 2141/KOLNP/2013, Indian Patent Number 299753 (2018).
48. Benjamin S. Hsiao, Hongyang Ma, "High-flux thin-film nanocomposite reverse osmosis membrane for desalination", Canadian Patent, CA 3053898 (2018).
49. Benjamin Chu, Benjamin S. Hsiao, Hongyang Ma and Zhe Wang, “Porous Graphene Based Composite Membranes for Nanofiltration, Desalination, and Pervaporation”, Filed in SUNY-Stony Brook (R-8628), U.S. Provisional Patent Application No. 62/025,549, July 17, 2014; PCT Int. Appl. (2016), WO 2016011124 A1 20160121, **US Patent 10112150** (2018).
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218. Shigeyuki Toki, Justin Che, Lixia Rong, Benjamin S. Hsiao, Adul Nimpaiboon, Jitladda Sakdapipanich, "The origin of strength of natural rubber studied by synchrotron X-ray: network in raw rubber and vulcanized rubber", Technical Meeting - American Chemical Society, Rubber Division, 180th, Cleveland, OH, 1, 149-160. (2011).
219. Justin Che, Shigeyuki Toki, Lixia Rong, Benjamin S. Hsiao, Juan Valentin and Justo Brasero, "Strain-Induced Crystallization of Pre- and Post-Vulcanized Natural Rubber Latex During Uniaxial Deformation by In-Situ Synchrotron X-Ray Diffraction", Technical Meeting - American Chemical Society, Rubber Division, 180th, Cleveland, OH, 1, 161-185 (2011).
220. Fanny Deplace, Glenn H. Fredrickson, Edward J. Kramer, Geoffrey W. Coates, Hisashi Ohtaki, Yong-Woo Shin, Fumihiko Shimizu, Lixia Rong, Benjamin S. Hsiao, "Tough polyolefin elastomers from copolymers with semicrystalline sPP grafts", The 15th international conference on Deformation, Yield and Fracture of Polymers (DYFP2012), Conference Proceedings (2012).
221. Yeh, Tsung-Ming; Mahajan, Devinder; Hsiao, Benjamin S.; Chu, Benjamin "Polymeric nanofibrous composite membranes for energy efficient ethanol dehydration", Preprints - American Chemical Society, Division of Petroleum Chemistry 57(1), 110-113 (2012).
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223. Ma, Hongyang; Hsiao, Benjamin S.; Chu, Benjamin "Highly permeable nanofibrous membranes for energy efficient water purification", PMSE Preprints (2013).
224. Toki, Shigeyuki; Che, Justin; Rong, Lixia; Hsiao, Benjamin S.; Amnuaypornsrri, Sureerut; Nimpaiboon, Adul; Sakdapipanich, Jitladda "Entanglement and end linking network on stress-strain relation and strain-induced crystallization of un-vulcanized and vulcanized natural and synthetic rubbers", Technical Meeting of the Rubber Division, American Chemical Society, 2, 1025-1038 (2012)
225. Che, Justin; Burger, Christian; Toki, Shigeyuki; Rong, Lixia; Hsiao, Benjamin S.; Amnuaypornsrri, Sureerut; Sakdapipanich, Jitladda "Two-dimensional wide-angle X-ray diffraction simulation study on strain-induced crystallization and temperature-induced crystallization of un-vulcanized natural and synthetic rubber", Technical Meeting of the Rubber Division, American Chemical Society, 2, 996-1024 (2012).
226. Toki, S.; Che, J.; Burger, C.; Hsiao, B. S.; Amnuaypornsrri, S.; Sakdapipanich, J., "Strain-induced crystallites and temperature-induced crystallites in poly-isoprene by 2D WAXD simulating analysis", Constitutive Models for Rubber VIII, Proceedings of the European Conference on Constitutive Models for Rubber, 8<sup>th</sup> (Edited by Gil-Negrete, Nere; Alonso, Asier), San Sebastian, Spain, June 25-28, 485-489 (2013).
227. Che, Justin; Burger, Christian; Toki, Shigeyuki; Rong, Lixia; Hsiao, Benjamin S.; Amnuaypornsrri, Sureerut; Sakdapipanich, Jitladda, "New insights into strain-induced crystallization and temperature-induced crystallization of un-vulcanized and peroxide-vulcanized natural rubber", Fall Technical Meeting of the Rubber Division, American Chemical Society, 2, 1701-1726 (2013).
228. Hristo A. Hristov, Thomas P. Oommen, Tami Mace, Benjamin S. Hsiao "In-Situ SAXS Study of Phase Segregation and Morphology of Styrenic Block Copolymers", SPE ANTEC Proc., (2015).
229. Toki, S.; Sainumsai, W.; Suchiva, K.; Rong, L.; Hsiao, B. S., "Crosslink, entanglement and strain-induced crystallization of NR" (Edited by Marvalova, Bohdana; Petrikova, Iva), Constitutive Models for Rubber IX, Proceedings of the European Conference on Constitutive Models for Rubbers, 9<sup>th</sup>, Prague, Czech Republic, Sept. 1-4, 515-520 (2015).
230. Yang, Y.; Wang, X.; Hsiao, B. S., "Preparation of thin film nanofibrous composite NF membrane based on EDC/NHS modified PAN-AA nanofibrous substrate", IOP Conference Series: Materials Science and Engineering 137(2016 Global Conference on Polymer and Composite Materials), 012047/1-012047/5 (2016).

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232. Tomas Rosen Ruifu Wang Chengbo Zhan Hongrui He Shirish Chodankar Benjamin S. Hsiao, "Orientation Distributions of Cellulose Nanofibrils and Nanocrystals in Confined Flow", ChemRxiv (2019).
233. Benjamin S. Hsiao, "Advancing Sustainable Nanocellulose Technologies for Water Purification", Video Proceedings of Advanced Materials: Volume 2, Article ID 2107192, (2021). DOI: 10.5185/vpoam.2021.07192, Video Link: <https://www.proceedings.iaamonline.org/article/vpoam-2107192>.

## 8. INVITED LECTURES

1. "Time-Resolved X-ray Study of Poly(aryl ether ether ketone)" Materials Science and Engineering Department, University of Pennsylvania, Philadelphia, PA., March 3, 1992
2. "Crystalline Phase Transition of Poly(aryl ether ether ketone)", Institute of Polymer Science, University of Akron, Akron, OH., May 13, 1992
3. "PEKK/Utem Blends; Morphology and Wetting", DuPont TECHON 92, Pocono, PA., June 24, 1992
4. "Miscibility and Crystallization Morphology Relations in Polyetherketone/ Polyetherimide Blends", in Second Annual UConn Symposium on Polymer Blends/Compatibilization, Institute of Materials Science, University of Connecticut, Storrs, CT., June 9, 1992
5. "Polymorphism and Crystalline Transitions in Poly(aryl ether ketones)" Institute für Polymere, ETH Zentrum, Zurich, Switzerland, September 2, 1992
6. "Time-Resolved Synchrotron Studies of Poly(aryl ether ketones) Phase Transitions", Institute für Technische und Mskromolekulare Chemie, University of Hamburg, Hamburg, Germany, September 3, 1992
7. "Diffraction Study of Phase Transition and Polymorphism in Poly(aryl ether ketones)" BioPhysics Department, Polytechnic University of Catalonia, Barcelona, Spain, September 15, 1992
8. "Time-Resolved Studies of Poly(aryl ether ketones) by Synchrotron Radiations", Instituto de Estructura de la Materia, CSIC, Madrid, Spain, September 16, 1992
9. "The Origin of Double Melting Behavior in Poly(aryl ether ketones) by Synchrotron Study", Materials Science Program, University of Delaware, Newark, DE., November 2, 1992
10. "Phase Transition and Polymorphism of Poly(aryl ether ketones)", Department of Materials Science and Engineering, Virginia Polytechnic Institute and State University, Blacksburg, VA., December 9, 1992
11. "Effect of Crystallization on the Morphology of PEEK/PEI and PEEK/PEKK Blends", Symposium on Engineered Polymer Blends IV: Theory and Practice, Polymer Research Institute, Polytechnic University, Brooklyn, NY., January 22, 1993
12. "Miscibility of High-Temperature Thermoplastic Polyimides and Poly(ether Ketones)", 3rd Uconn Symposium on Polymer Blends/Compatibilization, Storrs, CT., June, 1993
13. "Crystallization Behavior of Poly(aryl ether ketone ketone) Copolymers", NATAS Conference, September, Denver, CO., September 21, 1993
14. "Scattering Studies in Poly(aryl ether ketones)" APS Meeting, Short Course on "X-ray and Neutron Scattering from Polymers", Pittsburgh, PA., March 19-20, 1994
15. "Structure Development During Fiber Processing Via Synchrotron Time-Resolved X-ray Measurements" (Invited Oral), CHESS Users Meeting, Ithaca, NY., June 22, 1994
16. "Crystallization and Melting Behavior in Poly(aryl ether ketones)", Department of Chemistry, University of North Carolina at Chapel Hill, Chapel Hill, NC., April 22, 1994
17. "Time-Resolved SAXS/WAXD Techniques for Poly(aryl ether ketone) Study", Department of Materials Science and Engineering, University of Cincinnati, Cincinnati, OH., May 10, 1994
18. "Time-Resolved X-ray Measurements for Polymer Fiber Processing", 43 Annual Denver X-ray Conference, Steamboat Springs, CO., August 3, 1994
19. "Chemical and Orientational Imaging of Polymeric Samples", MSA Meeting, New Orleans, LA., August 17, 1994
20. "Automated Data Analysis of Time Resolved X-ray Measurements", Institute für Technische und Mskromolekulare Chemie, University of Hamburg, Hamburg, Germany, September 8, 1994
21. "Synchrotron Research for Polymer Science: Overview and Opportunity", National Institute of Standards and Technology, Gaithersburg, MD., September 16, 1994

22. "Workshop on X-ray Scattering from Polymers: I. Scattering Theory for Oriented and Unoriented Polymers; II. Applications of Scattering for Phase Transition Study of Poly(aryl ether ketones); III. Synchrotron Scattering Applications to Polymer Science", Polymer Science Group, Chemical Engineering Department, University of Delaware, Newark, DE., October 18-20, 1994
23. "Application of Synchrotron Research to Polymer Science", Synchrotron Radiation Research Center, Hsinchu, Taiwan, November 22, 1994
24. "Crystal Structure Development in Nylon 66 Fiber Drawing and Spinning", Institute für Technische und Mskromolekulare Chemie, University of Hamburg, Hamburg, Germany, February 8, 1995
25. "Probing In-Situ Structural Changes in Polymers Using High Brilliance Synchrotron X-rays", Department of Polymer Science and Engineering, University of Massachusetts, Amherst, MA., March 13, 1995
26. "Probing Structure/Morphology Changes in Real Time Using High Brilliance Synchrotron X-rays", Institute of Polymers Science, University of Akron, Akron, OH., May 12, 1995
27. "Probing Structural Changes in Polymers Using High Brilliance Synchrotron X-rays", Department of Materials Science and Engineering, Massachusetts Institute of Technology, Cambridge, MA., September 13, 1995
28. "Probing Polymer Structural Changes in Real Time Via High Brilliance Synchrotron X-rays", Institute of Materials Science, University of Connecticut, Storrs, CT., December 15, 1995
29. "Probing Structure and Morphology Changes During Polymer Crystallization and Melting Via Simultaneous SAXS/WAXD Methods", X International Conference on Small-Angle Scattering, Campinas, Brazil, July 21, 1996
30. "On-line X-ray Scattering Characterization of Structure and Morphology During Fiber Processing", X International Conference on Small-Angle Scattering, Campinas, Brazil, July 25, 1996
31. "New Insights Into Crystallization and Melting Behavior of Polymers and Fibers Via Synchrotron X-ray Scattering Methods", University of Tennessee, Knoxville, TN., August 22, 1996
32. "New Insights Into Crystallization and Melting Mechanism of Polymers and Fibers Via Synchrotron X-ray Scattering Methods", State University of New York at Stony Brook, Stony Brook, NY., October 3, 1996
33. "New Insights Into Crystallization and Melting Behavior of Polymers Via Synchrotron Time-Resolved X-ray Scattering Methods", University of Illinois, Urbana Champaign, IL., October 28, 1996
34. "New Insight Into Polymer Crystallization Via Time-Resolved Synchrotron Scattering Techniques", Materials Research Society Spring Meeting, San Francisco, CA., March 31, 1997
35. "New Insight into The Crystallization Behavior of Polymers and Fibers via Time-Resolved Synchrotron X-ray Measurements and Novel Data Analysis Techniques", CCP-13 Workshop, Synchrotron Research Source, Daresbury Laboratory, Manchester, UK., May 7, 1997
36. "Control of Crystallization and Morphology in Semi-Stiff Polymers via Molecular Architecture, Processing and Advanced In-Situ Characterization Techniques", General Electric Central Research & Development, Schenectady, NY., May 28, 1997
37. "New Insight into Polymer Crystallization via Time-Resolved Synchrotron X-ray Techniques", Naval Research Laboratory, Washington, DC., June 24, 1997
38. "Polymer Research Opportunities via Synchrotron Scattering Techniques and The Advanced Polymers PRT Beamline at X27C", BESAC Site Visit, National Synchrotron Light Source, Brookhaven National Laboratory, Upton, NY., June 25, 1997
39. "Study of Structural and Morphological Development During Fiber Spinning and Deformation Via Simultaneous 2D SAXS/WAXS Techniques", 46 Annual Denver X-ray Conference, Steamboat Springs, CO., August 3, 1997
40. "Probing Polymers via Synchrotron X-rays", State University of New York at Stony Brook, Materials Science and Engineering Colloquium, Stony Brook, NY., Oct. 29, 1997
41. "New Insights Into Crystallization and Melting Behavior of Polymers Via Synchrotron X-ray Scattering Methods", Central Research Division, Dow Chemical Company, Midland, MI., Dec. 4, 1997
42. "Probing Polymers Science via Synchrotron Radiation", Dow Corning Company, Midland, MI., Dec. 5, 1997
43. "Probing Polymers Science via Synchrotron Radiation", Research & Development Center, Montell, USA, Elkton, MD., Dec. 12, 1997
44. "New Insights Into Crystallization and Melting Behavior of Polymers Via Synchrotron X-ray Scattering Methods", EXXON Chemicals, Baytown, TX., Jan. 16, 1998
45. "New Insights Into Crystallization and Melting Behavior of Polymers Via Synchrotron X-ray Scattering Methods", Chemical Eng., University of Delaware, Newark, DE., Jan. 21, 1998

46. "Probing Polymers Science via Synchrotron Radiation", Ethicon, A Johnson & Johnson Company, Somerville, NJ., Jan 31, 1998
47. "Research Opportunity in Polymer Science by Simultaneous Synchrotron Small- and Wide- Angle X-ray Scattering Techniques", Small Angle Scattering, EXAFS and XANES Workshop, PPG Chemicals Technical Center, Pittsburgh, September 17, 1998
48. "Structure Development during Deformation of Poly(urethane) Based Polymers with Nanostructured Reinforcement", State University of New York at Stony Brook, Materials Science and Engineering Colloquium, Stony Brook, NY., Oct. 14, 1998.
49. "Research Opportunity in Polymer Science by Synchrotron X-ray Scattering Techniques", Chemistry and Chemical Engineering Department, Polytechnic University, Brooklyn, NY, October 28, 1998.
50. "Structural Changes during Deformation of Segmented Chain Elastomers with Nanostructured Reinforcement", Chemical Engineering Department, National Taiwan University, Taipei, Taiwan, November 16, 1998.
51. "Research Opportunity in Polymer Science by Simultaneous Synchrotron Small- and Wide- Angle X-ray Scattering Techniques", SRRC Users Meeting and Scattering Workshop, Hsinchu, Taiwan, November 18-21, 1998.
52. "Structural Changes during Deformation of Segmented Chain Elastomers with Nanostructured Reinforcement", Phillips Laboratory, Air Force Research Laboratory, Edward SFB, January 19, 1999.
53. "Probing the early stages of polymer crystallization by simultaneous small- and wide-angle X-ray scattering and laser light scattering", SAS99, XI International Conference on Small Angle Scattering, Upton, NY., May 20, 1999
54. "New Research Opportunities in Polymer Science via Synchrotron Radiation", Shaping Polymer for Novel Application by Crystallization", Changchun Institute of Applied Chemistry, Changchun, China, June 14-20, 1999.
55. "Small-Angle X-ray Analysis of Semi-Crystalline Polymers", 48th Annual Denver X-ray Conference, Polymer Data Analysis Workshop, Steamboat Springs, CO., August 3, 1999
56. "Effect of Orientation on Polymer Crystallization - A Study Of Melt Spinning Of Poly(Vinylidene fluoride) By In-Situ Synchrotron X-Ray Scattering ", European Physical Society Conference on Macromolecular Physics, Potsdam, Germany, Sept. 30-Oct. 2, 1999.
57. "Advanced Polymers Beamline (X27C) at National Synchrotron Light Source, Brookhaven National Laboratory", European Synchrotron Radiation Facility, Grenoble, France, Oct. 4, 1999.
58. "Research Opportunities in Polymer Science by Synchrotron X-ray Scattering Techniques", Physics Department, Boston University, Boston, MA October 15, 1999.
59. "Toward the Understanding of Early Stages of Polymer Crystallization: from Quiescent State to Elongational Flow", 6<sup>th</sup> Pacific Polymer Conference, Guangzhou, China, December 7-11, 1999.
60. "Some New Insights into the Morphological Development during Fiber Melt Spinning", Clemson University, Clemson, SC, January 20, 2000.
61. "Synchrotron Scattering Analysis", Dow Chemical Company, Midland, MI., February 24, 2000.
62. "Understanding of Process, Crystallization and Morphology Relationships in Isotactic Polypolypropylene", ExxonMobil Chemicals, Baytown, TX., April 28, 2000.
63. "Probing the Early Stages of Polymer Crystallization at Quiescent and Flow States", European Polymer Federation, Europolymer Conference 2000, Gargnano, Italy, May 31, 2000.
64. "POSS-Polyurethane and POSS-iPP", Nanostructured Chemicals Workshop, Huntington Beach, CA, September 7, 2000.
65. "Flow-Induced Crystallization in Polymers by In-Situ X-ray Scattering Study", Polymer Technology Center, Texas A&M, College Station, TX, Oct. 6, 2000.
66. "Orientation-Induced Crystallization in Isotactic Polypropylene", Goodyear Akron Polymer Lecture Group, Akron University, Akron, OH, November 3, 2000.
67. "Orientation-Induced Crystallization in Polymers", in Symposium of "Scattering Studies of Mesoscopic Scale Structure and Dynamics in Soft Matter", Messina, Italy, November 22-25, 2000.
68. "Orientation-Induced Crystallization in Polymers", Chemical Engineering Department, University of Palermo, Palermo, Sicily, Italy, November 27, 2000
69. "Orientation-Induced Crystallization in Polymers", Instituto de Estructura de la Materia, CSIC, Madrid, Spain, November 30, 2000
70. "Orientation-Induced Crystallization in Polymers", Chemical Engineering Department, Princeton University, December 11, 2000.

71. "Flow-Induced Crystallization in Polymers", ExxonMobil Chemicals, Clinton, NJ, March 1, 2001.
72. "Real-time measurements of structure development during polymer flow", 2001 Gordon Research Conference on CAE in Polymer Processing, Ventura, CA, March 4, 2001.
73. "Synthetic and Natural Nanofibers for Biomedical Applications", Chemistry Department, City College of New York, New York, March 28, 2001.
74. "Orientation-Induced Crystallization in Polymers", "Nanofillers Induced Physical Gelation in Polyolefins and Elastomers", EXXONMOBIL Chemicals, Baytown, TX., May 24, 2001.
75. "Polymer Research Opportunities by Synchrotron X-rays", 2001 Science, Engineering and Technology Seminars (SETS) and Business Expo, AACP (Association of American-Chinese Professionals) Foundation, Houston, TX, May 25, 2001.
76. "Silicon Based Nanocomposites", Estee Lauder Company, Inc., Melville, NY, June 6, 2001.
77. "Orientation-Induced Crystallization in Polymers", 2001 Telluride Workshop on Polymer Theory vs Polymer Experiment, Telluride, Colorado, August 6-10, 2001.
78. "Orientation-Induced Crystallization in Polymers", HORIZONS lecture, Kimberly-Clark Corp., Rosewell, GA, June 15, 2001.
79. "Physics of Orientation-Induced Crystallization in Polymers - A Case Study of Isotactic Polypropylene in Shear", Italian Association of Science and Technology of Macromolecules (AIM), European Polymer Federation (EPF), Salerno, Italy, October 14-17, 2001.
80. "Manipulation of Structure and Property in Vinyl-Based Polymer/Clay Nanocomposites", Building and Fire Research Laboratory, NIST, Gaithersburg, MD, January 16, 2002.
81. "Orientation-Induced Crystallization In Isotactic Polypropylene", 'Studies in Crystallization and Orientation of Thermoplastics', SPE ANTEC Meeting, San Francisco, CA, May 5-9, 2002.
82. "Control of Structure and Property in Nanocomposites Comprising Semicrystalline Polymer Matrix and Clay", 'International Symposium on Nanostructure, Deformation and Fracture in Semicrystalline Polymers', 223rd ACS National Meeting, Polymer Materials Science and Engineering Division, Orlando, FL, April 7-11, 2002.
83. "A Novel Diffraction Analysis for Estimate of Mesophase in Crystalline Polymer Fibers", 'Symposium on Polymer Diffraction Methods', 223rd ACS National Meeting, Polymer Chemistry Division, Orlando, FL, April 7-11, 2002
84. "Crystalline Morphology and Elastic Recovery of Semi-crystalline Ethylene-Propylene Elastomer", 223rd ACS National Meeting, Polymer Chemistry Division, Orlando, FL, April 7-11, 2002
85. "Orientation-Induced Crystallization in Long Chain Branched Polypropylenes and Ethylene-Propylene Copolymers", ExxonMobil Chemical Company, Baytown Research Center, Baytown, TX, March 22, 2002.
86. "Polymer Nanocomposite Technology", Chemical Technology Division of Associations of Chinese American Professionals, Houston, TX, March 23, 2002.
87. "New Insights into Natural Bone and Synthetic Nanocomposites by Synchrotron X-ray Scattering" Frontiers for Synchrotron Research on Soft Matter and Biomaterials Workshop organized by BNL, Tarrytown, New York, April 25-27, 2002.
88. "Orientation Induced Crystallization in Polymers", Polymer Processing for Nanostructure Control Workshop IPRIME Annual Meetings, University of Minnesota, Minneapolis, MN, May 28-29, 2002.
89. "Orientation-Induced Crystallization in Polymers", International Symposium on Polymer Crystallization, Mishima, Japan, June 9-12, 2002.
90. "Polymer Nanocomposite Technology", Chemical Engineering Department, National Taiwan University, Taipei, Taiwan, June 21, 2002.
91. "Polymer Research Opportunities Using Synchrotron Scattering Techniques", Chemical Engineering Department, Chung-Hsin University, Taichung, Taiwan, June 25, 2002.
92. "Orientation Induced Crystallization in Polymers", Materials Science and Engineering Department, Chung-Shan University, Kaoshung, Taiwan, June 26, 2002.
93. "Nanostructured Bioabsorbable Membranes for Biomedical Applications", Union Chemical Laboratory, Hsin-Chu, June 28, 2002.
94. "Manipulation of Structure and Morphology in Semicrystalline Bioabsorbable Polymers", International Symposium on Polymer Physics, PP'2002, Qingdao, China, July 2-6, 2002.
95. "Orientation Induced Crystallization in Polymers", Department of Textile and Fibers Engineering, Georgia Institute of Technology, Atlanta, GA, September 26, 2002.
96. "Mesomorphic PET as Precursor to Crystallization during Deformation", Corporate Research Laboratory, Kodak Company, Rochester, NY, Oct. 24, 2002.



97. "Polymer Nanocomposites Technology", The 2<sup>nd</sup> Annual Emerging Information Technology Conference - Princeton, NJ, Nov 1, 2002.
98. "New Insights Into Natural Bone and Synthetic Nanocomposites by Synchrotron X-ray Scattering", Department of Chemistry, Rensselaer Polytechnic Institute, Troy, November 8, 2002.
99. "Stony Brook/Baytown Collaborations of Synchrotron X-ray Study of Polymer Science", ExxonMobil Chemicals, Baytown, TX, November 15, 2002.
100. "Nanostructured Bioabsorbable Membranes for Biomedical Applications", Association of Chinese American Professionals, Houston, TX, November 16, 2002.
101. "Orientation Induced Crystallization in Polypropylene, Effects of Molecular Weight", Dow Chemical, Houston, TX, January 14, 2003.
102. "Shear-Induced Precursor Structures in Polyolefin Melts by In-Situ Rheo-SAXS and -WAXD Studies", Keynote Lecture, Engineering Properties & Structure Session, ANTEC 2003 Meeting in Nashville, TN, May 6, 2003.
103. "Non-Woven Nanofiber Technology from STAR, Inc.", Long Island Life Sciences Initiative's 2003 Long Island Life Sciences Summit, 'Nurturing the Life Sciences Revolution: A Strategic Perspective', Huntington, NY, May 8, 2003.
104. "Structural Development during Thermal Deformation in Poly(ethylene terephthalate) Film", Eastman Chemical Company, Kingsport, TN, June 12, 2003.
105. "Structural Development during Thermal Deformation in Poly(ethylene terephthalate) Film", Mitsubishi Polyester Films, Greenville, SC, June 16, 2003
106. "Flow-Induced Crystallization in Polyolefins", Milliken and Company, Spartanburg, SC, June 19, 2003.
107. "Flow-Induced Crystallization in Polyolefins", EquiStar Chemicals, Cincinnati, OH, August 5, 2003.
108. "Orientation-Induced Crystallization in Polymers", Chemical Engineering and Chemistry, Eindhoven University of Technology, Eindhoven, Netherlands, Sept. 19, 2003.
109. "Shear-Induced Precursor Structures in Polyolefin Melts by In-Situ Rheo-SAXS and -WAXD Studies", European Discussion Meeting on Polymer Physics, Waldau, Germany, Sept 24 - 27, 2003.
110. "Flow-Induced Crystallization Precursor Structures in Polymer Melts", Swiss Federal Institutes of Technology (ETH-Zurich), Zurich, Switzerland, Sept 28-Oct. 3, 2003.
111. "Real-Time Synchrotron X-ray Techniques for Polymer Processing Research", 3M Research Center, St. Paul, MN, Oct. 16, 2003.
112. "Adhesion and Anti-adhesion, from DNAs, Cells to Body Parts", Department of Chemical Engineering, National Tsing Hua University, Nov. 22, 2003.
113. "Synchrotron SAXS/WAXD application on soft condensed matter", 2003 Hsinchu Materials Nanotechnology Forum at ITRI, Hsinchu, Taiwan, Nov. 25,26, 2003
114. "Adhesion and Anti-adhesion, from DNAs, Cells to Body Parts", 2002 Gordon Research Conference, Colloidal, Macromolecular & Polyelectrolyte Solutions, Ventura Beach, CA, Feb 1-6, 2004.
115. "Flow-Induced Crystallization Precursor Structures in Polymer Melt", 9th Microsymposium in Wittenberg, Crystallization Processes and Micromechanical Effects in Confined Polymer System, Wittenberg , Germany, May 6-7, 2004.
116. "Structural formation of amorphous poly(ethylene terephthalate) during uniaxial deformation above and below glass temperature", SPE ANTEC Meeting, Chicago, IL, May 16-20, 2004
117. "Real-Time Synchrotron X-ray Techniques for Polymer Processing Research", SPE ANTEC Meeting, Frontier Award Symposium in honor of M. T. Shaw, Chicago, IL, May 16-20, 2004
118. "Strain Induced Phase Transition and Superstructure Development in Poly(ethylene Terephthalate)", International Symposium for Polymer Physics, Dali and Lijiang of Yunan, China, June 1-5, 2004.
119. "Directed nucleation scaffolds by polymer flow" 3rd East Asian Polymer Conference, Chengdu, China, May 26-29, 2003
120. "Synchrotron SAXS Techniques for Polymer Research", Small Angle Scattering Workshop, Denver X-ray Conference, Steamboat Springs, Colorado August 2-6, 2004.
121. "Flow-Induced Crystallization in Polyethylene and Blends", ExxonMobil Chemicals, Baytown, TX, October 15, 2004.
122. "In-Situ Synchrotron X-Ray Study of Polymer Processing", Chemical Engineering Department, the Autonomous University of San Luis Potosí in México, October 18, 2004.

123. "Biodegradable Nanofibers for Biomedical Applications", for Explorations in Nanoscale Science and Engineering, 2004 Science and Technology Series Sponsored by The Johns Hopkins University, Center Talented Youth Workshop, October 24, 2004.
124. "Super-Tough Surface-Modified Carbon Nanofiber/UHMWPE Nanocomposites" Annual Meeting of Emerging Information Technology Conference (EITC) –2004, Princeton University, Princeton, NJ, October 28-29, 2004.
125. "High Throughput Electro-Blowing Technology for Fabrication of Nanofibrous Barrier Fabrics", 14th TANDEC International Nonwovens Conference, Knoxville, TN, November 9-11, 2004.
126. "In-situ Synchrotron X-Ray Studies of Modified Carbon Nano-fiber and UHMWPE Nano-Composite Films during Deformation", MRS Symposium on "Materials for Space Applications", Boston, MA, Nov. 29 – Dec. 2, 2004.
127. "Synchrotron X-ray Techniques for the Study of Clay-Based Polymer Nanocomposites", the 167th Spring Technical Meeting of the Rubber Division, ACS in San Antonio, TX, May 16-18, 2005.
128. "Advanced Nanoscale Processing of Nanofibrous Articles and Their Applications", Korea Research Institute of Chemical Technology, Daejeon, Korea, December 6, 2004.
129. "Flow-Induced Crystallization in Polymers", KAIST, Korea, December 6, 2004.
130. "Advanced Synchrotron Research in Polymer Science", The symposium celebrating the 10th anniversary of Pohang Accelerator Laboratory, Pohang, Korea, December 8, 2004.
131. "Advanced Nanoscale Processing of Nanofibrous Articles and Their Applications", Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Tokyo, Japan, December 10, 2004.
132. "Flow-Induced Crystallization in Polymers", The Raymond F. Boyer Lecture Series, Department of Macromolecular Science and Engineering, Case Western Reserve University, Cleveland, OH, January 14, 2005.
133. "Structure Characterization of Nanocomposites by Synchrotron X-ray Rays", NanoCenter Polymer Nanocomposites Symposium Univ. Southern Carolina, April 7-8, 2005.
134. "Flow-induced crystallization precursor structures in entangled polyethylene melt", Phil Geil 75<sup>th</sup> Birthday Symposium, University of Illinois, Urbana-Champaign, I.L. April 8-9, 2005.
135. "Nanofibers for Biomedical Applications", Chemistry Department, Hofstra University, Long Island, NY, April 13, 2005.
136. "What can you do with fibers 1000 times smaller than spider silk", Extreme Textiles Symposium, Cooper-Hewitt National Design Museum, New York City, N.Y., May 12, 2005.
137. "What can you do with fibers 1000 times smaller than spider silk", Institut Charles Sadron, Strasbourg, France, June 23, 2005.
138. "Flow-Induced Crystallization in Polymers", Universite de Mons, Mons, Belgium, June 29, 2005.
139. "Nanofiber Technology for Biomedical Applications", Physikalisches Institut, Albert-Ludwigs-Universitaet, Freiburg, Germany, July 8, 2005.
140. "Flow-Induced Shish Kebab Precursor Structures in Entangled Polymer Melts", Polymer Processing Society in Quebec City, Canada, August 14-17, 2005
141. "Nanofiber Technology", DuPont Richmond Spruance Plant, Richmond, VA, August 23, 2005.
142. "Flow-Induced Crystallization Precursor Structures in Entangled Polymer Melts", European Discussion Meeting on Polymer Physics, "Polymer Crystallization", Waldau / Hochschwarzwald Germany, October 5 - 8, 2005
143. "Flow-Induced Crystallization in Entangled Polymer Melts", Dipartimento di Ingegneria Chimica e Alimentare, Universita' degli Studi di Salerno, Fisciano (SA), Italy, October 10, 2005
144. "Functional Nanofibers for Biomedical Applications", Proceeding of 2005 International Conference on Advanced Fibers and Polymer Materials, Shanghai, China, October 19-21, 2005.
145. "Biodegradable Nanofibers for Biomedical Applications", The First International Symposium of Research Center for Environment Friendly Polymers (IS-RCEFP-I), Kwansai Gakuin University Convention Center, Nishinomiya, Hyogo, Japan, Oct. 24-25, 2005.
146. "Polymer Nanofibers and Their Applications", Chemistry Department, Union College, New York, Nov. 3, 2005.
147. "A Scattering Study of Flow-Induced Crystallization Precursor Structures in Entangled Polyethylene Melt", Workshop on Application of Scattering Methods to Investigation of Structure and Dynamics of Soft Condensed Matter Villa Bencista, San Domenico (Florence), Italy, Nov. 11-13, 2005.
148. "Flow-Induced Crystallization Precursor Structure in Entangled Polymer Melt", Dow Chemical, Freeport TX, Nov. 29, 2005.

149. "Nanofiber Technology: Challenges and Opportunities", Institute of Materials Science, University of Connecticut, Connecticut, Storrs, Dec. 16, 2005.
150. "X-ray Characterization of Polymer Nanocomposites", ExxonMobil Chemical Company, Baytown, Texas, January 18, 2006.
151. "Flow Induced Crystallization from Entangled Melts", Twenty-Ninth Asilomar Conference on Polymeric Materials, Asilomar State Park, Pacific Grove, CA, February 5-8, 2006.
152. "Flow-Induced Crystallization Precursor Structure in Entangled Polymer Melt", APS March Meeting, Baltimore, MD, March 13-17, 2006.
153. "Thermal Stability of Shear-Induced Shish-Kebab Precursor Structure from High Molecular Weight Polyethylene Chains", 231st ACS National Meeting, Division of Polymeric Materials: Science and Engineering, Symposium on "Complex Fluids in Confined Spaces: Colloids and Complex Fluids", Atlanta, GA, March 26-30, 2006.
154. "Functional Nanofiber Technology through Combination of Chemistry, Physics and Engineering" Chemistry Department, The College of Staten Island, City University of New York, Staten Island, NY, April 13, 2006
155. "Functional Nanofiber Technology through Combination of Chemistry, Physics and Engineering" Chemistry Department, Lehigh University, PA, April 26, 2006
156. "Nanofiber Technology: Challenges and Opportunities", Dept. of Textiles and Apparel, Cornell University, May 4, 2006.
157. "Functional Nanofiber Technology through Combination of Chemistry, Physics and Engineering" Chemistry Department, State University of New York at Binghamton, NY, May 5, 2006
158. "Pushing the envelope of in-situ synchrotron scattering technique for characterization of biocomposites", Soft Materials & Nanoscience ERL Workshop, CHESS, Cornell University, June 19-20, 2006.
159. "Nanostructure Characterization by Advanced Scattering Techniques" Chemical Engineering Department, National Taiwan University of Science and Technology (NTUST), Taipei, Taiwan, June 27, 2006.
160. "Nanofiber Technology: Challenges and Opportunities" Center for Condensed Matter Sciences (CCMS), National Taiwan University (NTU), Taipei, Taiwan, June 28, 2006.
161. "Nanofiber Technology for Health: Challenges and Opportunities" Chemical Engineering Department, National Tsing-Hua University (NTHU), Hsin-Chu, Taiwan, June 30, 2006.
162. "Nanostructure Characterization by Advanced Scattering Techniques" National Chiao-Tung University (NCTU), Hsin-Chu, Taiwan, June 30, 2006.
163. "On-Line Nanostructure Characterization by Synchrotron X-ray Scattering and Diffraction Techniques", 22nd Annual Meeting of Polymer Processing Society, Yamagata, Japan, July 2-6, 2006.
164. "Synchrotron X-Ray Scattering of Polymer Nanocomposites", Synchrotron Radiation in Polymer Science III (SRPS3) Proceeding, Spring-8, Japan, July 6 - 8, 2006.
165. "Probing Shear-Induced Crystallization Precursor Structure in Entangled Polymer Melts by In-Situ Rheo-SAXS and Rheo-WAXD", XIII International Conference on Small-Angle Scattering Symposium, Kyoto, Japan, July 9-13., 2006.
166. "Polymer Nanocomposite Containing Modified Carbon Nanotubes/Nanofibers", Toyobo Company, Otsu, Japan, July 14, 2006.
167. "Nanofiber Technology for Health: Challenges and Opportunities", Department of Chemical Engineering and Materials Science, YuanZe University, Chungli, Taiwan, July 17, 2006.
168. "Nanofiber Technology for Health: Challenges and Opportunities", Health Materials and Techniques: Research and Development over the Past 25 Years: Investment in Basic Research Leading to Benefits for Society, HIST/PRES symposium, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14, 2006.
169. "Nanofibrous Materials for Biomedical and Environmental Applications", Health Materials and Techniques: Research and Development over the Past 25 Years: Investment in Basic Research Leading to Benefits for Society, HIST/PRES symposium, 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14, 2006.
170. "The Origin of Flow-Induced Crystallization in Entangled Polymer Melts " International Polymer Physics Meeting to honour Prof. Francisco José Baltá-Calleja on his 70th birthday, "Advances in Nanostructure and Physical Properties of Polymer Materials and Nanocomposites", Madrid, Spain, October 23-24, 2006.
171. "Structure, Process and Property Relationships of Olefin Block Copolymers via In-Situ Synchrotron X-ray Studies", The Dow Chemical Company, Freeport, TX, Nov. 7, 2006.
172. "On-Line Nanostructure Characterization by Synchrotron X-ray Scattering and Diffraction Techniques", W. L. Gore Company, Elkton, MD, Nov. 9, 2006.

173. "Effects of Microwave Irradiation on Nanostructure of Somasif Organoclay", ExxonMobil Chemical Company, Baytown, TX, Nov. 17, 2006.
174. "On-Line Nanostructure Characterization by Synchrotron X-ray Scattering and Diffraction Techniques", Arkema Inc. (Formerly Atofina Chemicals Inc.) King of Prussia, PA, January 17, 2007.
175. "Advanced Structure Characterization during Fiber Processing - Development of Supertough Nanocomposite Fibers", 90th Eastern Science and Technology Forum, Shanghai, China, April 23, 2007
176. "Flow-Induced Crystallization from Entangled Polymer Melts", Donghua University, Shanghai, China, April 23, 2007.
177. "New Horizon of Nanofiber Technology for Environmental Applications", the Alan Lawley Seminar, Department of Materials Science and Engineering, Drexel University, May 8, 2007.
178. "Advanced Nanostructure Characterization by Synchrotron Scattering/Diffraction Techniques – Instrumentation and Applications", Workshop on Synchrotron Radiation in Polymer Science, University of Science and Technology of China, Hefei, China, May 15, 2007
179. "Advanced Nanostructure Characterization by Synchrotron Radiation", Peking University, Beijing, China, May 16, 2007
180. "Structure Characterization of Nanocomposites by Synchrotron X-ray Rays" Nanotech 2007. Santa Clara (Silicon Valley) CA, May 20-24, 2007
181. "Transition Metal Ion Modified Organoclays as Fire Retardant Fillers for Polymer Nanocomposites", 18th Annual BCC Conference of FR on Polymeric Materials, Stamford, CT, May 21-23, 2007.
182. "Nanostructure Characterization of Biocomposites by Synchrotron Scattering" COST P12 Workshop on Applications of Synchrotron Light to Non-crystalline Diffraction in Materials and Life Sciences, Madrid, Spain, Oct. 15-17, 2007.
183. "Nanofiber Technology and Ultrafiltration", International Symposium on Polymers for Advanced Technologies (PAT2007), Shanghai, China, October 22 to 25, 2007.
184. "Fluoropolymer Nanocomposites Based on Fluorinated Carbon Nanotubes", Xerox Corporation, Webster, NY, Nov. 19, 2007.
185. "On-Line Nanostructure Characterization by Synchrotron X-ray Scattering and Diffraction Techniques", Chevron-Phillips Seminar Series, Macromolecules and Interfaces Institute, Virginia Tech, Blacksburg, VA, January 23, 2008.
186. "New Horizon of Nanofiber Technology for Environmental Applications", The Princeton Institute for the Science and Technology of Materials (PRISM) at Princeton University, Princeton, NJ, March 5, 2008.
187. "New Horizon of Nanofiber Technology for Environmental Applications" Macromolecular Science and Engineering, University of Michigan, Ann Arbor, MI, March 7, 2008.
188. Water Innovation, "From Ideas to Innovations", UCLA Anderson Entrepreneurs Conference (<http://www.uclamba.com/eac/2008>), May 9, 2008.
189. "New Breakthroughs in Water Purification - Nanofiber Technology & Molecular Engineering for Environment: Application to Water Purification", Commission on Sustainable Development 16 Conference, United Nations, May 16, 2008.
190. "Functional Nanofibrous Scaffolds for Biomedical Applications", The 40th Middle Atlantic Regional Meeting (MARM 2008) of the American Chemical Society, Queensborough Community College, Bayside, Queens, NY, May 17-21, 2008.
191. "Nanofiber Technology for Energy Saving Water Purification", Case Western Reserve University, Cleveland, Ohio, May 30, 2008.
192. "Structural Analysis of Polymer-Inorganic Nanocomposites by Synchrotron X-ray Scattering"; "Instrumentation Development of Multi-Scaled Scattering for Bio-Macromolecular Solutions at the National Synchrotron Light Source", 5th East-Asian Polymer Conference, Shanghai, China, June 4, 2008.
193. "Functional Nanofibrous Scaffolds for Biomedical Applications"; "Functional Nanofiber Technology for Environmental Application", the International Forum on Nanofibers and Functional Materials (111 project), Donghua University, Shanghai, China, June 5 and 6, 2008.
194. "Flow-induced Crystallization from Entangled Melts", International Symposium on Polymer Physics, PP'2008, Xiamen, China, June 8-12, 2008.
195. "Advanced Nanostructure Characterization of Polymeric Materials by Synchrotron X-ray Scattering/Diffraction Techniques", 24th Annual Meeting of Polymer Processing Society; PPS-24, Salerno, Italy, June 15-19, 2008.

196. "Functional Nanofibrous Scaffolds for Biomedical Applications", 2008 Emerging Information and Technology Conference, National Cheng Kung University, Tainan, Taiwan, June 26-27, 2008
197. "Nanofiber Technology for Water Purification", IUPAC-sponsored 42nd World Polymer Congress ("Macro 2008"), Taipei International Convention Center, Taipei, Taiwan, June 29 to July 4, 2008
198. "Structural Analysis of Polymer-Inorganic Nanocomposites by Synchrotron X-ray Scattering", "Polymeric Materials P2008", Martin-Luther-Universität Halle-Wittenberg, Halle (Saale), Germany, September 24 - 26, 2008
199. "Nanofiber Technology for Water Purification", The Fiber Society 2008 Fall Meeting and Technical Conference, Industrial Materials Institute Campus, Boucherville, Québec, Canada, October 1-3, 2008
200. "Advanced Nanostructure Characterization of Soft Matter by Synchrotron X-ray Techniques", Society of Plastics Engineers, Engineering Properties & Structure Division and Philadelphia Section, TOPCON: New Approaches in Polymer Characterization: Nanocomposites, Block Copolymers and other Nanostructured Materials, Wilmington, DE, October 13-14, 2008,
201. "Nanofiber Technology for Water Purification" the Lux Executive Summit Conference, Cambridge, MA, October 20-21, 2008.
202. "Nanofiber Technology for Environmental Applications", Chemical Engineering Department, University of Salerno, Salerno Italy, October 27, 2008.
203. "Nanofiber Technology for Environmental Applications", Institute of Physics, National Research Council - Messina, Sicily, Italy, October 28, 2008.
204. "In situ characterization of polymer processing by synchrotron scattering", Chemical Engineering Department, University of Palermo, Sicily, Italy, October 30, 2008.
205. "Advanced Nanostructure Characterization by Synchrotron Scattering/Diffraction Techniques", Department of Mechanical Engineering, Stevens Institute of Technology, Hoboken, NJ, November, 12, 2008.
206. "Low Pressure High Flux Nanofibrous Membranes for Water Purification", Advances in Materials and Processes for Polymeric Membrane Mediated Water Purification at California's Asilomar Conference Center, Monterey, California, February 22-25, 2009.
207. "Synchrotron Research on Polymer Science", A Symposium honoring Dr. Darrell Reneker's 80th Birthday, University of Akron, College of Polymer Science And Polymer Engineering, Akron, OH, March 13-15, 2009.
208. "High Flux Nanofibrous Membranes for Water Purification", in the session of Physics of Polymer Membranes for Water Purification, Pittsburgh, Pennsylvania, APS March Meeting, March 18, 2009.
209. "Breakthrough Nanofiber Technology for Water Purification", Tongji University, Shanghai, April 20, 2009.
210. "Synchrotron Research on Polymer Science", State Key Lab for Chemical Fibers & Polymer Materials, Donghua University, Shanghai, May 27, 2009.
211. "In-Situ Structure Characterization during Fiber Processing by Synchrotron X-ray Scattering/Diffraction Techniques", 2009 Fiber Society Conference, Donghua University, Shanghai, May 28, 2009
212. "Breakthrough Nanofiber Technology for Water Purification", Beijing University of Chemical Technology, Beijing, June 1, 2009.
213. "Breakthrough Nanofiber Technology for Water Purification", Polymer and Chemical Engineering Innovation Northeast Ohio (PINO) 2009 Conference, Case Western Reserve University, July 17, 2009.
214. "Structure, Property and Process Relationship of Thermoplastic Polyolefin Elastomers", Symposium on Polyolefin Crystallization, the ExxonMobil Global Microscopy Network, and Products Fundamentals Research, ExxonMobil, Clinton, NJ, July 21, 2009.
215. "Energy-saving nanofibrous membrane technology for water purification", Division of Industrial & Engineering Chemistry, Symposium Honoring Professor Donald R. Paul on the Occasion of his 70th Birthday, ACS Fall Meeting, Washington, DC, August 18, 2009.
216. "Breakthrough polymer nanofiber technology for water purification", 2009 International Conference on Advanced Fibers and Polymer Materials (ICAFPM 2009), Shanghai, China, October 21 - 24, 2009.
217. "Synchrotron Research on Polymer Science", College of Polymer Science and Engineering, Sichuan University, Chengdu, China, October 27, 2009.
218. "Highly Efficient Microfiltration Membranes based on Hierarchical Nanofiber Structure", International Symposium on Polymer Physics, PP' 2010, Ji'nan, China, June 6-10, 2010.
219. "Highly Efficient Microfiltration Membranes based on Hierarchical Fiber Composite Configuration", Nanofibers for the 3rd Millennium 2010 (N3M 2010), Raleigh, North Carolina, August 30 - September 1, 2010.
220. "Breakthrough polymer nanofiber technology for water purification", Applied Chemistry Lecture Series, Chanchung Institute of Applied Chemistry, Chinese Academy of Sciences, Changchung, November 19, 2010.

221. "In-situ Synchrotron X-ray Studies on the Structure-Property Relationships in Polyolefin Blends and Copolymers", College of Polymer Science and Engineering, Sichuan University, Chengdu, Sichuan, November 24, 2010.
222. "Highly Permeable Nanofibrous Filters for Water Purification", ACS Division of Polymer Chemistry "Advances in Materials and Processes for Polymeric Membrane Mediated Water Purification 2011" Conference, Asilomar Conference Grounds, Pacific Grove, California, February 27 – March 2, 2011.
223. "Highly Efficient Nanofibrous Membranes for Water Purification", POLYCHAR 19 – World Forum on Advanced Materials Kathmandu, Nepal, March 20-24, 2011.
224. "Highly Efficient Nanofibrous Membranes for Water Purification", State Key Lab for Chemical Fibers & Polymer Materials, Donghua University, Shanghai, April 1, 2011.
225. "Highly Permeable Nanofibrous Membranes for Water Purification", International Conference on Advanced Fibers and Polymer Materials (ICAFPM 2011), Shanghai, China, August 15 – 17, 2011.
226. "Highly Permeable Nanofibrous Membranes for Water Purification", Department of Materials and Optoelectronic Science, National Sun Yat-Sen University, Kaohsiung, Taiwan, August 19, 2011.
227. "Highly Permeable Nanofibrous Membranes for Water Purification", Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan, August 22, 2011.
228. "Highly Permeable Nanofibrous Membranes for Water Purification", Department of Chemistry and Department of Chemical Engineering & Materials Science, University of Minnesota, Minneapolis, Minnesota, September 23, 2011.
229. "NSLS-II Current Status and Plans", Shanghai Synchrotron Radiation Facility, Shanghai, China, October 31, 2011.
230. "New Insights on the Formation of Bone by Synchrotron X-ray Scattering", Department of Chemistry, The Chinese University of Hong Kong, Hong Kong, China, November 2, 2011.
231. "Highly Permeable Nanofibrous Membranes for Water Purification", NUS Nanoscience and Nanotechnology Initiative National University of Singapore, Singapore, November 4, 2011.
232. "X-ray scattering fundamentals- theoretic computation of scattering patterns", "X-ray scattering study of polyolefin crystallization - crystalline morphology development and mechanical behavior", Workshop "SAXS and WAXS/XRD in ExxonMobil", Corporate Strategic Research, Clinton, NJ, November 9, 2011.
233. "Highly Efficient Nanofibrous Membranes for Water Purification", Institute of Materials Science, University of Connecticut, Storrs, CT., February 3, 2012.
234. "Highly Efficient Nanofibrous Membranes for Water Purification", College of Chemistry and Chemical Biology, Gunma University, Gunma, Japan, May 28, 2012.
235. "Highly Efficient Nanofibrous Membranes for Water Purification", School of Chemistry and Chemical Engineering, Nanjing University, Nanjing, China, June 1, 2012.
236. "Highly Permeable Nanofibrous Membranes for Water Purification", Polymer Physics 2012, Chengdu, China, June 6, 2012.
237. "Highly Efficient Nanofibrous Membranes for Water Purification", College of Polymer Sciences and Engineering, Sichuan University, Chengdu, China, June 7, 2012.
238. "Nanofibrous Polymeric Membranes with Directed Water Channels", ACS "Water Purification 2013" Workshop, Asilomar Conference Grounds, Pacific Grove, CA, February 24 - 27, 2013.
239. "Highly permeable nanofibrous membranes for energy efficient water purification", ACS National Meeting, Polymeric Materials: Science and Engineering Division, the "Porous Polymers" Symposium, New Orleans, LA, April 7-11, 2013.
240. "Nanofibrous Cellulose Membranes for Water Purification", Planery Lecture, 6th International Symposium on Engineering Plastics, Xiamen, China, August 25-28, 2013.
241. "Synchrotron X-ray Characterizations of Polymers and Biomaterials", Key Laboratory of Rubber-plastics, Ministry of Education, Qingdao University of Science and Technology, Qingdao, China, September 24, 2013.
242. "Highly Efficient Nanofibrous Membranes for Water Purification" D6 (Advanced Fibers and Nano-composites) Session, IUMRS-13th International Conference on Advanced Materials, Qingdao, China, September 23-27, 2013.
243. "Synchrotron X-ray Characterizations of Polymers and Biomaterials", Institute of Chemistry, Chinese Academy of Sciences, Beijing, September 25, 2013.
244. "Synchrotron X-ray Characterizations of Polymers and Biomaterials", Sinopec Headquarter, Beijing, September 26, 2013.

245. "Planning for Excellence, Chemistry Department at Stony Brook", Facultad de Ciencias Químicas, La Universidad Autónoma de San Luis Potosí (UASLP), Mexico, January 8, 2014.
246. "Highly permeable nanofibrous membranes for water purification", Chemistry Department, Stony Brook University, Feb 13, 2014.
247. "New breakthroughs in highly permeable polymer membranes for water purification", IBM Research Center - Almaden Science & Technology, Feb. 25, 2014.
248. "Electro-Spinning Technology & its Applications to Fibrous Membranes" in Electrospinning and Nanofibers: Symposium in Honor of the 85th Birthday of Darrell Reneker, Division of Polymeric Materials Science and Engineering (PMSE), 247th American Chemical Society National Meeting, Dallas, TX, March 16-20, 2014.
249. "New breakthroughs in highly permeable polymer membranes for water purification", "Dr R A Mashelkar Endowment Lecture on Advanced Materials" at the Council of Scientific and Industrial Research (CSIR) - National Chemical Laboratory (NCL), India, March 6, 2014.
250. "Electro-Spinning Technology & its Applications to Fibrous Membranes" in Electrospinning and Nanofibers: Symposium in Honor of the 85th Birthday of Darrell Reneker, Division of Polymeric Materials Science and Engineering (PMSE), 247th American Chemical Society National Meeting, Dallas, TX, March 18, 2014.
251. "High flux nanofibrous membranes for water purification", POLYCHAR 22: World Forum on Advanced Materials, Stellenbosch, South Africa, April 10, 2014.
252. "Highly Permeable Nanofibrous Membranes for Water Purification", Chinese American Academic & Professional Society (CAAPS), Taipei Economic and Cultural Office in New York, May 9, 2014.
253. "Highly Permeable Nanofibrous Membranes for Water Purification", State Key Lab for Chemical Fibers & Polymer Materials, Donghua University, Shanghai, May 27, 2014.
254. "Highly Permeable Nanofibrous Membranes for Water Purification", 11th International Symposium of Polymer Physics (PP2014), Nanjing, China, June 9, 2014.
255. "Characterization of cellulose nano-fibers & applications to fibrous membranes", 30th International Conference of the Polymer Processing Society (PPS-30), Cleveland, Ohio, June 11, 2014.
256. "Highly permeable nanofibrous membranes for water purification", Materials Science and Engineering Division, National Institute of Standards and Technology, Gaithersburg, MD, July 14, 2014.
257. "Breakthrough Nanofibrous Membranes for Water Purification", Chinese American Academic and Professional Society 2014 Annual Convention (CAAPS2014), Technology Innovation & Applications Session, Flushing, NY August 17, 2014.
258. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Kathmandu Symposia on Advanced Materials – 2014 (KaSAM-2014), Kathmandu, Nepal, September, 8, 2014.
259. "Synchrotron X-ray study of extensional flow-induced crystallization in isotactic polypropylene", International Symposium on Fiber Science and Technology (ISF2014), Tokyo, Japan, Sept. 29, 2014.
260. "Structural study of cellulose nascent crystals", ICR Symposium on Polymer Crystals (ICRSPC2014), Kyoto, Japan, Oct. 2, 2014.
261. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Tianfu Forum for Polymer Lecture Series, State Key Laboratory of Polymer Materials Engineering, Polymer Research Institute and College of Polymer Science & Engineering, Sichuan University, Chengdu, China, October 15, 2014
262. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", 3rd Saudi International Nanotechnology Conference and workshops (SINC 2014), King Abdulaziz City for Science and Technology (KACST), Riyadh, Saudi Arabia, December 3, 2014.
263. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Institut Charles Sadron, CNRS, Starsbourg, France, December 8, 2014.
264. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Centre for Materials for Electronics Technology (C-MET), Thrissur, India, January 19, 2015.
265. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Centre for Nanoscience and Nanotechnology, School of Chemical Sciences, Mahatma Gandhi University, Kerala, India, January 21, 2015.
266. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Material Sciences and Technology Division, CSIR-National Institute for Interdisciplinary Science and Technology (CSIR-NIIST), Thiruvananthapuram, India, January 22, 2015.
267. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Department of Fiber and Polymer Sciences, Division of Textiles and Clothing, University of California, Davis, February 20, 2015.

268. “Crystallization of Polyolefins under Flow and Deformation”, SCG Chemicals Co., Ltd, Siam Cement Group, (SCG), Rayong, Thailand, March 16, 2015.
269. “Synchrotron X-ray Characterizations of Polymers and Biomaterials”, Synchrotron light research institute (SRLI), Nakhon Ratchasima, Thailand, March 18, 2015.
270. “Synchrotron X-ray research of structure-property relationship in polymers”, and “Highly Permeable Nanofibrous Cellulose Membranes for Water Purification”, 3M Corporate Research Processing Laboratory, St. Paul, MN, May 14 and 15.
271. “Exploring the Nature of Cellulose Microfibrils”, 2015 International Conference on Advanced Fibers and Polymer Materials (ICAFPM 2015), Donghua University, Shanghai, China, May 24–27, 2015.
272. “Exploring the Nature of Cellulose Microfibrils”, College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu, China, May 28, 2015.
273. “Exploring the Nature of Cellulose Microfibrils”, College of Material Science and Engineering, Beijing University of Chemical Technology, Beijing, China, June 1, 2015.
274. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, The Symposium in honor of Professor Richard Stein on his 90th Birthday, University of Massachusetts, Amherst, MA, August 21, 2015.
275. “Structure Characterization of Cellulose Nanofibers/Microfibrils”, 6th Conference on Synchrotron Radiation in Polymer Science, Madrid, Spain, September 7-10, 2015.
276. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, in the symposium of “Polymer processing with resulting morphology and properties: feet in the present and eyes at the future.”, Salerno, Italy, October 15- 17, 2015.
277. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes” (Plenary Speaker), Australasian Polymer Symposium, Gold Coast, Australia, July 14, 2015.
278. “Exploring the nature of cellulose microfibrils and their applications in water purification”, Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Australia, July 16, 2015.
279. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, Department of Chemical & Biomolecular Engineering, Melbourne University, Melbourne, Australia, July 20, 2015.
280. “Breakthrough Water Purification Technology Based on Highly Permeable Nanofibrous Membranes”, Stein Symposium (in honor of Prof. Richard Stein’s 90<sup>th</sup> Birthday), University of Massachusetts, Amherst, MA, August 21, 2015.
281. “Structure Characterization of Cellulose Nanofibers/Microfibrils”, Advanced Light Source, Lawrence Berkeley National Laboratory, Berkeley, CA, August 24, 2015.
282. “Structure Characterization of Cellulose Nanofibers/Microfibrils”, 6th International Conference on Synchrotron Radiation in Polymer Science, Madrid, September 9, 2015.
283. “Structure Characterization of Cellulose Nanofibers/Microfibrils”, Department of Polymer Engineering, University of Minho, Guimarães, Portugal, September 11, 2015.
284. “Highly Permeable Nanofibrous Cellulose Membranes for Water Purification”, Chemistry Department, New York University, New York City, NY, October 2, 2015.
285. “Highly Permeable Nanofibrous Cellulose Membranes for Water Purification”, Macromolecular Sciences and Engineering Department, Case Western Reserve University, Cleveland, OH, October 7, 2015.
286. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, an International Conference celebrating the 70<sup>th</sup> birthday of Giuseppe Titomanlio (GT70 International Conference), Salerno, Italy, October 16, 2015.
287. “Structure Characterization of Cellulose Nanofibers/Microfibrils”, ALBA Synchrotron Light Facility, Barcelona, Spain, October 19, 2015.
288. “Discovery of Sustainable Nanomaterials for Water Purification”, ACS Award Symposium, Department of Chemistry, Stony Brook University, Stony Brook, NY, October 29, 2015.
289. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, Wallenberg Wood Science Centre (WWSC) Fall Conference/Workshop in Gothenburg, Sweden, December 8, 2015.
290. “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, Government Engineering College, Thrissur, Kerala, India, January 20, 2016.
291. “Breakthrough water filtration membrane technology based on nanofibers”, Center of Functional Nanomaterials (CFN) Colloquium, Brookhaven National Laboratory, Upton, NY, Feb 18, 2016.
292. “Center for Integrated Electric Energy Systems (CIEES)”, The 3rd International Electric Vehicle Expo (IEVE), Jeju, Korea, March 21, 2016.



293. "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", EE15: Materials for Sustainable Development - Integrated Approaches, 2016 MRS Spring Meeting & Exhibit, Phoenix, Arizona, March 31, 2016.
294. "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", 2106 Dow Chemical (China) Innovation Forum, Shanghai, China, May 26, 2016.
295. "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", Eastern Forum of Science and Technology, Forum on Fundamental and Application Issues of Low-Dimension Materials, Shanghai, China, May 26, 2016.
296. "Scattering in Polymer Science – Characterization of Nanocelluloses", Wallenberg Wood Science Centre (WWSC) Spring Conference/Workshop in Aland Islands, Finland, June 13-15, 2015.
297. "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", Department of Chemical and Biomolecular Engineering, The Ohio State University, Columbus, OH, August 25, 2016.
298. "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", Department of Chemical Engineering, National Taiwan University, Taipei, Taiwan, October 5, 2016.
299. "Processing of Highly Permeable Membranes for Water Purification", Polymer Processing Society Asia/Australia Conference 2016 (PPS-2016), Chengdu, China, October 13, 2016.
300. "Multi-scale Structure Characterization of Complex Polymer Systems", College of Material Science and Engineering, Beijing University of Chemical Technology, Beijing, China, October 18, 2016.
301. "Multi-scale Structure Characterization of Complex Polymer Systems", Key Laboratory of Rubber-Plastics, Qingdao University of Science and Technology, Qingdao, China, October 20, 2016.
302. "Highly permeable nanocellulose membranes for water purification", International Union of Materials Research Societies, International Conferences in Asia (IUMRS-ICA 2016), Qingdao, China, October 21, 2016.
303. "Nanocelluloses for Water Purification", International Union of Materials Research Societies, International Conferences in Asia (IUMRS-ICA 2016), Qingdao, China, October 21, 2016.
304. "Nanocelluloses for Water Purification", The 4th Saudi International Nanotechnology Conference (SINC 2016), King Fahd University of Petroleum and Minerals (KFUPM), Dhahran, Saudi Arabia, October 26, 2016.
305. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", International Conference on Advances in Functional Materials, ICAFM2017, Anna University, Guindy, Chennai, India, January 6-8, 2017.
306. "Nanocelluloses for Water Purification", MACRO2017 International Conference on Polymer Science and Technology, Thiruvananthapuram, India, January 9-11, 2017.
307. "Nanocelluloses for Water Purification", CINVESTAV, Unidad Irapuato, Mexico, February 6, 2017.
308. "Structure and property relations in crystalline and multicomponent polymers"; "Probing the structure, property and processing relations in polyolefins by in-situ X-ray scattering", SCG Chemicals Co., Ltd, Siam Cement Group, (SCG), Rayong, Thailand, February 20-21, 2017.
309. "Synchrotron scattering applications in polymer and soft matter science", Synchrotron Light Research Institute (SLRI), Nakhon Ratchasima, Thailand, February 22, 2017.
310. "Learning how to use agricultural wastes to treat waste water through nanotechnology", the World Water Day event, Botswana Institute for Technology Research and Innovation (BITRI), Gaborone, Botswana, March 22, 2017.
311. "New ideas for global water challenges", NAI-SBU Young Academic Inventor's Award Symposium, Stony Brook University, September 12, 2017.
312. "Advancing Nanocellulose Technologies for Water Purification", 2017 International Conference on BioNano Innovation, Australian Institute for Bioengineering and Nanotechnology, The University of Queensland, Brisbane, Australia, September 24, 2017.
313. "Advancing Nanocellulose Technologies for Water Purification", International Conference on Advanced Fibers and Polymer Material (ICAFPM), Donghua University, Shanghai, China, October 11, 2017.
314. "Sustainable Extraction of Carboxycellulose Nanofibers for Environmental and Advanced Materials Applications", College of Material Science and Engineering, Beijing University of Chemical Technology, Beijing, China, October 17, 2017.
315. "Nanocelluloses for Water Purification", 9th Sino-US Joint Conference of Chemical Engineering, organized by Beijing University of Chemical Technology, Beijing, China, October 17, 2017.
316. "Advancing Nanocellulose Technologies for Water Purification", R&D Technology Club Seminar Series, Pall Corporation, Port Washington, NY, December 5, 2017.

317. "To Purify Water with Nanocelluloses", African Materials Research Society (AMRS) Conference, "Addressing Africa's Challenges through Materials Development", Gaborone, Botswana, December 11, 2017.
318. "Extracting nanocelluloses from underutilized biomass for water purification", BiMaC Innovation, KTH, in IVA (The Royal Swedish Academy of Engineering Sciences) Stockholm, Sweden, January 29, 2018.
319. "New ways to lift the burden of drinking water challenges for our planet", Harvard Project for Asian and International Relations, "The Crisis of Water Sanitation", Harvard University, Massachusetts, February 18, 2018.
320. "Advancing Nanocellulose Membrane Technology for Water Purification", Chemical Engineering Department, Donghai University, Taichun, Taiwan, May 21, 2018.
321. "Advancing Nanocellulose Membrane Technology for Water Purification", Department of Chemical Engineering, National Tsing Hua University, Hsinchu, Taiwan, May 25, 2018.
322. "Advancing Nanocellulose Membrane Technology for Water Purification", College of Materials Science and Engineering, Beijing University of Chemical Technology, Beijing, China, May 28, 2018.
323. "Advancing Nanocellulose Membrane Technology for Water Purification", College of Materials Science and Engineering, Donghua University, Shanghai, China, May 31, 2018.
324. "Advancing Nanocellulose Technologies for Water Purification", 2018 MRS Fall Meeting, Boston, Massachusetts, November 29, 2018.
325. "New and Sustainable Nanocellulose Technologies for Desalination and Waste Water Treatments", Botswana Institute for Technology Research and Innovation (BITRI), Gaborone, Botswana, December 12, 2018.
326. "Advancing Nanocellulose Membrane Technology for Water Purification", Manhattan College, Riverdale, NY February 27, 2019.
327. "Advancing Nanocellulose Membrane Technology for Water Purification", Suffolk County Community College, Michael J. Grant Campus, Long Island, NY, March 11, 2019.
328. "Advancing Nanocellulose Technology for Water Purification", The City College of New York, Grove School of Engineering, New York City, NY, April 18, 2019.
329. "Fundamental aspects of structure and property relationship in semi-crystalline polyolefins", Siam Cement Group, SCG Chemicals Co., Ltd., Bangkok, Thailand, September 17, 2019.
330. "Sustainable New Materials Based on Nanocellulose for Water Purification", Chemical Engineering Department, Tsinghua University, Beijing, China, September 24, 2019.
331. "Sustainable New Materials Based on Nanocellulose for Water Purification", College of Materials Science and Engineering, Beijing University of Chemical Technology, Beijing, China, September 24, 2019.
332. "Nanocellulose Technologies for Water Purification", Ningbo Key Laboratory of Specialty Polymers, Department of Materials Science and Chemical Engineering, Ningbo University, Ningbo, Nov 18, 2019.
333. "Sustainable Water Purification Using Biomass Nanofibers", 9th International Conference on Advanced Fibers and Polymer Materials (ICAFPM 2019), Donghua University, Shanghai, China, November 21, 2019.
334. "Synchrotron enabled soft matter research: From polymers to nanocellulose", Division of Polymeric Materials Science and Engineering, SESSION: Celebrating 50 Years of Polymer Science at ExxonMobil's Corporate Research Laboratories, ACS National Meeting, Philadelphia, PA, March 24, 2020.
335. "Sustainable water purification using biomass nanofibers", Division of Cellulose and Renewable Materials, SESSION: Cellulose & Renewable Materials for Gas, Air & Water/Liquid Purification, ACS National Meeting, Philadelphia, PA, March 25, 2020.
336. "Fabrication, characterization and applications of nanocellulose for water purification", Symposium on Polymer Rheology, Processing, and Characterization in Honor of Dr. Montgomery T. Shaw's 77th Birthday and Many Contributions, Society of Plastic Engineering, ANTEC 2020, San Antonio, TX, March 31, 2020.
337. "Exploring the nature of plant biomass building block-elementary microfibril", 4<sup>th</sup> Symposium of Polymer Crystallization: Theory, Applications and Characterizations (Virtual Presentation), Chinese Chemical Society, Hangzhou, China, April 25, 2020.
338. "Nanocellulose technologies to advance the nexus of food-energy-water systems", Wallenberg Wood Science Centre (WWSC) Workshop: Researchers' Response to Crisis (Virtual Presentation), June 15, 2020.
339. "Nanocellulose technologies to advance the nexus of food energy water systems", Chinese American Academic & Professional Society (CAAPS), (Virtual Presentation), August 8, 2020.
340. "Nanocellulose technologies to advance the nexus of food energy water systems", NYS Center for Clean Water Technology, Stony Brook University, (Virtual Presentation), August 31, 2020.
341. "Synchrotron enabled soft matter research: from polyolefin to nanocellulose", Dow Chemical, Corporate Research (Virtual Seminar), September 10, 2020.

342. "Nanocellulose technologies to advance the nexus of food energy water systems", Department of Civil and Environmental Engineering, Worcester Polytechnic Institute (Virtual Seminar), September 30, 2020.
343. "Upcycling biomass waste as effective water purification materials by nitro-oxide process", 9th International Conference on Water Resources and Arid Environments (Virtual Presentation), March 29 (2021)
344. "Nanocellulose technologies to advance the nexus of food energy water systems", Connecticut Agricultural Experimental Station, New Haven, CT, April 15, 2021.
345. "Structure Studies of Aromatic Polyamide Selective Layers in Reverse Osmosis Membranes", Telluride (TSRC) workshop on "Water: Grand Challenges for Molecular Science and Engineering", Telluride, CO., July 16, 2021.
346. "Advancing Sustainable Nanocellulose Technologies for Water Purification", Advanced Materials Lecture Series (Virtual Presentation), International Association of Advanced Materials, July 29, 2021.
347. "Extracting Nanocellulose from Diverse Biomass Feedstocks for Water Purification", The Global Health Youth Organization (Virtual Presentation), August 30, 2021.
348. "Advancing Sustainable Nanocellulose Technologies for Water Purification", Advanced Nanomaterials Congress (Virtual Presentation), October 25, 2021.
349. "Synchrotron Research to Accelerate Materials Development for Sustainable Water Purification", SLAC-Stanford Water Group (Virtual Presentation), November 19, 2021.
350. "Sustainable Nanocellulose Extraction from Diverse Biomass Feedstocks for Water Purification", International Symposium on 'Nanotechnology and Innovations for 4IR in Asia-Pacific and Beyond' (Virtual Presentation), November 20, 2021.
351. "Nanocellulose Extraction from Diverse Biomass Feedstocks by Nitro-Oxidation Method", International Conference on Frontier Materials (Virtual Presentation), Zhuhai, China, December 8-12, 2021.
352. "Advancing nanofiber technologies from electrospinning to nanocellulose for water purification", Youth Innovators Design Bootcamp in Kigali, Rwanda, United Nations Economic Commission for Africa (UNECA) (Virtual Presentation), February 23, 2022.
353. "Nanocellulose Extraction from Diverse Biomass Feedstocks for Sustainable Water Purification ", NYS Center for Clean Water Technology, Stony Brook University (Virtual Presentation), May 2, 2022.
354. "Nanocellulose Extraction from Diverse Biomass Feedstocks by Nitro-Oxidation Method", International Conference on Frontier Materials 2022 (Virtual Presentation), Beijing, China May 28, 2022.
355. "Synchrotron X-ray Technologies to Assist Our Understanding of Nanocellulose Science and Applications", Wallenberg Wood Science Center (WWSC) Summer Workshop, (Virtual Presentation), Sweden, June 21, 2022.
356. "Nanocellulose Extraction from Diverse Biomass Feedstocks by Nitro-Oxidation Method", 2022 Simons Summer Program, Stony Brook University (Virtual Presentation), July 12, 2022.
357. "Zero-Waste Nitro-oxidation Process to Extract Nanocellulose from Diverse Feedstocks to Combat Climate Change". Wallenberg Wood Science Centre (WWSC) Workshop, Skåvsjöholm, Sweden, December 12, 2022.
358. "Zero-Waste Nitro-oxidation Process to Extract Nanocellulose from Diverse Feedstocks to Combat Climate Change", Agricultural Innovation and Technology Transfer Center (AITTC), the International Water Research Institute (IWRI), the Center for Remote Sensing Application (CRSA), and the African Plant Nutrition Institute (APNI), Université Mohammed VI Polytechnique (UM6P), Ben Guerir, Moroccan. December 15, 2022.
359. "Nanocellulose-Enabled Nanofertilizers to Enhance the Food and Water Nexus" (Virtual Presentation), UNECA Fourth Youth Innovators Design Bootcamp, United Nations, February 22, 2023.
360. "Synchrotron-Enabled Nanocellulose Research: from Basic Science to New Circular Solutions for Improving Water-Food-Infrastructural Nexus", APS Workshop on New Opportunities in Chemistry & Materials Sciences w/Anomalous X-ray Scattering, APS/CNM 2023 Users Meeting, University of Chicago, Chicago, IL, May 3, 2023.
361. "New Circular Solutions for the Food-Water Nexus by Nanocellulose Technologies", Chemical Engineering Department, The University of Queensland, Brisbane, Australia, May 12, 2023.
362. "New Circular Solutions for the Food-Water Nexus by Nanocellulose Technologies", The 3rd International Conference of Lignocellulose, in conjunction with the 15th International Symposium of Indonesian Wood Research Society (ICONLIG-IWORS), Bogor, Indonesia, September 21, 2023.
363. "From Waste to Harvest: New Circular Solutions for Agriculture", 7th International Symposium on Green Technology for Value Chains (GreenVC), Bandung, West Java, Indonesia, November 14, 2023.
364. "From Waste to Harvest: Creating Circular Solutions to Enhance the Nexus of Food and Water", 2024 Zero City, Circular Economy Forum, Yuan Ze Univeristy, Taoyuan, Taiwan, January 22, 2024.
365. "From Waste to Harvest: New Circular Solutions for Agriculture - My Journey Inspired by Polymer Science", Annual Polymer Symposium in Taiwan, Tainan, Taiwan, January 22, 2024.

366. "From Waste to Harvest: New Circular Solutions for Agriculture", Chemical Engineer Department, National Taiwan University, Taipei, Taiwan, January 31, 2024.
367. "From Waste to Harvest: New Circular Solutions for Agriculture", Ministry of Environment, Taipei, Taiwan February 1, 2024.
368. "From Waste to Harvest: New Circular Solutions for Agriculture", ACS Webinars on Natural Polymers, Harnessing the Power of Natural Polymers: Innovation Opportunities for Circular Materials, February 28, 2024.
369. "From Nanocellulose Technologies to New Circular Solutions for Agriculture", Distinguished Alumni Lecture, Institute of Materials Science, University of Connecticut, Storrs, CT, April 19, 2024.
370. "Transforming Organic Waste into Sustainable Solutions: A Glimpse into SWFT Labs", Long Island Organics Council, Virtual Presentation, April 24, 2024.
371. "Cationic Nanocellulose Adsorbents for Removal of Perfluoroalkyl Substances", 2024 Clean Water Symposium, NYS Center for Clean Water Technology, June 12, 2024.

## 9. MEETING PRESENTATIONS

### 1984

1. B. S. Hsiao, M. T. Shaw and E. T. Samulski, "High Pressure DTA Apparatus for the Study of Liquid Crystalline Polymers" (poster), NBS/SPE Symp. on Applications of Phase Diagrams in Polymer Science, October, Gaithersburg, MD.

### 1985

2. B. S. Hsiao, E. T. Samulski and M. T. Shaw, "High Pressure Study of Potential Liquid Crystalline Polymers" (oral), APS Annual Meeting, March, Baltimore, MD.

### 1986

3. B. S. Hsiao, E. T. Samulski and M. T. Shaw, "A High-Pressure DTA Apparatus Based on an Instron Capillary Rheometer" (oral), SPE ANTEC Meeting, April, Boston, MA.
4. B. S. Hsiao, E. T. Samulski and M. T. Shaw, "High Pressure Study of A Liquid Crystal Polymer" (poster), Gordon Research Conference on Liquid Crystal Polymers, July, New London, NH.
5. B. S. Hsiao, M. T. Shaw and E. T. Samulski, "A High Pressure DTA/Dilatometric Apparatus Based on an Instron Capillary Rheometer" (oral), 41st Annual Calorimetry Conference, August, Annandale, NJ.
6. M. T. Shaw, E. T. Samulski and B. S. Hsiao, "Pressure Effects with Polymeric Liquid Crystals" (oral), AIChE National Meeting, August, Boston, MA.
7. B. S. Hsiao, M. T. Shaw and E. T. Samulski, "Pressure and Temperature Effects on Longitudinal Volume Viscosity" (oral), 58th Society of Rheology Annual Meeting, October, Tulsa, OK.

### 1987

8. B. S. Hsiao, M. T. Shaw and E. T. Samulski, "Characterization of A High Pressure Phase of A Liquid Crystal Polymer" (oral), SPE RETEC meeting, October, Chicago, IL.

### 1988

9. S. Rojstaczer, B. S. Hsiao, R. S. Stein, R. Gaudiana and N. Weeks, "Light Scattering Studies of Stiff Rod Molecules for Use in Molecular Composites" (poster), Polymer Science and Plastics Technology Symp., March, Sturbridge, MA.
10. S. Rojstaczer, B. S. Hsiao and R. S. Stein, "Texture Formation in Thermotropic Liquid Crystalline Polymers" (oral), ACS National Meeting, June, Toronto, Canada.
11. S. Rojstaczer, B. S. Hsiao and R. S. Stein, "Optical Studies of Thermotropic Liquid Crystal Polymers Upon Annealing and Deformation" (poster), Gordon Research Conference on Liquid Crystal Polymers, July, New London, NH.
12. R. S. Stein, S. Rojstaczer, B. S. Hsiao, R. Gaudiana and N. Weeks, "Studies of Ordering of Stiff and Semi-Flexible Molecules in Solution and in the Melt" (oral), MRS Fall Meeting, December, Boston, MA.

### 1989

13. B. S. Hsiao, R. S. Stein, N. Weeks and R. Gaudiana, "Light Scattering Studies of Molecular Composites Comprising Stiff and Semi-Flexible Macromolecules" (oral), APS Annual Meeting, March, St. Louis, MO.
14. R. S. Stein, S. Rojstaczer and B. S. Hsiao, "The Role of Disclination in the Annealing and Flow of Thermotropic Liquid Crystalline Polymers" (oral), Polymer Processing Society Meeting, August, Amherst, MA.
15. B. S. Hsiao, H. H. Winter and R. S. Stein, "Rheo-Optical Studies of a Thermotropic Liquid Crystalline Polyester" (oral), ACS National Meeting, September, Miami, FL.
16. B. S. Hsiao and E. J. H. Chen, "Study of Transcrystallization in Polymer Composites" (oral), MRS Fall Meeting, November, Boston, MA.

17. B. S. Hsiao, R. S. Stein, S. Addad-Cohen, N. Weeks and R. Gaudiana, "Light Scattering Studies of the State of Dispersion in Molecular Composites" (oral), MRS Fall Meeting, November, Boston, MA.

#### 1990

18. B. S. Hsiao and E. J. H. Chen, "Transcrystalline Interphase in Advanced Polymer Composites" (oral), ICCI-III, Controlled Interphases in Composite Materials Symp., April, Cleveland, OH.
19. B. S. Hsiao and I. Y. Chang, "Structure/Property/Processing Relations of PEKK Resin Matrix for Advanced Composites" (oral), DuPont TECHCON 90, April, Chantilly, VA.
20. E. J. H. Chen and B. S. Hsiao, "Transcrystalline Interphase in Advanced Polymer Composites" (oral), DuPont TECHCON 90, April, Chantilly, VA.
21. B. S. Hsiao and E. J. H. Chen, "Interfacial Bond Strength of Transcrystalline Interphase in Polymer Composites" (oral), 33rd IUPAC, MACRO 90 Meeting, July, Montreal, Canada.
22. B. S. Hsiao, R. S. Stein, H. H. Winter and K. Deutscher, "Light Scattering and Birefringence Studies of Orientation of Sheared Thermotropic Liquid Crystalline Polymers" (oral), 33rd IUPAC, MACRO 90 Meeting, July, Montreal, Canada.
23. B. B. Sauer, P. Avakian, H. Starkweather and B. S. Hsiao, "Thermally Stimulated Current Studies of Poly(aryl ether ketone) and polycarbonate" (poster), ACS National Meeting, August, Washington, DC.
24. R. S. Stein, H. H. Winter and B. S. Hsiao, "Time-Resolved Scattering Studies of Polymer Morphology, Deformation and Flow" (oral), 62nd Society of Rheology Annual Meeting, October, Santa Fe, NM.
25. E. J. H. Chen and B. S. Hsiao, "The Effects of Transcrystalline Interphase in Advanced Polymer Composites" (oral), The Textile Institute Annual World Conference, November, Dundee, UK.

#### 1991

26. E. J. H. Chen and B. S. Hsiao, "Transcrystalline Interphases in Polymer Composites" (poster), Gordon Research Conference on Composites, January, Ventura, CA.
27. K. H. Gardener, B. S. Hsiao and R. R. Matheson, "Crystallization and Morphology of Poly(ether ketone ketone) (PEKK)" (poster), Polymer Physics Symposium to mark the retirement of A. Keller, April, Bristol, UK.
28. I. Y. Chang and B. S. Hsiao, "Thermal Properties of High Performance Thermoplastic Composites Based on Poly(ether ketone ketone) (PEKK)" (oral), 36th SAMPE Symposium., April, San Diego, CA.
29. B. S. Hsiao, I. Y. Chang and B. B. Sauer, "Novel Crystallization Kinetics Modeling of Advanced Polymer Composites" (oral), SPE ANTEC Meeting, May, Montreal, Canada.
30. B. S. Hsiao, D. Wu, K. Gardner and B. Chu, "Crystallization and Melting Studies of Poly(aryl ether ketones) by Synchrotron X-ray" (poster), Annual Users' Meeting, National Synchrotron Light Source, May, Brookhaven National Laboratory, Long Island, NY.
31. B. S. Hsiao and I. Y. Chang, "Thermal Behavior of High Performance Poly(ether ketone ketone) (PEKK)" (oral), ACS Polymer Technology Conference, June, Philadelphia, PA.
32. K. H. Gardener, B. S. Hsiao and R. R. Matheson, "Structure and Morphology of Poly(ether ketone ketone)" (oral), Pacific-International Congress on X-ray Analytical Methods, August, Honolulu, HI.
33. B. S. Hsiao, "Crystallization Induced Gelation in Poly(aryl ether ketones)" (poster), National ACS Meeting, August, New York City, NY.
34. K. H. Gardner, B. S. Hsiao and R. R. Matheson, "Structure, Crystallization and Melting of Poly(aryl ether ketone ketone) (PEKK). Part I: Structure" (poster), National ACS Meeting, August, New York City, NY.
35. B. S. Hsiao, K. H. Gardner and R. R. Matheson, "Structure, Crystallization and Melting of Poly(aryl ether ketone ketone) (PEKK). Part II: Crystallization and Melting" (poster), National ACS Meeting, August, New York City, NY.
36. B. B. Sauer, P. Avakian, H. Starkweather and B. S. Hsiao, "Interpretation of Relaxation Spectra Obtained from Thermal Stimulated Current" (oral), NATAS Conference, September, Minneapolis, MN.

#### 1992

37. B. S. Hsiao, K. H. Gardner and R. R. Matheson, "Crystallization Study of Poly(aryl ether ketone ketone) Copolymers Containing Different para/meta Isomer Ratios" (oral), APS Meeting, March, Indianapolis, IN.
38. B. S. Hsiao, J. M. Schultz and K. H. Gardner, "Blends of Poly(aryl ether ketone ketones) Having Different para/meta Isomer Ratios" (oral), APS Meeting, March, Indianapolis, IN.
39. P. A. Weimann, R. J. Composto and B. S. Hsiao, "Effect of Ionic Salt Diluent on the Crystallization Behavior and Morphology of Intermediate Molecular Weight Poly(ethylene oxide)" (oral), APS Meeting, March, Indianapolis, IN.
40. B. S. Hsiao, K. H. Gardner, D. Q. Wu and B. Liang and B. Chu, "Time-Resolved X-ray Study of Crystallization and Melting in Poly(aryl ether ether ketones)" (oral), National ACS Meeting, April, San Francisco, CA.

41. D. Q. Wu, B. Liang, B. S. Hsiao, Y. Li and B. Chu, "Synchrotron SAXS Studies of NAFION Morphology", (poster), National ACS Meeting, April, San Francisco, CA.
42. K. H. Gardner, B. S. Hsiao and K. L. Faron, "Diffraction Studies of Polymorphism in Poly(aryl ether ketones)" (oral), National ACS Meeting, April, San Francisco, CA.
43. B. S. Hsiao and B. B. Sauer, "Crystallization Effect on Miscibility and Morphology of Poly(aryl ether ketone) and Poly(ether imide) Blends" (oral), SPE ANTEC Meeting, May, Detroit, MI.
44. R. G. Kander, R. K. Verma and B. S. Hsiao, "A Study of the Processing Structure Property Relationship in Poly(aryl ether ketone ketone)" (oral), SPE ANTEC Meeting, May, Detroit, MI.
45. K. H. Gardner, B. S. Hsiao and K. L. Faron, "Neutron Study of Selectively Deuterated Poly(aryl ether ketone ketone)" (oral), National ACS Meeting, August, Washington, D.C.
46. B. S. Hsiao, B. B. Sauer and J. G. Van Alsten, "Crystallization and Morphology Relationship in Miscible Poly(aryl ether ketones)/Poly(ether imide) Blends" (poster), National ACS Meeting, August, Washington, D.C.
47. X. Lu, R. A. Weiss, B. S. Hsiao, D. Q. Wu, Y. J. Li and B. Chu, "Microstructure of Blends of Block Copolymer Ionomers and Poly(caprolactone) and Poly(styrene-co-4-vinyl pyridene)" (oral), National ACS Meeting, August, Washington, D.C.
48. K. H. Gardner, B. S. Hsiao and K. L. Faron, "X-ray Diffraction Studies of Polymorphism in Poly(aryl ether ketones)" (oral), 41st Annual Denver Conference on Applications of X-ray Analysis, July, Colorado Springs, CO.
49. B. S. Hsiao and K. H. Gardner, "Time-Resolved X-ray Studies of Crystallization and Melting in Poly(aryl ether ether ketone)" (oral), Crystallization of Polymers, NATO Advanced Research Workshop, September, Mons, Belgium.
50. K. H. Gardner, B. S. Hsiao and K. L. Faron, "Diffraction Studies of Polymorphism in Poly(aryl ether ketones)" (oral), Crystallization of Polymers, NATO Advanced Research Workshop, September, Mons, Belgium.
51. W. Wang, B. S. Hsiao and J. M. Schultz, "Crystallization of PEKK-Based Polymer Alloys" (oral), AIChE Fall Meeting, October, Miami Beach, FL.

### 1993

52. B. S. Hsiao, K. H. Gardner, W. Wang and J. M. Schultz, "Anomalous Spherulite Growth in Poly(aryl ether ketones)" (oral), APS Meeting, March, Seattle, WA.
53. B. S. Hsiao, K. H. Gardner, D. Q. Wu and B. Chu, "Time Resolved SAXS Study of Poly(aryl ether ketones)" (oral), APS Meeting, March, Seattle, WA.
54. S. Z. D. Cheng, S. S. Wu, J. Chen, Q. Zhuo, R. P. Quirk, E. D. Von Meewall, A. Habenschuss, P. R. Zschack and B. S. Hsiao, "End Group and Molecular Weight Effects on Thickening and Thinning Processes in Low Molecular Weight Poly(ethylene Oxide) Fractions", (oral), APS Meeting, March, Seattle, WA.
55. W. Wang, J. M. Schultz, B. S. Hsiao and K. H. Gardner, "Phase Separation During Crystallization of PEEK/PEKK Blends" (poster), APS Meeting, March, Seattle, WA.
56. J. G. Van Alsten, S. R. Lustig and B. S. Hsiao, "Polymer Diffusion in Semi-Crystalline Systems" (oral), APS Meeting, March, Seattle, WA.
57. B. S. Hsiao, K. H. Gardner, W. Wang and J. M. Schultz, "Crystallization and Morphology Studies of Poly(aryl ether ketone) Blends" (poster), SPE ANTEC Meeting, May, New Orleans, LA.
58. R. Verma, R. Kander, B. S. Hsiao and R. B. Croman, "A New Damage Evaluation Model for Composite Materials" (oral), SPE ANTEC Meeting, May, New Orleans, LA.
59. H. Ade, S. Cameron, C. Costello, B. Hsiao and S. Subramony, "Polarization Dependent XANES Microscopy and Its Applications to Polymer Science" (oral), The Forth International Conference on X-ray Microscopy, XRM'93, September, Moscow, Russia.
60. H. Ade, B. S. Hsiao, G. Mitchel, S. Cameron and C. Costello, "X-ray Microscopy in Polymer Science: Prospects of a New Imaging Technique" (oral), MSA Meeting, Symposium "Aspects of Imaging in Polymer Science", August, Cincinnati, OH.
61. B. B. Sauer and B. S. Hsiao, "Effects of Heterogeneous Distribution of Lamellar Stacks in Semi-Crystalline Polymers on Amorphous Relaxations" (oral), National ACS Meeting, August, Chicago, IL.
62. B. S. Hsiao, K. H. Gardner and A. Biswas, "SAXS Study of Crystallization in Poly(Aryl Ether Ketones) and Polyimides" (oral), 42nd Annual Denver Conference on Applications of X-ray Analysis, August, Denver, CO.
63. H. Ade, A. P. Smith, R. Cieslinski, B. S. Hsiao, G. Mitchell and E. Rightor, "Chemical Contrast X-ray Microscopy", (oral), MRS Fall Meeting, November, Boston, MA.

### 1994

64. H. Ade, B. S. Hsiao and G. Mitchell, "Imaging of Polymeric Materials with Chemical and Orientational Sensitivity" (oral), APS Meeting, March, Pittsburgh, PA.
65. R. M. Ho, S. Z. D. Cheng, B. S. Hsiao and K. H. Gardner, "Crystal Morphology and Phase Identifications in Poly(aryl ether ketone ketone)" (oral), APS Meeting, March, Pittsburgh, PA.
66. R. K. Verma, R. G. Kander, B. S. Hsiao, B. Chu, V. Velikov and H. Marand, "Time-Resolved SAXS Studies During Crystallization and Melting in PEEK" (oral), APS Meeting, March, Pittsburgh, PA.
67. B. S. Hsiao, K. H. Gardner and S. Z. D. Cheng, "Time-Resolved X-ray Studies of Crystallization and Triple-Melting Behavior in Poly(aryl ether ketone ketone) Containing Isophthalic Moiety" (oral), MacroAkron'94., IUPAC 35th International Symposium on Macromolecules, July, Akron, OH.
68. J. M. Stouffer, H. Starkweather, B. S. Hsiao and P. Avakian, "The Effect of Nylon 66 Copolymers Modified with 2-Methyl Pentamethylene Diamine on Morphology and Thermal Properties" (oral), MacroAkron'94., IUPAC 35th International Symposium on Macromolecules, July, Akron, OH.
69. A. Biswas, B. S. Hsiao, M. Capel and A. D. Kennedy, "Morphology Characterization of Semicrystalline Fibers Using Small Angle X-ray Scattering" (oral), MacroAkron'94., IUPAC 35th International Symposium on Macromolecules, July, Akron, OH.
70. R. M. Ho, S. Z. D. Cheng, B. S. Hsiao and K. H. Gardner, "Crystal Structure and Phase Identifications in Poly(aryl ether ketone ketones) and Their Copolymers" (oral), MacroAkron'94., IUPAC 35th International Symposium on Macromolecules, July, Akron, OH.
71. B. S. Hsiao, A. D. Kennedy, R. A. Leach, R. Barton, Jr., S. Seifert and H. G. Zachmann, "Structure Development During Fiber Processing Via Synchrotron X-ray Measurements" (oral), IUPAC, International Polymer Symposium Taipei, November, Taipei, Taiwan.

#### 1995

72. A. P. Smith, H. Ade, B. Hsiao and S. Subramoney, "Radial Order In Kevlar Fibers Determined By X-ray Linear Dichroism Microscopy" (oral), APS Meeting, March, San Jose, CA.
73. B. S. Hsiao, K. H. Gardner, R. M. Ho and S. Z. D. Cheng, "Phase Transformation and Polymorphism in Poly(aryl ether ketone ketone) Copolymers" (oral), APS Meeting, Dillon Award Symp., March, San Jose, CA.
74. R. M. Ho, S. Z. D. Cheng, B. S. Hsiao and K. H. Gardner, "Crystal Morphology and Phase Identification in Poly(aryl ether ketone ketone) and Their Copolymers" (oral), APS Meeting, March, San Jose, CA.
75. W. Wang, J. M. Schultz and B. S. Hsiao, "Time-Resolved SAXS Study of Crystallization of PEEK Copolymers and Their Blends" (oral), APS Meeting, March, San Jose, CA.
76. P. Harney, B. S. Hsiao, A. D. Kennedy and B. Chu, "Synchrotron SAXS Studies of Amorphous PET Fiber During Deformation" (oral), National ACS Meeting, March, Anaheim, CA.
77. B. Sauer and B. S. Hsiao, "Restricted Motions in Semi-Crystalline Polymers and Blends" (oral), National ACS Meeting, March, Anaheim, CA.
78. B. S. Hsiao, A. D. Kennedy, R. A. Leach, R. Barton, Jr., R. Harlow, R. Ross, S. Seifert and H. G. Zachmann, "In-Situ Structural Characterization During Fiber Melt Spinning Via Synchrotron X-ray Diffraction Measurement" (poster), National ACS Meeting, March, Anaheim, CA.
79. B. S. Hsiao, B. B. Sauer, R. A. Leach, B. Chu, P. Harney, H. G. Zachmann and S. Seifert, "New Insight Of Isothermal Melt Crystallization Via Time-Resolved Simultaneous SAXS/WAXD Measurements" (poster), National ACS Meeting, March, Anaheim, CA.
80. B. S. Hsiao, R. A. Leach, A. D. Kennedy, K. H. Gardner, C. Gochanour, A. Biswas, S. Seifert and H. G. Zachmann, "Structural Study Of Semi-Crystalline Fibers During Deformation Via Synchrotron SAXS Technique" (oral), National ACS Meeting, March, Anaheim, CA.
81. R. Verma, A. Biswas and B. S. Hsiao, "Small Angle X-ray Scattering for Lamellar Semi-Crystalline Systems: Some Novel Data Analysis Techniques" (poster), National ACS Meeting, March, Anaheim, CA.
82. R. Verma, B. Chu, H. Marand and B. S. Hsiao, "Real Time SAXS Studies of Lamellar Level Morphological Development in PEEK" (poster), National ACS Meeting, March, Anaheim, CA.
83. S. Z. D. Cheng, S. W. Lee, E. Von Meerwall and B. S. Hsiao, "Molecular Shape Effects on the Crystallization, Melting and Morphology of Star Poly(ethylene oxide) Fractions" (oral), National ACS Meeting, March, Anaheim, CA.
84. R. M. Ho, S. Z. D. Cheng, B. S. Hsiao and K. H. Gardner, "Crystal Morphology and Phase Identifications in Poly(aryl ether ketone)s and Their Copolymers" (poster), National ACS Meeting, March, Anaheim, CA.
85. A. D. Kennedy, B. S. Hsiao, R. A. Leach, P. Harney, B. Chu, S. Seifert, H. G. Zachmann, "Structural Development and Change During Spinning and Drawing of 66-Nylon: Real Time Synchrotron X-ray Studies" (oral), ACA Annual Meeting, July, Montreal, Canada

86. K. H. Gardner, B. S. Hsiao, H. Shih, S. Stempel, E. T. Samulski and J. Preston, "The Crystal Structure of Poly(p-Phenylene Thiophenylamide)" (oral), ACA Annual Meeting, July, Montreal, Canada
  87. B. S. Hsiao, A. Biswas, R. K. Verma, "SAXS Analysis For Morphological Characterization of Unoriented and Oriented Semi-crystalline Polymers" (oral), ACA Annual Meeting, July, Montreal, Canada
  88. B. S. Hsiao, R. A. Leach, K. H. Gardner, C. Gochanour, A. Biswas, S. Seifert, H. G. Zachmann, "Morphological Development During The Deformation of a Segmented Segregated Elastomeric Fiber" (oral), ACS Intersociety Polymer Conference, October, Baltimore, MD.
  89. A. D. Kennedy, B. S. Hsiao, P. Harney, B. Chu, S. Seifert and H. G. Zachmann, "Real Time Study of Morphology Development in Spinning and Drawing 66-nylon" (oral), Europhysics Conf. on Macromol. Phys. and Hamburg Macromol. Symposium, September, Hamburg, Germany
  90. R. A. Leach, B. S. Hsiao, K. H. Gardner, C. Gochanour, A. Biswas, S. Seifert and H. G. Zachmann, "Structural Development in The Deformation of Poly(urethane-urea) Determined by Simultaneous SAXS and WAXD" (oral), Europhysics Conf. on Macromol. Phys. and Hamburg Macromol. Symposium, September, Hamburg, Germany
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91. R. Verma, B. S. Hsiao and A. Biswas, "Analysis of SAXS Data from Semicrystalline Ionomeric Systems" (oral), ACS Spring Meeting, March, New Orleans, LA.
  92. B. Hsiao and R. Verma, "New Insight of Isothermal Polymer Crystallization by Synchrotron Time-Resolved SAXS Measurements" (oral), APS Meeting, March, St. Louis, MO.
  93. W. Wang, J. M. Schultz and B. S. Hsiao, "Simultaneous SAXS/WAXS Study of Crystallization of PEEK/PEKK Blends" (oral), APS Meeting, March, St. Louis, MO.
  94. D. M. Dean, R. A. Register, L. Rebenfeld and B. S. Hsiao, "Molecular and Lamellar Orientation of the Transcrystalline Region in Fiber-Reinforced Polypropylene Composites" (oral), APS Meeting, March, St. Louis, MO.
  95. B. S. Hsiao, A. Biswas, M. Capel and S. Cheng, "Morphological Characterization of High Performance Polymer Fibers Via SAXS Technique" (oral), APS Meeting, March, St. Louis, MO.
  96. R. Verma, H. Marand and B. Hsiao, "Morphological Changes During Secondary Crystallization and Melting in Poly(ether ether ketones) as Studied by Small Angle X-ray Scattering" (poster), APS Meeting, March, St. Louis, MO.
  97. T. A. Ezquerro, E. Lopez-Cabarcos, F. J. Balta-Calleja and B. Hsiao, "Precursors of Crystallization Via Density Fluctuations in PEKK" (poster), APS Meeting, March, St. Louis, MO.
  98. J. M. Schultz, W. Wang and B. S. Hsiao, "Lamellar Structure Study of Poly(aryl ether ketone) during Isothermal Crystallization and Melting" (poster), APS Meeting, March, St. Louis, MO.
  99. R. Verma, B. S. Hsiao and A. Biswas, "New Insights on the Morphology of Ionomers Revealed by Novel Small Angle X-ray Scattering Data Analysis" (oral), APS Meeting, March, St. Louis, MO.
  100. S. Z. D. Cheng, S. W. Lee, E. Chen, E. D. von Meerwall, B. S. Hsiao and R. Verma, "Molecular Architecture Effects on Star Poly(ethylene oxide) Crystallization" (oral), APS Meeting, March, St. Louis, MO.
  101. B. B. Sauer, B. S. Hsiao and R. Verma, "Morphological Contributions to Constrained Relaxations: Comparison of Stiff Aromatic Versus Flexible Semicrystalline Polymers" (oral), 11th International Congress on Thermal Analysis and Calorimetry, August, Philadelphia, PA.
  102. B. B. Sauer, B. S. Hsiao and K. L. Faron, "Phase Behavior of Semi-Crystalline Polyimide and PEEK Blends" (oral), Engineered Polymer Blends Symposium, Sponsored by Polytechnic Univ., Sept., Hoechst Celanese Site, Summit, NJ.
  103. W. Wang, J. M. Schultz and B. S. Hsiao, "Crystallization and Phase Behaviors of PEEK, PEKK and Their Blends" (poster), Composites'96 and Oriented Polymers Symposium, National Research Council of Canada, October, Boucherville, Canada.
  104. B. S. Hsiao, J. M. Schultz and W. Wang, "Microstructure and Phase Separation of PEEK, PEKK and Their Blends" (oral), MRS Fall Meeting, Symposium on Morphological Control in Multiphase Polymer Mixtures, November, Boston, MA.
  105. B. Chu, P. Harney, B. S. Hsiao, A. Kennedy, R. Leach and B. Chase, "Synchrotron X-ray Studies Of PET Fiber" (oral), Fiber Society Fall Meeting, October, Newport, RI.
  106. B. S. Hsiao, "Structure and Morphology Changes During Fiber Deformation via On-line X-ray Scattering Techniques" (oral), AICHE Annual Meeting, November, Chicago, IL.
  107. D. Dean, R. Register, L. Rebenfeld, B. Hsiao, "Investigation of Transcrystalline Interface in Fiber Reinforced Polypropylene Composites" (oral), AICHE Annual Meeting, November, Chicago, IL.



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- 108.S. Seifert, B. Hsiao, J. Schultz, J. Samon, I. Gurke, N. Stribeck, C. Saw and G. Collins, "On-line Simultaneous SAXS and WAXD Studies during Fiber Spinning of Polyethylene and Poly(vinylidene fluoride)" (poster), APS Meeting, March, Kansas City, MO.
- 109.J. R. Sharrow, J. M. Schultz, B. S. Hsiao and H. Chang, "Comparisons of Morphological Evaluation on Nylon 66 Fibers Via WAXD, SAXS and Radial Distribution Function Methods" (poster), APS Meeting, March, Kansas City, MO.
- 110.B. S. Hsiao, A. Nogales, F. J. Balta-Calleja, T. Ezquerra, B. Sauer, S. Seifert, Y. Kapalu, R. Stein, M. Muthukuman and M. Koch, "Some Possible Evidences of Density Fluctuations as Precursors of Crystallization in Ethylene-1-Octene Copolymers" (poster), APS Meeting, March, Kansas City, MO.
- 111.B. S. Hsiao, "The Nature of Secondary Crystallization During Isothermal Crystallization Probed by Time-Resolved SAXS" (oral), APS Meeting, March, Kansas City, MO.
- 112.R. Leach, B. Hsiao, A. Kennedy, B. Chu and P. Harney, "Synchrotron X-ray Studies of Polymers Deformation" (oral), APS Meeting, March, Kansas City, MO.
- 113.R. S. Stein, Y. Akpalu, M. Muthukumar, B. Hsiao, J. Gronauer, S. Groth, G. Zachmann, "Probing the Fundamentals of the Melt Crystallization Mechanism of Polyethylene Melts and Their Homogeneous Blends" (invited talk), APS Meeting, March, Kansas City, MO.
- 114.Y. Akpalu, R. S. Stein, M. Muthukumar and B. Hsiao, "Effect of Melt Miscibility on Crystallization and Melting of Blends of Different Polyethylenes: Small Angle Light Scattering Studies" (poster), APS Meeting, March, Kansas City, MO.
- 115.A. D. Kennedy, B. S. Hsiao, R. A. Leach and B. Chase, "Real-Time X-ray and Raman Studies of 6,6 Nylon Drawing" (oral), Fiber Society/TRI/NCRC Joint Meeting, October, Knoxville, TN

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- 116.B. S. Hsiao, F. J. Yeh, B. Chu and B. B. Sauer, "Behavior of Microphase Separation in a Poly(urethane-urea) Film under Deformation" APS Meeting, March, Los Angeles, CA.
- 117.B. S. Hsiao, B. Chu and F. J. Yeh, "Advanced Polymers PRT at NSLS - A Dedicated Polymers Beamline", APS Meeting, March, Los Angeles, CA.
- 118.Y. Gao, K. Sheth, B. S. Hsiao, F. Yeh, Z. G. Wang, "Development of Lamellar Microstructure During Isothermal Crystallization of Poly(butylene terephthalate) Semicrystalline Polymers" APS Meeting, March, Los Angeles, CA.
- 119.B. S. Hsiao, F. Yeh, B. Chu, B. B. Sauer "Effect of Polymer Diluents on The Lamellar Morphology of Poly(oxymethylene) Blends", APS Meeting, March, Los Angeles, CA.
- 120.Y. Akpalu, R. S. Stein, M. Muthukumar, B. S. Hsiao, "Effect of Branch Content on Spherulitic Growth in Homogeneous Ethylene-1-Octene Copolymer Blends: Time-Resolved Synchrotron X-ray and Small Angle Light Scattering (SALS)", APS Meeting, March, Los Angeles, CA.
- 121.J. Samon, J. Schultz, J. Wu, B. Hsiao, R. Kolb, "On-line Simultaneous SAXS and WAXS Studies during Fiber Spinning of Nylon-6", APS Meeting, March, Los Angeles, CA.
- 122.J. Wu, J. Schultz, F. Yeh and B. Hsiao, "In-situ Simultaneous Synchrotron Small- and Wide- Angle X-ray Scattering Measurement of PVDF Fibers Under Strain", APS Meeting, March, Los Angeles, CA.
- 123.K. Guruswamy, R. K. Verma, J. A. Kornfield, F. Yeh and B. S. Hsiao, "Shear Induced Crystallization in Isotactic Polypropylene Optical and SAXS Studies", APS Meeting, March, Los Angeles, CA.
- 124.F. Yeh, B. S. Hsiao, B. Chu and B. Sauer, "Synchrotron X-Ray Scattering Applications in Crystallization and Deformation of Polymers" (oral), SPE ANTEC Meeting, April, Atlanta, GA
- 125.S. Kim, Z. Wang, R. A. Phillips, F. Yeh and B. S. Hsiao, "Morphology Development in Polypropylene Homopolymer Tacticity Mixtures: Isotactic/Syndiotactic Blends", 46<sup>th</sup> Annual Undergraduate Research Symposium, May, New York Univ., New York, NY.
- 126.J. Lopez, Z. G. Wang, B. Hsiao and P. Armistead, "Dynamic Structure Development during Isothermal Crystallization and Melting of Linear Polyethylenes", 46<sup>th</sup> Annual Undergraduate Research Symposium, May, New York Univ., New York, NY.
- 127.W. D. Liu, H. L. Yang, B. S. Hsiao and R. S. Stein, "Real Time Crystallization and Melting Study of Ethylene Based Copolymers", ACS National Meeting, August, Boston, MA.
- 128.F. Yeh, B. Hsiao, B. Sauer, "Deformation-Induced Structural Changes in Poly(urethaneurea) Film", ACS National Meeting, August, Boston, MA.
- 129.J. Wu, J. M. Schultz and B. S. Hsiao, "The Melting Behavior of Poly(vinylidene fluoride) Crystallized at High Temperature or Under High Pressure", AIChE Annual Meeting, November,

130. B. S. Hsiao, B. Chu and F. Yeh, "Advanced Polymers Beamline (X27C) at the National Synchrotron Light Source, Brookhaven National Laboratory", Workshop on Polymer Applications of X-ray Microscopy at NIST, May, Gaithersburg, MD.
131. S. Kim, Z. Wang, R. A. Phillips, F. Yeh and B. S. Hsiao, "Morphology Development in Polypropylene Homopolymer Tacticity Mixtures: Isotactic/Syndiotactic Blends", ACS National Meeting, August, Boston, MA.
132. R. A. Phillips, Z. G. Wang and B. S. Hsiao, "Morphology Development in Polypropylene Homopolymer Tacticity Mixtures: Isotactic/Atactic Blends", ACS National Meeting, August, Boston, MA.
133. Z. G. Wang, B. S. Hsiao, B. B. Sauer and W. G. Kampert, "The Nature of Secondary Crystallization in Poly(ethyleneterephthalate)", ACS National Meeting, August, Boston, MA.
134. J. Lopez, Z. G. Wang, B. Hsiao and P. Armistead, "Dynamic Structure Development during Isothermal Crystallization and Melting of Linear Polyethylenes", ACS National Meeting, August, Boston, MA.
135. S. Z. D. Cheng, E. Chen, G. Xue, S. Lee, A. Zhang, B. Moon, H. Lin, F. Harris, B. S. Hsiao and F. J. Yeh, "Effect of Conformational Defect in Low Molecular Weight PEO fraction on Crystallization and Phase Behavior", ACS National Meeting, August, Boston, MA.
136. B. S. Hsiao, X. Fu, H. White, M. Rafailovich, P. T. Mather, K. P. Chaffee, H. Jeon, J. D. Lichtenhan and J. Schwab, "Structural Development during Deformation of a Nano-Reinforced Poly(urethane) with Polyhedral Oligomeric Silsesquioxane (POSS)" ACS National Meeting, August, Boston, MA.
137. A. Brenner, R. Gross, Z. G. Wang and B. S. Hsiao, "Crystallization and Morphology Study of Nylon11/Polytetramethylene Glycol Block Copolymers" (oral), Undergraduate Research Symposium, SUNY Stony Brook, Stony Brook, NY.
138. Z. G. Wang, B. Hsiao, P. Agarwal, S. Srivatsan and E. Sirota, "Probing the Myth of Initial Polymer Crystallization" (poster), Polymer Physics, Gordon Research Conference, Salve Regina Univ., August, Newport, RI.
139. J. M. Samon, J. M. Schultz, B. S. Hsiao, "Study of the Cold Drawing of Nylon 6 Fiber by Simultaneous In-Situ Small- and Wide-Angle X-ray Scattering Techniques", (poster), AIChE Annual Meeting, November, Miami, FL.
140. E. Chen, B. S. Moon, F. W. Harris, S. Z. D. Cheng, B. S. Hsiao and F. Yeh, "Melting and Annealing Behavior of Non-Integral Folding Chain Crystals of Low Molecular Weight Two-Arm Poly(Ethylene Oxide) Fractions Crystallized from Melt", Twenty-Sixth Conference of the North American Thermal Analysis Society,

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141. J. Samon, J. Schultz, J. Wu, S. Khot and B. Hsiao "Synchrotron Small- and Wide-Angle X-ray Scattering during the Melt Spinning of Polybutene-1 Fiber" (oral), APS Meeting, March, Atlanta, GA.
142. M. S. Lisowski, J. Runt, F. Yeh and B. Hsiao, "Time-Resolved Small- and Wide-Angle X-ray Scattering Study of Crystallization of Poly(ethylene oxide) and Model PEO Blends" (poster), APS Meeting, March, Atlanta, GA.
143. Z. G. Wang, B. Hsiao, P. Agarwal, S. Srivatsan and E. Sirota, "Probing the Fundamentals of Initial Polymer Crystallization" (oral), APS Meeting, March, Atlanta, GA.
144. E.-Q. Chen, S.-W. Lee, A. Zhang, B.-S. Moon, F. W. Harris, S. Z. D. Cheng B. S. Hsiao and F. Yeh, "Crystallization, Melting and Annealing of Low Molecular Weight Star PEO Fractions" (oral), APS Meeting, March, Atlanta, GA.
145. P. S. Honigfort, R. M. Ho, S. Z. D. Cheng and B. S. Hsiao, "Studies on the Crystalline Structure of Poly(aryl ether ketone ketone) Copolymer" (poster), APS Meeting, March, Atlanta, GA.
146. Y.-L. Loo, R. A. Register and B. S. Hsiao, "Secondary Crystal Melting in Ethylene-Methacrylic Acid Ionomers" (poster), APS Meeting, March, Atlanta, GA.
147. E. Schrag, B. Hsiao, X. Fu, J. D. Lichtenhan, J. Schwab, P. T. Mather, M. Rafailovich, S. Ge and H. White, "Polyhedral Oligomeric Silsesquioxane (POSS) Nano-Reinforced Polyurethane (PU) Thin Films" (poster), APS Meeting, March, Atlanta, GA.
148. D. Fang, S. Ran, X. Zong, B. Hsiao and B. Chu, "Study of Structural & Morphological Changes of Polypropylene Fibers during Deformation by WAXD/SAXS" (poster), APS Meeting, March, Atlanta, GA.
149. S. Z. D. Cheng, L. Zhu, R. P. Quirk, B. S. Hsiao, F. Yeh, B. Chu, "Competitions among Self-Organization, Vitrification, and Crystallization in Amorphous-Crystalline Block Copolymers" (oral), APS Meeting, March, Atlanta, GA.
150. G. Kumaraswamy, R. K. Verma, A. M. Issaian, P. Wang, J. A. Kornfield F. Yeh and B. S. Hsiao, "The Effect of Molecular Weight on the Shear-Enhanced Crystallization of isotactic Polypropylene: Relating In-situ Rheo Optics and Synchrotron SAXS/WAXD Studies to Ex-situ Structure Determination" (oral), APS Meeting, March, Atlanta, GA.

151. Z. G. Wang, B. S. Hsiao, C. Kopp, B. X. Fu, H. Hu, D. F. Fang, E. B. Sirota, P. Agarwal and S. Srinivas, "Probing the early stages of polymer crystallization by simultaneous small- and wide-angle X-ray scattering and laser light scattering" (oral), XI International Conference on Small Angle Scattering, May, Upton, NY.
152. N. S. Murthy, Z. G. Wang, B. S. Hsiao, "Lamellar Structure Analysis of Melting and Recrystallization in Nylon66 Using Small-Angle X-ray Scattering" (oral), XI International Conference on Small Angle Scattering, May, Upton, NY.
153. L. Z. Liu, B. S. Hsiao and B. Chu, "Static and Time-Resolved Synchrotron X-ray Study of Crystallization and Phase Separation in Compatible Polymer Blends" (poster), XI International Conference on Small Angle Scattering, May, Upton, NY.
154. Y. L. Loo, R. A. Register and B. S. Hsiao, "The Melting of Secondary Crystals in Ethylene-Methacrylic Acid Ionomers" (oral), XI International Conference on Small Angle Scattering, May, Upton, NY.
155. W. Liu, S. Kim, B. S. Hsiao, R. S. Stein, B. Landes and M. Y. Keating, "Crystallization Study of Ethylene Based Copolymers by simultaneous SAXS/WAXD and DSC Techniques" (poster), XI International Conference on Small Angle Scattering, May, Upton, NY.
156. X.-H. Zong, Z.-G. Wang, B. S. Hsiao, B. Chu, J. J. Zhou and D. D. Jamiolkowski "Morphological Development During Crystallization and its Relationships with Degradation Properties in Absorbable Poly(Glycolide), Poly(Glycolide-Co-Lactide) and Copolymers" (poster), XI International Conference on Small Angle Scattering, May, Upton, NY.
157. Z. G. Wang, B. S. Hsiao, B. B. Sauer, W. G. Kampert, "The Nature of Secondary Crystallization in Poly(ethylene terephthalate)" (poster), Prof. Ron Eby 70<sup>th</sup> Birthday Symposium, May, Akron, OH.
158. H. Yang, B. Hsiao, B. Landes, R. Bubeck and Y. B. Huang, "Crystallization Study of Syndiotactic Polystyrene via Time-Resolved X-ray Scattering and Diffraction Methods" (poster), ACS PMSE Meeting, August, New Orleans, MI.
159. Z. G. Wang, B. S. Hsiao, C. Kopp, E. B. Sirota, P. Agarwal and S. Srinivas, "Probing the Early Stages of Polymer Crystallization by Simultaneous Small- and Wide-Angle X-ray Scattering and Laser Light Scattering" (oral), ACS PMSE Meeting, August, New Orleans, MI.
160. Y. L. Loo, R. A. Register and B. S. Hsiao, "The Melting of Secondary Polyethylene Crystals in a Slow Cooled Ethylene-Methacrylic Acid Ionomer" (oral), ACS PMSE Meeting, August, New Orleans, MI.
161. W. Liu, B. S. Hsiao, R. S. Stein, "Real Time Crystallization and Melting Study of Metallocene-Based Polyethylene Copolymers by SAXS, WAXD and DSC Techniques" (oral), ACS PMSE Meeting, August, New Orleans, MI.
162. Z. G. Wang, B. S. Hsiao, B. B. Sauer, H. Chang and J. M. Schultz, "Correct Determination of Crystal Lamellar Parameters in Poly(ethylene terephthalate) by Small-Angle X-ray Scattering" (poster), ACS PMSE Meeting, August, New Orleans, MI.
163. J. A. Kornfield, G. Kumaraswamy, P. Wang, R. K. Verma, F. Yeh and B. S. Hsiao, "Effect of Shear History on Crystallization of Isotactic Polypropylene" (oral), ACS PMSE Meeting, August, New Orleans, MI.
164. B. B. Sauer, B. S. Hsiao and Z. G. Wang, "Morphological Changes During Crystallization and Melting of Polymers Studied by Synchrotron X-ray and Modulated DSC" (oral), ACS PMSE Meeting, August, New Orleans, MI.
165. B. S. Hsiao, Z.-G. Wang, B. B. Sauer, H. Chang and J. M. Schultz, "The Nature of Secondary Crystallization in Poly(ethylene terephthalate)" (oral), 48th Annual Denver X-ray Conference, August, Steamboat Springs, CO.
166. B. B. Sauer, B. S. Hsiao and Z.-G. Wang, "Morphological Changes during Crystallization and Melting of Flexible and Stiff Polymers Studied by Synchrotron X-Ray" (oral), 48th Annual Denver X-ray Conference, August, Steamboat Springs, CO.
167. S. Z. D. Cheng, L. Zhu, R. P. Quirk, B. S. Hsiao and F. Yeh, "Phase Structures and Morphologies Determined by Self-Organization, Crystallization and Vitrification in Poly(Ethylene Oxide) -b- Polystyrene Diblock Copolymers" (oral), 48th Annual Denver X-ray Conference, August, Steamboat Springs, CO.
168. N. S. Murthy, D. T. Grubb, B. Hsiao, Z.-G. Wang, "Studies of the Effects of Strain and Temperature on the Lamellar Structure of Polymers using Small-Angle X-Ray Scattering" (oral), 48th Annual Denver X-ray Conference, August, Steamboat Springs, CO.
169. N. Beck Tan, D. Crawford, E. E. Napadensky, K. Laverdure, S. Gido, D. Reuschle, D. Mountz, K. Mauritz, W. Liu and B. Hsiao, "Perm-Selective Elastomeric Membranes from Self-Assembled Block Copolymer Ionomers" (oral), Materials Research Society, Fall meeting, December, Boston MA.
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170. B. Hsiao, "Probing the Early Stages of Polymer Crystallization: from Quiescent State to Flow" (oral), APS Meeting, March, Minneapolis, MN.

171. E. Schrag, W. Zheng, X. Fu, H. White, Ben Hsiao, M. Rafailovich, J. Sokolov, A. Winesett, H. Ade, D. Gersappe, S. Schwarz, "Compatibilization of Polymer Blends with POSS" (oral), APS Meeting, March, Minneapolis, MN.
172. W. Liu, F. Medellin-Rodriguez, R. Somani, I. Sics, B. S. Hsiao, M. Rafailovich, B. Chu and J. Sokolov, "Morphological Evolution under Shear of PS/PMMA/clay Nanocomposites using Synchrotron X-Ray Method" (oral), APS Meeting, March, Minneapolis, MN.
173. L. Zhu, Stephen Z. D. Cheng, B. H. Calhoun, Q. Ge, R. P. Quirk, B. S. Hsiao, F. Yeh, "Confined Crystallization in A Lamellar Forming PEO-b-PS Diblock Copolymer" (oral), APS Meeting, March, Minneapolis, MN.
174. J. M. Samon, J. M. Schultz, B. S. Hsiao, J. Wu and S. Khot, "Structure Development During the Melt Spinning of Poly(oxymethylene) Fiber" (oral), APS Meeting, March, Minneapolis, MN.
175. E.-Q. Chen, S. Z. D. Cheng and B. S. Hsiao, "Recrystallization and Reorganization of Linear Low Molecular Weight Poly(ethylene oxide)" (oral), APS Meeting, March, Minneapolis, MN.
176. G. Kumaraswamy, A. M. Issaian, R. K. Verma, J. A. Kornfield, F. Yeh and B. S. Hsiao, "The Role of Melt Relaxation Dynamics in Shear Enhanced Crystallization of Semicrystalline Polymers" (oral), APS Meeting, March, Minneapolis, MN.
177. Z. Wang, B. S. Hsiao, S. Srinivas and Buckley Crist, "Relationship between Crystal Thickness and Isothermal Crystallization Temperature for Determination of Equilibrium Melting Temperature for Syndiotactic Polypropylene" (poster), APS Meeting, March, Minneapolis, MN.
178. R. H. Somani, I. Sics, B. S. Hsiao, Z. G. Wang, F. Balta-Calleja, T. Ezquerra, S. Srinivas and A. Tsou, "Shear-Induced Orientation in Polyethylene Melt Near the Melting Temperature by Synchrotron SAXS and WAXD", (poster), APS Meeting, March, Minneapolis, MN.
179. R. H. Somani, I. Sics, B. S. Hsiao, Z. G. Wang, F. Balta-Calleja, T. Ezquerra, S. Srinivas and A. Tsou, "Shear-Induced Orientation and Subsequent Crystallization in Subcooled Melt of Polypropylene by Synchrotron SAXS", (oral), APS Meeting, March, Minneapolis, MN.
180. R. A. Vaia, D. Lincoln, Z. G. Wang, B. S. Hsiao and R. Krishnamoorti, "Crystallization of Polymers in Confined Environments: Structural Development of Semi-crystalline Polymer-Layered Silicate Nanocomposites", (oral), APS Meeting, March, Minneapolis, MN.
181. F. J. Medellin-Rodriguez, B. Hsiao, B. Chu, R. Vaia and S. Phillips, "Time-Resolved Steady Shear Study of End-Tethered Nylon6-Clay Nanocomposites Followed by Non-Isothermal Crystallization", (oral), APS Meeting, March, Minneapolis, MN.
182. N. S. Murthy, Z. G. Wang, M. K. Akkapeddi and B. S. Hsiao, "Crystallization Kinetics of Nylon Blends and Copolymers using Simultaneous Small- and Wide-Angle X-ray Measurements", (oral), APS Meeting, March, Minneapolis, MN.
183. B. X. Fu, W. Zhang, B. S. Hsiao, G. Johansson, B. B. Sauer, S. Phillips, R. Blanski, M. Rafailovich and J. Sokolov, "Synthesis and Characterization of Novel Segmented Poly(urethanes) containing Polyhedral Oligimeric Silsesquioxanes (POSS) Nanostructured Molecules", (poster), ACS Meeting, March, San Francisco, CA.
184. R. A. Vaia, D. Lincoln, Z.-G. Wang, B. S. Hsiao and R. Krishnamoorti, "Characterization of Mesoscopic Structure of Polymer-Layered Silicate Nanocomposites and Impact on Polymer Crystallinity", (oral), ACS Meeting, March, San Francisco, CA.
185. Shaofeng Ran, Dufei Fang, Xinhua Zong, Philip Cunniff, Ben Hsiao and Ben Chu, "Structural Studies on the Deformation of Kevlar Fibers via On-line Synchrotron SAXS/WAXD", (oral), Polymer Fibers 2000, June, Manchester, United Kingdom.
186. R. Somani, B. S. Hsiao, R. S. Stein, S. Srinivas, A. Tsou, F. Balta-Calleja, A. Nogales, "Orientation-Induced Crystallization in Isotactic Polypropylene", (poster), Gordon Research Conference, Polymer Physics, July, New London, CT.
187. C. Burger, L. Liu, B. Hsiao, B. Chu, M. Glimcher, T. Hori, "Some New Insights into the Initial Biomineralization Stages in Bone by Synchrotron X-ray Techniques" (poster), Gordon Research Conference, Biomineralization, August, New Hampshire, CT.
188. B. S. Hsiao, "Orientation-Induced Crystallization in Polymers", in Symposium of "Scattering Studies of Mesoscopic Scale Structure and Dynamics in Soft Matter" (oral), November, Messina, Italy.
189. B. S. Hsiao, R. Somani, S. Srinivas and A. Tsou, "Flow Induced Crystallization in Isotactic Polypropylene" (oral), ACS Millennium Polymer Conference, December, Hawaii.

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190. Zhigang Wang, Xuehui Wang, Norbert Striebeck, Benjamin S. Hsiao and Charles C. Han “Morphology development upon melting of ultrahigh molecular weight polyethylene formed at high pressure by Ultra SAXS and DSC”, (poster), APS Meeting, March, Seattle, WA.
191. J. D. Cho, J. Runt, F. Yeh, B. Hsiao, “Crystallization and Structure Formation of Polyethylene oxide Fractions and Their Blends”, (poster), APS Meeting, March, Seattle, WA.
192. F. Balta-Calleja, T. Ezquerro, A. Nogales, R. Somani, B. Hsiao, S. Srinivas, A. Tsou, H. Fruitwala, “Shear-induced crystallization of isotactic polypropylene with different molecular weight distributions: in-situ synchrotron SAXS and WAXD studies”, (oral), APS Meeting, March, Seattle, WA.
193. L. Yang, R. H. Somani, B. X. Fu, L. Liu, B. S. Hsiao, S. H. Phillips, P. Ruth and R. Blansky, “In-situ X-ray studies of Molecular Orientation Enhancement in Polyhedral Oligomeric silsesquioxanes(POSS)/iPP nanocomposites”, (poster), APS Meeting, March, Seattle, WA.
194. S. Z. D. Cheng, L. Zhu, P. Huang, B. H. Calhoun, Q. Ge, R. P. Quirk, E. L. Thomas, B. S. Hsiao, F. Yeh, L. Liu and B. Lotz, “Nano-confined Polymer Crystallization in Self-assembled Block Copolymers”, (oral), APS Meeting, March, Seattle, WA.
195. L. Zhu, P. Huang, B. H. Calhoun, S. Z. D. Cheng, Q. Ge, R. P. Quirk, E. L. Thomas, B. S. Hsiao, F. Yeh, L. Liu and B. Lotz, “Caged Polymer Crystallization in Perforated Layers”, (poster), APS Meeting, March, Seattle, WA.
196. R. H. Somani, L. Yang, L. Liu, B. S. Hsiao, S. Srinivas, A. Tsou and H. Fruitwala, “Orientation-induced morphology and structure development in i-PP melt after step shear using synchrotron SAXS and WAXD”, (oral), APS Meeting, March, Seattle, WA.
197. Shaofeng Ran, Christian Burger, Dufei Fang, Xinhua Zong, Sharon Cruz, Benjamin Hsiao, Benjamin Chu, Robert Bubeck, Kazuyuki Yabuki, Yoshihiko Teramoto, David Martin, Philip Cunniff, “In-situ Structural Studies during PBO Fiber Spinning by Synchrotron WAXD/SAXS”, (poster), APS Meeting, March, Seattle, WA.
198. Benjamin Hsiao, Rajesh Somani and Richard Stein, “Physics of Orientation-Induced Crystallization in Isotactic Polypropylene”, (oral), APS Meeting, March, Seattle, WA.
199. Joshua M. Samon, Jerold M. Schultz and Benjamin S. Hsiao, “Structure Development in the Early Stages of Crystallization during Melt Spinning”, (oral), APS Meeting, March, Seattle, WA.
200. Dufei Fang, Xinhua Zong, Wander Chen, Sharon Cruz, Benjamin Hsiao and Benjamin Chu “Nano-structured Electrospun Poly-D,L-lactide-co-glycolide Membranes for Antiadhesion Applications”, (oral), Fiber Society Spring 2001 Meeting on New Frontiers in Fiber-Based Products, May, Raleigh, NC.
201. E. Chen, S. Li, B. Garlick, B. Hsiao, B. Chu, X. Zong, D. Fang and C. Brathwaite, “Prevention of Abdominal Adhesions Using a Novel Barrier – Preliminary Results”, Plastic Surgery/Wound Healing, Oct.
202. M. Y. Gelfer, C. Burger, B. Hsiao, B. Chu, C. Avila-Orta, M. Si, M. Rafailovich “Manipulating the Microstructure and Rheology in Polymer-Organoclay Composites”, Nanocomposite, September, Montreal, CA
203. Derek M. Lincoln, Richard A. Vaia, Zhi-Gang Wang, Benjamin S. Hsiao and Ramanan Krishnamoort, “Structure Model for Nylon 6/Montmorillonite Nanocomposites”, ACS Fall National Meeting, August, Chicago, IL.
204. Rajesh H. Somani, Christian Burger, Benjamin S. Hsiao and Richard S. Stein “Scattering from precursors of primary nucleation in sheared isotactic polypropylene melt”, ACS Fall National Meeting, August, Chicago, IL.
205. George Z.G. Wang, Howard Wang, K Shimizu, Charles C Han and Benjamin S Hsiao “Early stage crystallization in poly (ethylene-co-hexene) by SAXS/WAXD, DSC, OM and AFM”, ACS Fall National Meeting, August, Chicago, IL.
206. Jaedong Cho, James T. Garrett, Ruijian Xu, Fengji Yeh, Benjamin S. Hsiao, J. S. Lin, and James Runt, “Crystallization and Structure Formation of Strongly-Interacting Polymer Mixtures: Poly(ethylene oxide) and Styrene-Hydroxystyrene Random Copolymers”, ACS Fall National Meeting, August, Chicago, IL.
207. Mikhail Y. Gelfer, Cristian Burger, Benjamin S. Hsiao, Benjamin Chu, Hyun Hoon Song, Carlos A. Avila-Orta, Mayu Si, Miriam H. Rafailovich, and Lizhi Liu, “Phase Transition in Organoclays”, ACS Fall National Meeting, August, Chicago, IL.
208. Christian Burger, Li-Zhi Liu, Benjamin S. Hsiao, Benjamin Chu, Jonathan Hanson, Tatsu-yuki Hori, and Melvin J. Glimcher. “Synchrotron SAXS/WAXS study of the composite nature of bone”, ACS Fall National Meeting, August, Chicago, IL.
209. Xuan Fu, Lizhi Liu and Benjamin Hsiao, “Synchrotron X-ray Study of Ethylene-Propylene Copolymer under Deformation”, ACS Fall National Meeting, August, Chicago, IL.

210. Shaofeng Ran, Zhigang Wang, Christian Burger, Benjamin Chu and Benjamin S. Hsiao, "Strain-induced crystallization from glassy state of PET film: in-situ X-ray diffraction studies", ACS Fall National Meeting, August, Chicago, IL.
211. Howard Wang, George Z. G. Wang, Charles C. Han, and Benjamin S. Hsiao. "Simultaneous SAXS and WAXS study of the isothermal crystallization in polyolefin blends", ACS Fall National Meeting, August, Chicago, IL.
212. M. Y. Gelfer, C. Burger, B. S. Hsiao, B. Chu, H. H. Song, C. A. Avila-Orta, L. Liu, F. Yeh, M. Si, M. Rafailovich and A. H. Tsou, "Manipulating the microstructure and rheology in polymer-organoclay composites", ACS Fall National Meeting, August, Chicago, IL.
213. Mikhail Y Gelfer, Lizhi Liu, Benjamin Hsiao, Benjamin Chu, Hyun H. Song, Carlos Avila-Orta, Christian Burger, Mayu Si and Mariam Rafailovich, "Novel Rheological Properties in Polymer-Organoclay Composites", Soc. of Rheology Meeting, October, Gaithersburg, MD.
214. K. Kim, W. Chen, M. Yu, S. Zhong, D. Fang, B. S. Hsiao, B. Chu and M. Hadjiargyrou, "Bioadsorbable membrane as tissue surrogates for bone cells", Materials Research Society, November, Boston, MA.

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215. Michael Goldman, Viveck Vaudevan, Mayu Si, Michael Gelfer, Benjamin Hsiao, Jonathan Sokolov, Miriam Rafailovich, Dennis Peiffer, "PMMA and PS / Clay Nanocomposites", APS Meeting, March, Indianapolis, IN.
216. E. Balizer, Z. Wang, A. Petchsuk, B. Hsiao, M. Chung, "Morphological Studies of Ferroelectric Terpolymers (VDF/TrFE/CTFE) by SAXS/WAXD", APS Meeting, March, Indianapolis, IN.
217. Zhigang Wang, Zhiyong Xia, Benjamin Hsiao, H J Sue, Charles Han, "In-Situ Small-Angle X-Ray Scattering Study of Simple Shear Oriented Poly(Ethylene Terephthalate) During Heating", APS Meeting, March, Indianapolis, IN.
218. Lei Zhu, Ping Huang, Yan Chen, S.Z.D. Cheng, Qing Ge, Roderic P. Quirk, Benjamin S. Hsiao, Fengji Yeh, Lizhi Liu, "Hexagonally Perforated Layer Phase Formed under Plastic Deformation", APS Meeting, March, Indianapolis, IN.
219. Howard Wang, Hongdoo Kim, Erik K. Hobbie, Zhi-gang Wang, Shimizu Katsumi, Charles C. Han, Benjamin S. Hsiao, "Shear-Induced Structural and Morphological Changes in Polyolefin Blends", APS Meeting, March, Indianapolis, IN.
220. J. Cho, S. Baratian, J. Kim, J. Runt, F. Yeh, B. S. Hsiao, "Crystallization and Microstructure Formation of Poly(L-lactide-co-meso-lactide) Copolymers: A Time-Resolved Wide- and Small-Angle X-ray Scattering Study", APS Meeting, March, Indianapolis, IN.
221. P. Huang, J. Jing, L. Zhu, Y. Chen, S.Z.D. Cheng, Y. Guo, Q. Ge, R.P. Quirk, B.S. Hsiao, L. Liu, F. Yeh, B. Lotz, "Phase Morphology and Crystal Orientation Changes in Two-Dimensionally Confined Nano-Cylinders in a Poly(Ethylene Oxide)-B-Polystyrene Diblock Copolymer", APS Meeting, March, Indianapolis, IN.
222. R.H. Somani, L. Yang, B.S. Hsiao, P. Agarwal, H. Fruitwala, A. Tsou, "Probing Polymer Melt Structure at the Early Stages of Crystallization By in-Situ Rheo -SAXS and -WAXD Techniques", APS Meeting, March, Indianapolis, IN.
223. Shaofeng Ran, Benjamin S. Hsiao and Benjamin Chu, "A Novel Diffraction Analysis for Estimate of Mesophase in Crystalline Polymer Fibers", ACS Meeting, April, Orlando, FL.
224. Li-Zhi Liu, Benjamin S. Hsiao, Xuan Fu, Shaofeng Ran, Andy H. Tsou, Shigeyuki Toki and Benjamin Chu, "Crystalline Morphology and Elastic Recovery of Semi-crystalline Ethylene-Propylene Elastomer", ACS Meeting, April, Orlando, FL.
225. M. Y. Gelfer, B. S. Hsiao, Z. Wang, C. Burger, B. Chu, I. Sics, W-J. Choi "Control of Structure and Property in Nanocomposites Comprising Semicrystalline Polymer Matrix and Clay", ACS Meeting, April, Orlando, FL.
226. Lei Zhu, Ping Huang, Yan Chen, Stephen Z. D. Cheng, Qing Ge, Roderic P. Quirk, Benjamin S. Hsiao, Fengji Yeh, and Lizhi Liu, "Dislocation-controlled hexagonally perforated layer phase in a PEO-b-PS diblock copolymer", ACS Meeting, April, Orlando, FL.
227. Lei Zhu, Stephen Z. D. Cheng, Yan Chen, Ping Huang, Qing Ge, Roderic P. Quirk, Benjamin S. Hsiao, Fengji Yeh, and Lizhi Liu, "Nano-tailored polymer crystallization in the HPL phase of a PS-b-PEO diblock copolymer", ACS Meeting, April, Orlando, FL.
228. George Zhigang Wang, Edward Balizer, Benjamin S. Hsiao and Charles H. Han, "Structure Evolution during Ferroelectric Phase Transition In A Vinylidene Fluoride/Trifluoroethylene Copolymer", ACS Meeting, April, Orlando, FL.
229. Toki, Shigeyuki; Sics, Igtors; Ran, Shaofeng; Liu, Lizui; Hsiao, Benjamin S.; Murakami, Syozo; Senoo, Kazunobu; Kohjiya, Shinzo. "New insights into structural developments in natural rubber during uniaxial

- deformation by in-situ synchrotron X-ray diffraction.” American Chemical Society, Rubber Division, 161st Spring Technical Program, Savannah, GA, April 29-May 1,
230. Zhiyong Xia and Hung-Jue Sue, Zhigang Wang and Benjamin S. Hsiao, “Application of Small-angle X-ray Scattering to the Lamellar Thickness Analysis in Semicrystalline Polymers”, SPE ANTEC Meeting, May, San Francisco, CA
  231. Shashi K. Gupta, Joseph J. Schwab, Andre Lee, Bruce X. Fu and Benjamin S. Hsiao, “POSS™ Reinforced Fire Retarding Epoxy Resins”, SAMPE Meeting, May, Long Beach, CA.
  232. Kwangsok Kim, Meiki Yu, Steven X. Zong, Jonathan Chiu, Dufei Fang, Young Soo Seo, Benjamin S. Hsiao, Benjamin Chu, and Michael Hadjiargyrou “Controlled Degradation of Electrospun Poly(DL-lactide) Nanofiber Membranes”, ACS National Meeting, August, Boston, MA.
  233. Xinhua Zong, Dufei Fang, Kwangsok Kim, Shaofeng Ran, Benjamin S. Hsiao, Benjamin Chu, Collin Brathwaite, Sean Li and Elliot Chen “Nonwoven Nanofiber Membranes of Poly(lactide) and Poly(glycolide-co-lactide) via Electrospinning and Their Applications for Anti-Adhesions”, ACS National Meeting, August, Boston, MA.
  234. M. Y. Gelfer, C. Burger, L. Liu, B. S. Hsiao, B. Chu, I. Sics, B. X. Fu, M. Si and M. Rafailovich, “Investigation of Morphology and Rheology of Nanocomposites Comprising Organoclays, POSS and Ethylene-Acrylate Copolymers”, Gordon Research Conference, Polymer Physics, August, Colby-Sawyer College, NH.
  235. Y. K. Luu, K. Kim, B. S. Hsiao, B. Chu and M. Hadjiargyrou, “Monitoring the Release of Plasmid DNA from Electrospun Poly(Lactide-co-Glycolide) Based Nanostructured Membranes”, National Biomedical Engineering Society Conference, October, Houston, TX.
  236. Toki, Shigeyuki; Sics, Igor; Ran, Shaofeng; Liu, Lizhi; Hsiao, Benjamin S. “Structural developments in natural and synthetic poly-isoprene rubbers during uniaxial deformation by in-situ synchrotron X-ray diffraction.” American Chemical Society, Rubber Division, 162nd Fall Technical Program, Pittsburgh, PA, Oct. 8-11,
  237. Huang, Ping; Zhu, Lei; Jing, Jiaokai; Chen, Yan; Cheng, Stephen Z. D.; Guo, Ya; Ge, Qing; Quirk, Roderic P.; Hsiao, Benjamin S.; Yeh, Fengji; Liu, Lizhi. “Phase morphology and crystal orientation changes in nano-confined lamellae of PEO-b-PS block copolymer”, NATAS Annual Conference on Thermal Analysis and Applications, September 21-22, Pittsburgh, PA.
  238. Zhu, Lei; Mimnaugh, Brion R.; Huang, Ping; Chen, William Y.; Ge, Qing; Quirk, Roderic P.; Cheng, Stephen Z. D.; Thomas, Edwin L.; Lotz, Bernard; Hsiao, Benjamin S.; Yeh, Fengji; Liu, Lizhi. “Hard and soft confinement effects on nano-confined polymer crystallization in cylindrical mesophases”, NATAS Annual Conference on Thermal Analysis and Applications, September 21-22, Pittsburgh, PA.
  239. J. Chiu, K. Kim, S. Zhong, B. S. Hsiao, B. Chu, M. Hadjiargyrou “Development Of Cell-Delivery Vehicles From Electrospun Nanostructured Membranes” National Biomedical Engineering Society Conference, October, Houston, TX.
  240. Hilmar Koerner, Chyi-Shan Wang, Richard A. Vaia, Max D. Alexander, Nathan A. Pearce, Heather Bentley, Benjamin S. Hsiao, Igor Sics, “Deformation-Structure Relationships of Carbon Nanotubes Filled Thermoplastic Elastomers”, MRS Fall Meeting, December 2-6, Boston, MA.
  241. Shigeyuki Toki, Igor Sics, Benjamin S. Hsiao, Syozo Murakami, Msatoshi Tosaka, Shinzo Kohjiya, Sirilux Poompradub and Yuko Ikeda “Structural Developments in Synthetic Rubbers during Uniaxial Deformation by *In-Situ* Synchrotron X-Ray Diffraction”, On International Seminar on Elastomer (ISE), April 2nd, at Kyoto Japan.
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242. T. Mace, H. Hristov, O. Thomas, B. Hsiao, C. Avila-Ortega, R. Somani, L. Yang, “Thermoplastic Polyurethanes Phase Segregation Kinetics Study”, APS Meeting, March, Austin, TX.
  243. Richard Vaia, Max Alexander, Nathan Pearce, Hilmar Koerner, Chyi-Shan Wang, Benjamin Hsiao, Igor Sics “Shape Recovery of Elastomeric Carbon-Nanotube Nanocomposites”, APS Meeting, March, Austin, TX.
  244. Benjamin Hsiao, Rajesh Somani, Ling Yang, Hitesh Fruitwala, “Shear-Induced Precursor Structures for Crystallization in Isotactic Polypropylene Melt by Rheo-SAXS and -WAXD Studies”, APS Meeting, March, Austin, TX.
  245. Carlos Avila-Orta, Rajesh Somani, Ling Yang, Benjamin Hsiao, Gad Marom, “Synchrotron small- and wide-angle X-ray scattering studies of shear-induced crystallization in iPP/UHMWPE solution blends”, APS Meeting, March, Austin, TX.
  246. Ling Yang, Rajesh Somani, Igor Sics, Benjamin Hsiao, Rainer Kolb, David Lohse, Christine Ong, Hitesh Fruitwala, “Flow Induced Crystallization in Model Polyethylene Blends: Molecular Weight Effect of the Matrix”, APS Meeting, March, Austin, TX.

247. Ling Yang, Rajesh Somani, Igors Scis, Benjamin Hsiao, Rainer Kolb, David Lohse, Christine Ong, Hitesh Fruitwala, "In-situ Rheo-SAXS and Rheo-WAXD studies of Shear Induced Structures in Model Polyethylene Blend", APS Meeting, March, Austin, TX.
248. Carlos Avila-Orta, Rajesh Somani, Ling Yang, Benjamin Hsiao, Gad Marom, "Effect of fiber on shear-induced crystallization of i-PP in UHMWPE/i-PP and Aramid/i-PP fiber composites", APS Meeting, March, Austin, TX.
249. Ping Huang, Lei Zhu, Alexander J. Jing, William Y. Chen, Stephen Z. D. Cheng, Ya Guo, Qing Ge, Roderic P. Quirk, Edwin L. Thomas, Bernard Lotz, Benjamin S. Hsiao, Fengji Yeh, Lizhi Liu, "Size Effect on Crystal Orientation Changes in Nano-Confined Lamellae of PEO-b-PS Block Copolymer", APS Meeting, March, Austin, TX.
250. Howard Wang, A.J. Müller, K. Shimizu, Z.G. Wang, C.C. Han, B.S. Hsiao, "How Does Phase Separation Affect Crystallization Kinetics in a Polymer Blend?", APS Meeting, March, Austin, TX.
251. Benjamin S. Hsiao, "Flow-induced Crystallization Precursor Structures in Polymer Melts", 2nd NIST-KIPS (Kyoto Institute of Polymer Science) Joint Symposium on Polymer Science, NIST, Gaithersburg, MD, March 20-21.
252. Daniel Dikovsky, Gad Marom, Carlos Avila-Orta, Rajesh Somani, Ling Yang and Benjamin Hsiao, "Orientation of Shear Flow Induced Crystallinity in Short UHMWPE and Aramid Fiber Reinforced iPP Composites", International Conference on Science and Technology of Composite Materials (COMAT) in Merida, Yucatan Mexico, November 4-7.
253. Daniel Dikovsky, Gad Marom, Carlos Avila-Orta, Rajesh Somani, Ling Yang, Benjamin Hsiao, "Shear flow induced crystallinity in short fiber reinforced iPP composites", PPS 2003 in Athens, Greece, September 14-17.
254. Kawakami, Daisuke; Fu, Bruce X.; Ran, Shaofeng; Sics, Igors; Hsiao, Benjamin S. "Structural formation of amorphous poly(ethylene terephthalate) under uniaxial deformation using synchrotron radiation", ACS National Meeting, New Orleans, LA, March 23-27.
255. Ran, Shaofeng; Fang, Dufei; Toki, Shigeyuki; Hsiao, Benjamin; Chu, Benjamin. "Combination of Raman spectroscopy and synchrotron X-ray diffraction for in situ studies of iPP fibers under deformation", ACS National Meeting, New Orleans, LA, March 23-27.
256. Gelfer, Mikhail Y.; Burger, Christian; Fadeev, Alexander; Hsiao, Benjamin; Chu, Benjamin. "Novel approach for X-ray structure characterizations of layered nanofiller-based nanocomposites", ACS National Meeting, New Orleans, LA, March 23-27.
257. Shigeyuki Toki, Igors Sics, Benjamin S. Hsiao, Syozo Murakami, Masatoshi Tosaka, Sirilux Poompradub and Shinzo Kohjiya, "Structural Developments in Synthetic Rubbers during Uniaxial Deformation by In-Situ Synchrotron X-Ray Diffraction", International Seminar on Elastomer, Kyoto, Japan, April 2-4.
258. Shigeyuki Toki, Igors Sics, Shaofeng Ran, Lizhi Liu, Benjamin S. Hsiao, Syozo Murakami, Masatoshi Tosaka, Shinzo Kohjiya, Sirilux Poompradub and Yuko Ikeda, "Strain-induced molecular orientation and crystallization in natural and synthetic rubbers under uniaxial deformation by in-situ synchrotron X-ray study", Paul Flory Symposium, ACS Rubber Division Meeting, 163rd Spring Technical Meeting, San Francisco, CA, April 27-30.
259. Dufei Fang, Benjamin S. Hsiao and Benjamin Chu, "Multiple-Jet Electrospinning of Non-Woven Nanofiber Articles", ACS Fall Meeting, New York, NY, September 7-11.
260. Rajesh H. Somani, Ling Yang, Benjamin S. Hsiao, Pawan K. Agarwal, Aspy Mehta, Weiquing Weng, "Effects of long chain branching in polypropylene on shear-induced crystallization", ACS Fall Meeting, New York, NY, September 7-11.
261. Benjamin Hsiao, Rajesh Somani, and Ling Yang, "Flow-induced crystallization precursors in polymer melt", ACS Fall Meeting, New York, NY, September 7-11.
262. Xinhua Zong, Kwangsok Kim, Jonathan Chiu, Benjamin S. Hsiao, Benjamin Chu, Sean Li, Barbara Garlick, Collin Brathwaite, Thomas Zimmerman and Dufei Fang, "Prevention of post-surgical adhesions using electrospun bioabsorbable non-woven nanofiber membranes", ACS Fall Meeting, New York, NY, September 7-11.
263. X. Zong, H. Bien, C.Y. Chung, L. Yin, K. Kim, D.F. Fang, B. Chu, B. S. Hsiao and E. Entcheva, "Electrospun Non-Woven Membranes as Scaffolds for Heart Tissue Constructs", ACS Fall Meeting, New York, NY, September 7-11.
264. Kwangsok Kim, Charles Chang, Xinhua Zong, Dufei Fang, Benjamin S. Hsiao and Benjamin Chu, "The incorporation of an antibiotic drug in electrospun poly(lactide-co-glycolide) non-woven nanofiber scaffolds", ACS Fall Meeting, New York, NY, September 7-11.



265. Chang Seoul, Igors Sics, Benjamin Chu and Benjamin S. Hsiao, "Deformation Study of Melt-Pressed Ultrahigh Molar Mass Polyethylene Films", ACS Fall Meeting, New York, NY, September 7-11.
266. Daisuke Kawakami, Shaofeng Ran, Igors Sics, Carlos Avila-Orta, Benjamin Chu and Benjamin S. Hsiao "A Structural Study Of Amorphous Poly(Ethylene Terephthalate) Under Extensional Deformation By X-ray Diffraction And Raman Spectroscopy", ACS Fall Meeting, New York, NY, September 7-11.
267. Lei Zhu, Lu Sun, Qing Ge, Roderic P. Quirk, Benjamin S. Hsiao, Carlos A. Avila-Orta, and Igors Sics, "Comparison of crystallization kinetics in nanoconfined cylinder and double gyroid phases", ACS Fall Meeting, New York, NY, September 7-11.
268. Igors Sics, Carlos Avila-Orta, Jong Kahk Keum, Ling Yang, Rajesh Somani, Christian Burger, Shaofeng Ran, Benjamin Chu, Benjamin Hsiao, David Cookson, Dave Schultz, Lee Myungae and P. James Viccaro, "Elongation-induced crystalline microstructures in iPP and iPP/UHMWPE blend during fiber spinning" ACS PMSE, ACS Fall Meeting, New York, NY, September 7-11.
269. Shaofeng Ran, Christian Burger, Igors Sics, Kyunghwan Yoon, Dufei Fang, Kwangsok Kim, Jong Kahk Keum, Benjamin Hsiao, Benjamin Chu, David Cookson, Dave Shultz, Myungae Lee, Jim Viccaro and Yasuo Ohta "In-Situ Synchrotron SAXS/WAXD of Melt Spinning of Modified Carbon Nanofiber and Polypropylene Nanocomposite" ACS Fall Meeting, New York, NY, September 7-11.
270. H. L. Jiang, D. F. Fang, B. Hsiao, B. Chu and W. Chen, "Hydrophobic/Hydrophilic Electrospun Membranes for Biomedical Applications", ACS Fall Meeting, New York, NY, September 7-11.
271. Alexander Fadeev, Sue D'Andrea, Mikhail Y. Benjamin Hsiao and Andy H. Tsou, "Highly-Ordered Thermally Stable Nano-Layered Materials Manufactured From Apatite Mineral", ACS Fall Meeting, New York, NY, September 7-11.
272. Benjamin S. Hsiao, "Biodegradable Nanofiber Membrane for Biomedical Applications", 6th Austrian Polymer Meeting/XXIst Hermann Mark Meeting, Vienna, Austria, September 15-17.
273. Daisuke Kawakami, Shaofeng Ran, Christian Burger, Bruce Fu, Igors Sics and Benjamin S. Hsiao, "Structural formation of amorphous poly(ethylene terephthalate) under uniaxial deformation", The Society of Rheology 75th Annual Meeting in Pittsburgh, PA, October 15.
274. M. Gelfer, C. Burger, C. Avila, L. Yang, I. Sics, B. S. Hsiao, B. Chu, M. Si, M. Rafailovich, B. Saur "Structural and Rheological Investigation of Nanocomposites Prepared by Melt-Blending of Ethylene-Vinyl Based Copolymers with Organoclays" Nanocomposite Conference, Montreal, Canada, Nov. 17-21
275. Rajesh H. Somani, Ling Yang and Benjamin S. Hsiao, "Flow Induced Crystallization in Polymers", ASME (American Society of Mechanical Engineers) IMECE meeting in Washington, DC, Nov 11-21.
276. Toki, Shigeyuki; Sics, Igors; Liu, Li-Zhi; Hsiao, Benjamin S.; Tsou, Andy H.; Datta, Sudhin. "Structure changes during uniaxial deformation of ethylene-propylene elastomer by in-situ synchrotron wide-angle X-ray diffraction studies." American Chemical Society, Rubber Division, 164<sup>th</sup> Fall Technical Program, Cleveland, OH, Oct. 14-17
277. Tosaka, M.; Kohjiya, S.; Murakami, S.; Poompradub, S.; Ikeda, Y.; Toki, S.; Sics, I.; Hsiao, B. "Effect of network-chain length on strain-induced crystallization of NR and IR vulcanizates." American Chemical Society, Rubber Division, 164<sup>th</sup> Fall Technical Program, Cleveland, OH, Oct. 14-17
278. Shigeyuki Toki, Li-Zhi Liu, Igors Sics, Benjamin S. Hsiao and Andy H. Tsou, "Structure Changes During Uniaxial Deformation of Ethylene-Propylene Elastomer by *In-Situ* Synchrotron X-Ray Studies", 8<sup>th</sup> Japan International SAMPE Symposium, Tokyo, Japan, November 18-21.
- 2004**
279. J. Chiu, X. Zong, B. S. Hsiao, B. Chu, M. Hadjiargyrou., "Development of a Viable Collagen-Containing, Non-Woven, Electro-Spun Poly-L-Lactide Scaffold for Tissue Engineering" (poster) Gordon Research Conference on Colloidal, Macromolecular & Polyelectrolyte Solutions, Ventura, CA, Feb. 1-6.
280. K. Kim, C. Chang , Y.K. Luu, D. Fang, B.S. Hsiao, B. Chu, M. Hadjiargyrou., "Biodegradable Amphiphilic Block Copolymers for the Control of Degradation and Drug Release in Electro-Spun Nano-Fibrous Scaffolds" (poster) Gordon Research Conference on Colloidal, Macromolecular & Polyelectrolyte Solutions, Ventura, CA, Feb. 1-6.
281. D. Liang, K. Kim, Y. K. Luu, M. Hadjiargyrou, B. S. Hsiao, B. Chu, "Encapsulation of Plasmid DNA by PLA-PEG-PLA in an Electro-Spun PLGA Scaffold as Non-Viral Gene Delivery Vehicle", Gordon Research Conference on Colloidal, Macromolecular & Polyelectrolyte Solutions, Ventura, CA, Feb. 1-6.
282. L. Yang, R. H. Somani, C. A. Avila-Orta, B. S. Hsiao, R. Kolb, T. Sun and D. Lohse, "Probing the Origin of Shish-Kebab Formation in Model Polyethylene Blend under Shear by In-situ Rheo-SAXS and Rheo-WAXD", American Physical Society Meeting, Montreal, Canada, March 22-26.

283. Lei Zhu, Lu Sun, Benjamin Hsiao, Carlos Avila-Orta, "Self-assembly Behavior and Crystallization of a Low Molecular Weight Double Crystalline Polyethylene-block-Poly(ethylene oxide) Diblock Copolymer", American Physical Society Meeting, Montreal, Canada, March 22-26.
284. Lei Zhu, Lu Sun, Qing Ge, Roderic P. Quirk, Stephen Z.D. Cheng, Benjamin S. Hsiao, Igors Sics, Carlos Avila-Orta, "Complex Transformations between Bicontinuous Cubic and Cylinder Phases in a Polystyrene-block-Poly(ethylene oxide) Diblock Copolymer", American Physical Society Meeting, Montreal, Canada, March 22-26.
285. Daisuke Kawakami, Benjamin S. Hsiao, Shaofeng Ran, Christian Burger and Igors Sic, "Structural formation of amorphous poly(ethylene terephthalate) during uniaxial deformation above and below glass temperature", SPE ANTEC Meeting, Chicago, IL, May 16-20
286. Benjamin S. Hsiao, "Real-Time Synchrotron X-ray Techniques for Polymer Processing Research", SPE ANTEC Meeting, Chicago, IL, May 16-20
287. M. Gelfer, A. Drozdov, C. Burger, B. S. Hsiao, B. Chu, M. Si, M. Rafailovich, "Effects of temperature and matrix composition on the structure and rheology relationship of polymer-organoclay nanocomposites", 14<sup>th</sup> International Congress on Rheology (ICR2004), Seoul, Korea, August 22-27
288. Xuming Chen, Kyunghwan Yoon, Christian Burger, Igors Sics, Benjamin S. Hsiao, Benjamin Chu, "In-situ Synchrotron X-Ray Studies of Modified Carbon Nano-fiber and UHMWPE Nano-Composite Films during Deformation", 2004 Fall MRS Meeting, Boston, MA, Nov. 29-Dec. 2.
289. Sirilux Poompradub, Masatoshi Tosaka, Shinzo Kohjiya, Yuko Ikeda, Shigeyuki Toki, Igors Sics, Benjamin S. Hsiao, "Smart in situ nanocomposite: Strain-induced crystallization in carbon black filled natural rubber", MACRO 2004 - 40th IUPAC World Polymer Congress, Paris, France, July 4-9.
290. M. Y. Gelfer, C. Burger, G. Jeschke, A. Fadeev, P. Nawani, B. S. Hsiao, B. Chu, M. Si, M. Rafailovich, "Investigation of thermally induced phase transitions and degradation of organoclays using in-situ X-ray scattering and FTIR spectroscopy", Nanocomposites 2004, San Francisco, CA, September 1-3.
291. Shigeyuki Toki, Igors Sics, Chris Burger, Dufei Fang, Benjamin S. Hsiao, Andy H. Tsou and Sudhin Datta, "Structural Evolution and Mechanical Properties in New TPE during Uniaxial Deformation by in-situ Synchrotron X-Ray Scattering", American Chemical Society Rubber Division 165<sup>th</sup> Spring Meeting, Grand Rapids, Michigan, May 17-19.
292. Shigeyuki Toki, Igors Sics, Christian Burger, Dufey Fang, Benjamin S. Hsiao, Andy H. Tsou<sup>2</sup> and Sudhin Datta, "Structure changes and Stress-build up during Uniaxial Deformation in Propylene based TPE by In-situ Synchrotron WAXD and SAXS studies", Polymer Processing Society 20th Anniversary Meeting, Akron OH, June 20-24.
293. Lu Sun, Ethan A. Ertel, Jianjun Miao, Lei Zhu, Benjamin S. Hsiao, and Carlos A. Avila-Ort, "Two-step De-intercalation and Intercalation Induced by Polymer Crystallization and Melting in Poly(ethylene oxide)/Organoclay Nanocomposites", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
294. Jianjun Miao, Lei Zhu, Lu Tian, Kathryn E. Uhrich, Carlos A. Avila-Orta and Benjamin S. Hsiao, "Forced Polymer Chain Folding in Amphiphilic Unimolecular Micelles", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
295. Rajesh H. Somani, Ling Yang, Benjamin S. Hsiao, Rainer Kolb and Hitesh Fruitwala, "Shear rate effect of flow-induced oriented precursor structure in polypropylene melt", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
296. Carlos A. Avila-Orta, Christian Burger, Rajesh Somani, Ling Yang, Benjamin S. Hsiao and Gad Marom, "Shear-Induced Crystallization Precursor Structures in iPP/UHMWPE Blends by In-Situ Small- and Wide-Angle X-ray Scattering", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
297. Jong Kahk Keum, Christian Burger, Rajesh Somani, Ling Yang, Hongyu Chen, Rainer Kolb, Ching-Tai Liu and Benjamin S. Hsiao, "Synchrotron X-ray scattering studies on the nature of flow-induced shish-kebab structure in polyethylene blends", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
298. Ling Yang, Rajesh H. Somani, Igors Scis, Carlos A. Avila-Orta, Benjamin S. Hsiao, "Flow-induced Crystallization Precursor Structures in Model Polyethylene Blend", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
299. Xuming Chen, Kyunghwan Yoon, Christian Burger, Igors Sics, Benjamin S. Hsiao and Benjamin Chu, "Super-Tough Performance of Modified Carbon Nanofiber (MCNF)/UHMWPE Nanocomposite Films", ACS POLY Fall Meeting, Philadelphia, PA, August 22-26.
300. C. V. Krishnana, M. Garnettb, B. Hsiao and B. Chu, "Electrochemical measurements of isopolyoxomolybdates: I. pH dependent behavior of sodium molybdate", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.

301. C. V. Krishnana, M. Garnett, J. Chen, C. Burger, B. Hsiao and B. Chu, "Electrochemical and X-ray measurements of isopolyoxomolybdates: II. Mono, di, and heptaoxymolybdates", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
302. Huang, Ping; Zhu, Lei; Guo, Ya; Ge, Qing; Quirk, Roderic P.; Thomas, Edwin L.; Lotz, Bernard; Hsiao, Benjamin S.; Avila-Orta, Carlos A.; Sics, Igors; Cheng, Stephen Z. D. "Comparison of poly(ethylene oxide) crystal orientation changes in two-dimensionally nano-confined cylinders constructed by a poly(ethylene oxide)-b-polystyrene diblock copolymer and a blend of poly(ethylene oxide)-b-polystyrene and polystyrene.", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
303. Sun, Lu; Liu, Yuxiu; Zhu, Lei; Hsiao, Benjamin S.; Avila-Orta, Carlos A. "Self-assembly and crystalline morphology in polyethylene and poly(ethylene oxide) copolymers", ACS PMSE Fall Meeting, Philadelphia, PA, August 22-26.
304. Tenneti, Kishore K.; Li, Christopher Y.; Zhang, Dong; Zhang, Hailiang; Wan, Xinhua; Chen, Er-Qiang; Zhou, Qi-Feng; Avila-Orta, Carlos; Igos, Sics; Hsiao, Benjamin S. "Nanoscale hierarchical structures of a series of liquid crystalline "rod-coil" block copolymers." ACS POLY Fall Meeting, Philadelphia, PA, August 22-26.
305. Mikhail Y Gelfer, Alex Drozdov, Christian Burger, Benjamin Hsiao, Benjamin Chu, Mayu Si, Miriam Rafailovich, "Effects of temperature and matrix composition on the structure and rheology relationship in polymer-organoclay nanocomposites", the XIVth International Congress on Rheology, Seoul, Korea, August 22-27.
306. Lei Zhu, Lu Sun, Qing Ge, Roderic P. Quirk, Stephen Z. D. Cheng, Benjamin S. Hsiao, Carlos A. Avila-Orta and Igors Sics, "Epitaxial Phase Transformation in Cylindrical and Double Gyroid Mesophases in Diblock Copolymers", 2004 MRS Fall Meeting, Boston, MA, Nov. 29-Dec. 3.
307. Jianjun Miao, Lei Zhu, Lu Tian, Kathryn E. Uhric<sup>2</sup>, Carlos A. Avila-Orta and Benjamin S. Hsiao, "Forced Polymer Chain Folding in Amphiphilic Unimolecular Micelles", 2004 MRS Fall Meeting, Boston, MA, Nov. 29-Dec. 3.
308. Lu Sun, Lei Zhu, Jianjun Miao, Carlos A. Avila-Orta, Igors Sics and Benjamin S. Hsiao, "Two-step De-intercalation and Intercalation Induced by Polymer Crystallization and Melting in Poly(ethylene oxide)/Organoclay Nanocomposites", 2004 MRS Fall Meeting, Boston, MA, Nov. 29-Dec. 3.
309. Xuming Chen, Kyunghwan Yoon, Christian Burger, Igors Sics, Benjamin Chu and Benjamin S. Hsiao, "Super-Tough Performance of Modified Carbon Nanofiber (MCNF)/UHMWPE Nanocomposite Films", Symposium on Materials for Space Applications, 2004 MRS Fall Meeting, Boston, MA, Nov. 29-Dec. 3.
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310. M. Y. Gelfer, C. Burger, G. Panek, G. Jeschke, A. Y. Fadeev, M. Si, M. H. Rafailovich, P. Nawani, B. Chu and B. Hsiao, "Investigation of thermally induced phase transitions and degradation of organoclays based on synthetic Somasif clays using in-situ X-ray scattering" (oral), American Chemical Society Meeting, San Diego, CA, March 13-17.
311. J. Keum, R. Somani, F. Zuo, L. Yang, I. Sics, B. Hsiao, H. Chen, R. Kolb and C.-T. Lue, "Examination of Flow-Induced Crystallization Precursor Structures in Polyethylene Blend Films by Reversed Melting Method" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
312. Benjamin Hsiao, Ling Yang, Rajesh Somani, Lei Zhu, "Unexpected Shish-Kebab Structure in Shear-Induced Polyethylene Melt" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
313. Rajesh Somani, Igors Sics, Benjamin Hsiao, "Shear-Induced Shish-Kebab Morphology in Polymer Melts - Flow Between Two Parallel Plates versus Coaxial Cylinders" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
314. Feng Zuo, JongKahk Keum, Ling Yang, Rajesh Somani, Benjamin Hsiao, "Thermal Stability of Shear-Induced Precursors of Shish-Kebab in a Model Polyethylene Blend by in-situ Rheo-SAXS and -WAXD" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
315. Lei Zhu, Jianjun Miao, Guoqiang Xu, Lu Tian, Kathryn Uhrich, Carlos Avila-Orta, Benjamin Hsiao, "Molecular Architecture Induced Chain-Folding in Polymeric Amphiphilic Unimolecular Micelles" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
316. Jianjun Miao, Li Cui, Lei Zhu, Igors Sics, Benjamin Hsiao, "Can short alkyl chain fold in lamellar crystals?" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
317. Kishore Tenneti, Christopher Li, Yingfeng Tu, Xinhua Wan, Qu-Feng Zhou, Carlos Avila-Orta, Benjamin Hsiao, "On the influence of temperature and volume fraction on liquid crystalline block copolymer nanoscale architectures" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.

318. Li Cui, Jianjun Miao, Lei Zhu, Igors Sics, Benjamin Hsiao, "Confined Discotic Liquid Crystalline Self-Assembly in a Novel Coil-Coil-Disk Triblock Oligomer" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
319. Ping Huang, Stephen Z. D. Cheng, Ya Guo, Roderic P. Quirk, Benjamin S. Hsiao, Carlos A. Avila-Orta, Igors Sics, "Induced PEO Crystal Orientation within the Inversed Cylindrical Morphology of PEO-b-PS Block Copolymer" (oral), American Physical Society Meeting, Los Angeles, CA, March 21-25.
320. Richard Vaia, Hilmar Koerner, Benjamin S. Hsiao and Igors Sics "Morphology -- Deformation Correlations in Nanocomposite Elastomers" (oral), the 167th Spring Technical Meeting of the Rubber Division, ACS in San Antonio, TX, May 16-18.
321. Hsiao, Benjamin S.; Gelfer, Mikhail Y. "Synchrotron X-ray techniques for the study of clay-based polymer nanocomposites.", Spring Technical Meeting - American Chemical Society, Rubber Division, 167th, San Antonio, TX, United States, May 16-18.
322. Vaia, Richard; Mirau, Peter; Alexander, Max; Koerner, Hilmar; Hsiao, Benjamin S.; Sics, Igors. "Morphology-deformation correlations in nanocomposite elastomers", Spring Technical Meeting - American Chemical Society, Rubber Division, 167th, San Antonio, TX, United States, May 16-18.
323. Kohjiya, Shinzo; Kato, Atsushi; Shimanuki, Junichi; Ikeda, Yuko; Tosaka, Masatoshi; Poompradub, Sirilux; Toki, Shigeyuki; Hsiao, Benjamin S.. "Nano-structural elucidation in carbon black loaded NR vulcanizate by 3D-TEM and in situ WAXD measurements." Spring Technical Meeting - American Chemical Society, Rubber Division, 167th, San Antonio, TX, United States, May 16-18.
324. Toki, Shigeyuki; Hsiao, Benjamin S.; Kohjiya, Shinzo; Tosaka, Masatoshi; Tsou, Andy H.; Datta, Sudhin. "Synchrotron X-ray studies of vulcanized rubbers and thermoplastic elastomers", Spring Technical Meeting - American Chemical Society, Rubber Division, 167th, San Antonio, TX, United States, May 16-18
325. M. Y. Gelfer, C. Burger, P. Nawani, B. Chu, B. S. Hsiao, M. Si, and M. Rafailovich, "Novel approach for the interpretation of x-ray scattering data from layered systems", 23rd Disc. Conf. of P.M.M., Curr. Fut. Trends Polym. Mater. Prague, Poland, August.
326. C. Burger, H. Zhou, B. S. Hsiao, and B. Chu, "Theoretical treatment and practical aspects of systems with preferred orientation", XXth IUCr Congress, Florence, Italy, August 23-31.
327. Feng Zuo, Hongyu Chen, Jing Li, Ronald Wevers, Greg Meyers, Jongkhak Keum, Xuming Chen and Benjamin S. Hsiao, "In-situ Synchrotron SAXS/WAXD Studies on Stretching of Isotactic Polypropylene" (poster), ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
328. Xuming Chen, Christian Burger, Xuefen Wang, Weidong He, Kyunghwan Yoon, Rajesh H. Somani, Dufei Dang, Igors Sics, Lixia Rong, Benjamin S. Hsiao and Benjamin Chu, "In-Situ X-Ray Scattering Studies of Fluorinated Multi-Wall Carbon Nanotube (FMWNT)/Fluorinated Ethylene Propylene (FEP) Composite Fiber during Stretching" (poster), ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
329. Jong Kahk Keum, Christian Burger, Feng Zuo, Igors Sics, Benjamin Hsiao, Thomas Sun, Arnold Lustiger, "Synchrotron X-ray diffraction/scattering studies on the nucleation and growth habits of flow-induced shish-kebab structure in linear polyethylene (HDPE) melts", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
330. Igors Sics, Lixia Rong, Benjamin S. Hsiao and Benjamin Chu, "Advanced Polymers Beamline (X27C) at National Synchrotron Light Source, BNL", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
331. Pranav Nawani, Mikhail Y. Gelfer, Benjamin S. Hsiao, "Investigations of morphology and thermal behavior of transition metal ions modified clays using in-situ X-ray scattering", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
332. Hong-wen Zhou, Christian Burger, Jinglu Chen, Benjamin S. Hsiao, Benjamin Chu, Lila Graham and Melvin J. Glimcher, "Interpretation of 2D Small-Angle X-Ray Diffraction Patterns from Mineralized Collagen Fibrils in Fish Bone", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
333. P. Huang, S. Z. D. Cheng, R. Van Horn, Y. Guo, R. P. Quirk, B. Lotz, E. L. Thomas, B. Hsiao, C. A. Avila-Orta, I. Sics, "PEO crystal orientation changes within an inversed cylindrical morphology constructed by a PEO-b-PS block copolymer", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
334. L. Cui, J. Miao, L. Zhu, I. Sics, B. S. Hsiao, "Confined discotic liquid crystalline self-assembly in a novel coil-coil-disk triblock oligomer", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.
335. K. K. Tenneti, X. Chen, C. Y. Li, X. Wan, Q.-F. Zhou, I. Sics, B. S. Hsiao, "Asymmetric Liquid Crystalline Rod-Coil Block Copolymer System", ACS, PMSE Fall Meeting, Washington, DC., August 28 to September 2.

336. Benjamin Chu and Benjamin S. Hsiao, "Electro-spinning Technology and its Applications", The Polymer Congress in Beijing, Oct. 9-10.
337. Andy H. Tsou, Matthew B. Measmer, Mikhail Y. Gelfer, Pranav Nawani and Benjamin S. Hsiao, "Evaluation of Organosilicate Dispersion in Polymer Nanocomposites by Permeability", International Rubber Conference Proceeding, Yokohama, Japan, Oct. 25-28.
338. Shigeyuki Toki, Igors Sics, Benjamin S. Hsiao, Sureerut Amnuaypornsi and Seiichi Kawahara, "Strain-Induced Crystallization in Un-Vulcanized Natural Rubbers by Synchrotron X-Ray Study", American Chemical Society Rubber Division Preprint, 168th Technical Meeting, Pittsburgh, PA, November 1-3.
339. C. Burger, H. Zhou, X. Chen, J.K. Keum, B.S. Hsiao, B. Chu, "Polymer Fiber Diffraction and Its Quantitative Analysis", Pittsburgh Diffraction Conference, Argonne, IL, November 3-5.
340. Kyunghwan Yoon, Kwangsok Kim, Xuefen Wang, Dufei Fang, Benjamin S. Hsiao and Benjamin Chu, "High Flux Ultrafiltration Membranes Based on Electrospun Nanofibrous Scaffolds", Symposium on Nanomaterials and the Environment, MRS 2005 Fall Meeting, Boston, MA, Nov. 29-Dec. 3.
341. C. A. Avila-Orta, M. V. Davila-Rodriguez, Y. A. Aguirre-Figueroa, F. J. Medellín-Rodrigue, B. S. Hsiao, "Thermal And Electrical Properties of iPP/MWCNT Nanocomposites", International Congress of Composites (COMAT 2005), Buenos Aires- Argentina, December 11-14.

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342. M. Gelfer, C. Burger, P. Nawani, A. Drozdov B. S. Hsiao, B. Chu, M. Si, M. Rafailovich, "Effects of temperature and matrix composition on the structure and rheology relationship in polymer-organoclay nanocomposites", 4th Mediterranean Conference on Chemical Engineering, Le Meridien Hotel on the Dead Sea, Israel, January 9-11
343. Kishore Tenneti, Xiaofang Chen, Christopher Li, Xinhua Wan, Qi-Feng Zhou, Igors Sics and Benjamin Hsiao, "Phase structures of block copolymers blended with small molecules", APS March Meeting, Baltimore, MD, March 13-17.
344. Kishore Tenneti, Xiaofang Chen, Christopher Li, Yingfeng Tu, Xinhua Wan, Qi-Feng Zhou, Igors Sics and Benjamin Hsiao, "Perforated layer structures in liquid crystalline block copolymers", APS March Meeting, Baltimore, MD, March 13-17.
345. Benjamin Hsiao, "Flow-Induced Crystallization Precursor Structure in Entangled Polymer Melt", APS March Meeting, Baltimore, MD, March 13-17.
346. Feng Zuo, Jong Kahk Keum, Ling Yang, Rajesh H. Somani and Benjamin S. Hsiao "Thermal Stability of Shear-Induced Shish-Kebab Precursor Structure from High Molecular Weight Polyethylene Chains", 231st ACS National Meeting, Division of Polymeric Materials: Science and Engineering, Symposium on "Complex Fluids in Confined Spaces: Colloids and Complex Fluids", Atlanta, GA, March 26-30.
347. Benjamin Chu and Benjamin Hsiao, "Super-Tough Nano-Composites with Modified Carbon Nano-Fibers", Polymer Physics '2006 Conference, Suzhou, China, June 1-5.
348. Dehai Liang, Christine Falabella, Michael Hadjiargyrou, Benjamin Hsiao, Benjamin Chu, "Controlled Release of Plasmid DNA from Electrospun Nanofibrous Scaffolds in Tissue Engineering", Polymer Physics '2006 Conference, Suzhou, China, June 1-5.
349. Dehai Liang, Jun Zhang, Weidong He, Benjamin Hsiao, Benjamin Chu, "Laser light scattering study on DNA/poly(ethylene glycol)-b-poly(L-lysine) complexes in aqueous and non-aqueous solutions", 4th East-Asian Polymer Conference (EAPC-4), Nankai University, Tianjin, China, May 28-31.
350. Benjamin S. Hsiao "On-Line Nanostructure Characterization by Synchrotron X-ray Scattering and Diffraction Techniques", 22nd Annual Meeting of Polymer Processing Society, Yamagata, Japan, July 2-6, 2006.
351. Benjamin S. Hsiao and Benjamin Chu, "Synchrotron X-Ray Scattering of Polymer Nanocomposites", Synchrotron Radiation in Polymer Science III (SRPS3) Meeting, Spring-8, Japan, July 6 - 8.
352. Benjamin S. Hsiao, Rajesh H. Somani, Ling Yang, Feng Zuo and Jong-Khak Keum, "Probing Shear-Induced Crystallization Precursor Structure in Entangled Polymer Melts by In-Situ Rheo-SAXS and Rheo-WAXD", XIII International Conference on Small-Angle Scattering Symposium, Kyoto, Japan, July 9-13.
353. H.-W. Zhou, C. Burger, L. Graham, M. J. Glimcher, I. Sics, B. S. Hsiao, and B. Chu, "Biom mineralization of Type-I Collagen Fibrils in Intramuscular Herring Bone", XIII International Conference on Small-Angle Scattering Symposium, Kyoto, Japan, July 9-13.
354. Dehai Liang; Jun Zhang; Weidong He; Benjamin Hsiao; Benjamin Chu "Laser light scattering study on DNA/poly(ethylene glycol)-b-poly(L-lysine) complexes in aqueous and non-aqueous solutions", World Polymer Congress – Macro 2006, 41st International Symposium on Macromolecules, Rio de Janeiro, July 16 – 21.

355. Benjamin Chu and Benjamin S. Hsiao, "Nanofiber Technology for Health: Challenges and Opportunities", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
356. Benjamin S. Hsiao and Benjamin Chu, "Nanofibrous Materials for Biomedical and Environmental Applications", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
357. Kyunghwan Yoon, Benjamin S. Hsiao and Benjamin Chu, "High flux ultrafiltration membranes based on poly(acrylonitrile) nanofibrous scaffolds and crosslinked poly(vinyl alcohol) coating", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
358. Antonis Kalarakis, Kyunghwan Yoon, Rajesh Somani, Igors Sics, Benjamin S. Hsiao and Benjamin Chu, "Polymer Chain Dynamics and Melting Behavior in a Carbon Nanofiber Reinforced Elastomeric Composite", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
359. Xuming Chen, Christian Burger, Jie Cai, Lina Zhang, Benjamin Hsiao and Benjamin Chu, "X-ray studies of regenerated cellulose fibers wet spun from environmental friendly NaOH/urea aqueous solution", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
360. Tsai-Ming Chung, Rong-Ming Ho, Jing Chung Kuo, Jing-Cherng Tsai, Benjamin S. Hsiao and Igors Sics, "Trilayer Crystalline Lamellar Morphology under Confinement", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
361. Christopher Y. Li, Kishore K. Tenneti, Xiaofang Chen, Xinhua Wan, Qi-Feng Zhou and Benjamin S. Hsiao, "Phase structures of mesogen jacketed liquid crystalline "rod-coil" block copolymers", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
362. Kishore K. Tenneti, Christopher Y. Li, Xiaofang Chen, Xinhua Wan, Qi-Feng Zhou and Benjamin S. Hsiao, "Phase structures of block copolymer complexes with bent-core mesogens", 232<sup>nd</sup> ACS National Meeting, San Francisco, CA, September 10-14.
363. B. Larin, C.A. Avila-Orta, Rajesh H. Somani, B.S. Hsiao and Gad Marom, "The significance of flow induced structures in fiber reinforced thermoplastic composites", Manufacturing and Processing Technologies at 5th Asian-Australasian Conference on Composite Materials (ACCM-5) in Hong Kong, November 27-30.

## 2007

364. Feng Zuo, Xuming Chen, Jongkakh Keum, Yiming Mao, Benjamin S. Hsiao, Hongyu Chen and Debbie Chiu, "Structure, Property and Processing Relationship of Olefin Block Copolymers via In-Situ Synchrotron X-ray Studies", 233<sup>rd</sup> National ACS Meeting, Chicago, IL, March 25-29.
365. Mun F. Tse, Benjamin S. Hsiao, and Pranav Nawani, "Characterization of Nanoclays in Solvents", 233<sup>rd</sup> National ACS Meeting, Chicago, IL, March 25-29.
366. Pranav Nawani, Christian Burger, Mikhail Gelfer, Benjamin Chu, Benjamin S. Hsiao, Andy H. Tsou and Weiqing Weng, "Preferred Orientation of Organoclay in Nanocomposites by 3D TEM and SAXS Study", 233<sup>rd</sup> National ACS Meeting, Chicago, IL, March 25-29.
367. Sudipto Das, Derek B. Klinedinst, Iskender Yilgor, Frederick L. Beyer, Shigeyuki Toki, Benjamin S. Hsiao and Garth L. Wilkes, "Structure-property relationships of segmented polyurethanes and polyureas based on single molecule hard segments", 233<sup>rd</sup> National ACS Meeting, Chicago, IL, March 25-29.
368. Junchai Zhao, Zhigang Wang, and Benjamin S. Hsiao, "Reorganization and crystallization of quenched mesomorphic isotactic polypropylene during thermal annealing", 233<sup>rd</sup> National ACS Meeting, Chicago, IL, March 25-29.
369. Benjamin S. Hsiao, Feng Zuo, Jongkakh Keum, Xuming Chen, Hongyu Chen, Jing Li, "Temperature Effects on Interlamellar Chain Entanglement and Structural Changes in Isotactic Polypropylene during Uniaxial Tensile Deformation", APS March Meeting, Denver, CO, March 6-9.
370. Aihua He, Junxing Li, Charles Han, Dufei Fang, Benjamin Hsiao and Benjamin Chu, "Electrospinning of Hyaluronic acid (HA) and HA/Gelatin Blends", APS March Meeting, Denver, CO, March 6-9.
371. Pranav Nawani and Benjamin S. Hsiao "Transition Metal Ion Modified Organoclays as Fire Retardant Fillers for Polymer Nanocomposites", 18h Annual BCC Conference of FR on Polymeric Materials, Stamford, CT, May 21-23, 2007.
372. Lei Zhu, Lu Sun, Lixia Rong, Benjamin Hsiao, "Tailor-Made Onion-Like Stereocomplex Crystals in Incompatible Enantiomeric Polylactide Containing Block Copolymer Blends", APS March Meeting, Denver, CO, March 6-9.
373. Kishore Tenneti, Xiaofang Chen, Christopher Li, Lixia Rong and Benjamin Hsiao, "Phase structures of a series of bent-core mesogen jacketed liquid crystalline block polymers", APS March Meeting, Denver, CO, March 6-9.

374. Lu Sun, Jorge Ginorio, Lei Zhu, Lixia Rong, Igor Sics and Benjamin Hsiao, "Phase Transitions and Honeycomb Morphology in an Incompatible Blend of Enantiomeric Polylactide Block Copolymers", APS March Meeting, Denver, CO, March 6-9.
375. Kishore Tenneti, Xiaofang Chen, Christopher Li, Lixia Rong and Benjamin Hsiao, "Morphological transformation and mesostructure formation in diblock copolymer blends" APS March Meeting, Denver, CO, March 6-9.
376. Benjamin Chu, Benjamin S. Hsiao, Kyunghwan Yoon, "Nanofiber and Nanocomposite-Fiber Technology for Environmental Applications", American Association of Textile Chemists and Colorists (AATCC) International Conference, Innovations in Nanotechnologies, Composites, and Sports/Military Materials Symposium, Atlanta, Georgia, April 11-12.
377. Shih-Yaw Lai, Hongyu Chen and Benjamin Hsiao "Structure, Property and Processing Relationship of Novel Polyolefin Elastomers", The PPS-2007 Asia/Australia Regional Meeting, Shanghai, China, July 12-14, 2007.
378. Yimin Mao, Feng Zuo, Rajesh H. Somani, Jong Kahk Keum, Benjamin S. Hsiao, "Influence of Strain on Shear-Induced Crystallization of Poly(ethylene oxide)", 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
379. Feng Zuo, Yiming Mao, Jong Kahk Keum, Benjamin S. Hsiao, Hongyu Chen, Debbie Chiu, and Shih-Yaw Lai, "Shear-induced Crystallization of Olefin Block Copolymer via In-Situ Synchrotron X-ray Studies" 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
380. Hongyang Ma, Lixia Rong, Kyunghwan Yoon, Benjamin S. Hsiao and Benjamin Chu, "Structure and Property of High Flux Cellulose Membranes Fabricated by Ionic Liquid", 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
381. Jong Kahk Keum, Feng Zuo, Yimin Mao and Benjamin S. Hsiao "Flow-induced crystallization precursor structure in high molecular weight isotactic polypropylene/low molecular weight linear low density polyethylene blends" 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
382. Benjamin S Hsiao, Jong Kahk Keum, and Feng Zuo "Dynamic formation of shear-induced shish-kebab structure in highly entangled melts of UHMWPE/HDPE blends" 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
383. Kyunghwan Yoon, Christopher Pang, Benjamin S Hsiao, and Benjamin Chu "High flux nanofiltration membranes based on interfacially polymerized polyamide on nanofibrous scaffolds", 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
384. Lei Zhu, Lu Sun, Lixia Rong, and Benjamin S. Hsiao, "Tailoring onion-like morphology in polylactide-containing block copolymers", 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
385. Kishore K. Tenneti, Xiaofang Chen, Christopher Y. Li, Xinhua Wan, Qi-Feng Zhou, Lixia Rong, and Benjamin S. Hsiao "Hierarchical nanostructures of mesogen jacketed bent-core liquid crystalline block copolymers" 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
386. Jaseung Koo, Kwanwoo Shin, Young-Soo Seo, Tadanori Koga, Seongchan Park, Sushil K. Satija, Xuming Chen, Kyunghwan Yoon, Benjamin S. Hsiao, Hila Calev, Jonathan Sokolov, and Miriam Rafailovich, "Control of Dewetting Dynamics at a Polymer-Polymer interface by Adding Multi-Walled Carbon Nanotubes", Division of Colloid & Surface Chemistry. 234<sup>th</sup> ACS National Meeting, Boston, MA, August 19-23.
387. Weiqing Weng, Benjamin S. Hsiao, Pranav Nawani, Brendan Rodgers, Robert N Webb "Isobutylene Polymer Nanocomposite as Advanced Tire Innerliner Materials", 9th International Symposium on Engineering Polymers for Advanced Technologies, Shanghai, China, October 22-25.
388. Shigeyuki Toki, Norio Minouchi, Igor Sics, Benjamin S. Hsiao and Shinzo Kohjiya, "Strain-Induced Crystallization and Tensile Strength in Carbon Black Filled Natural Rubber Compounds by Synchrotron X-Ray Study", Proceeding of 11th International Seminar on Elastomers, Freiburg, Breisgau, Germany, Sept. 23-27.
389. C. Burger, H. Zhou, B.S. Hsiao, B. Chu, L. Graham, M.J. Glimcher, "New Insights into the Mineralization Process of Bone", 2007 Denver X-ray Conference, Colorado Springs, CO, July 30 – Aug. 3.
390. C. Burger, P. Nawani, B.S. Hsiao, B. Chu, M. Gelfer, "SAXS from Polymer-Clay Composites and Other Layered Systems" 2007 Denver X-ray Conference, Colorado Springs, CO, July 30 – Aug. 3.
391. Pranav Nawani, Christian Burger, Benjamin Hsiao "Effect of carbon black on the preferred orientation of organoclays dispersed in polymer nanocomposites", UKPCF2007 International Conference on Polymer Colloids, University of Warwick, Coventry, UK, Sept. 16 -18.
392. Gad Marom, Carlos Avila-Orta, Boris Larin, Rajesh Somani, Benjamin S. Hsiao "The combined effect of shear and fibers on the formation of orientated crystalline domains in discontinuous aramid fiber/isotactic polypropylene composites", COMAT 2007, Rio de Janeiro, Brazil, December 09-12

393. Yimin Mao, Feng Zuo, Jong Kahk Keum, Benjamin S. Hsiao, "Crystallization of Propylene-Hexene Random Copolymer", APS March Meeting, New Orleans, Louisiana, March 10-14.
394. Feng Zuo, Yiming Mao, Jong Kahk Keum, Benjamin S. Hsiao, Hongyu Chen, Debbie Chiu, Shih-Yaw Lai, "Deformation-induced structure evolution in olefin block copolymer", APS March Meeting, New Orleans, Louisiana, March 10-14.
395. Jong Kahk Keum, Yimin Mao, Feng Zuo and Benjamin S. Hsiao, "Investigation of extensional flow-induced crystallization in entangled polymer melt", APS March Meeting, New Orleans, Louisiana, March 10-14.
396. Kishore Tenneti, Xiaofang Chen, Christopher Li, Xinhua Wan, Qi-Feng Zhou, Lixia Rong and Benjamin Hsiao, "Competition between liquid crystalline (LC) ordering and block copolymer (BCP) microphase separation in a series of LCBCPs", APS March Meeting, New Orleans, Louisiana, March 10-14.
397. Robert K. Prud'homme, Ilhan A. Aksay, Richard A. Register, Doug H. Adamson, Bulent Osbas, Michael McCallister, Hannes Schneipp, Benjamin Chu, Shigeyuki Toki and Benjamin Hsiao, "Functionalized Graphene nano sheets (FGS) as a new material for polymer and elastomer composites and barrier films", 173rd ACS Rubber Technical Meeting, Dearborn, MI, April 28-30.
398. Benjamin S. Hsiao and Benjamin Chu, "Functional Nanofibrous Scaffolds for Biomedical Applications", 40th Middle Atlantic Regional Meeting (MARM), Queensborough Community College, Bayside, NY, May 17-21.
399. Fen Wan, Chirakkal V. Krishnan, Benjamin S. Hsiao and Benjamin Chu "Nanostructured Tri-Block Copolymer Gels for Pain Management", 40th Middle Atlantic Regional Meeting (MARM), Queensborough Community College, Bayside, NY, May 17-21.
400. Benjamin Chu, Dufei Fang, Christian Burger and Benjamin S. Hsiao, "Instrumentation Development of Multi-Scaled Scattering for Bio-Macromolecular Solutions at the National Synchrotron Light Source", 5th East-Asian Polymer Conference, Shanghai, China, June 3-6.
401. Pranav Nawani, Hongwen Zhou, Christian Burger, Benjamin Chu and Benjamin S. Hsiao "Structural Analysis of Polymer-Inorganic Nanocomposites by Synchrotron X-ray Scattering", 5th East-Asian Polymer Conference, Shanghai, China, June 3-6.
402. Benjamin S. Hsiao, "Flow-induced Crystallization from Entangled Melts", International Symposium on Polymer Physics, PP'2008, Xiamen, China, June 8-12
403. Rossana Iervolino, Franco Cocchini, Maria Rossella Nobile, Xuming Chen, Feng Zuo, Rajesh H. Somani, Benjamin S. Hsiao and Benjamin Chu, "Rheological properties and shear induced crystallization of model polyethylene blends", 24th Annual Meeting of Polymer Processing Society; PPS-24, Salerno, Italy, June 15-19.
404. Benjamin S. Hsiao, "Advanced Nanostructure Characterization of Polymeric Materials by Synchrotron X-ray Scattering/Diffraction Techniques", 24th Annual Meeting of Polymer Processing Society; PPS-24, Salerno, Italy, June 15-19.
405. Peter Glass, Jonathan B. Chiu, Chirakkal V. Krishnan, Karin C. Wang, Randy K. Ramcharitar, Fen Wan, Benjamin S. Hsiao, Benjamin Chu, "Nanostructured smart gel for pain management", IASP, 12th World Congress of Pain, Glasgow, UK, Aug. 17-22.
406. Shifeng Han, Fen Wan, Benjamin Hsiao and Benjamin Chu, "Controlled release of drugs in electrospun polycaprolactone membranes", 236th ACS National Meeting, Philadelphia, PA, August 17-21.
407. Jonathan B. Chiu, Karin C. Wan<sup>2</sup>, Randy Ramcharitar, Fen Wan, Chirakkal V. Krishnan, Benjamin S. Hsiao, and Benjamin Chu, "Thermo-sensitive gels polymers for tunable, therapeutic delivery", 236th ACS National Meeting, Philadelphia, PA, August 17-21.
408. Jianjun Miao, Lixia Rong, Benjamin S. Hsiao and Lei Zhu, "Synthesis and Self-assembly of Asymmetric Amphiphilic Discotic Oligomer Based on Protoporphyrin", 236th ACS National Meeting, Philadelphia, PA, August 17-21.
409. Weiqiang Cao, Lu Sun, Lixia Rong, Benjamin Hsiao, and Lei Zhu "Chirality effect on interaction parameters in poly(ethylene-co-1-butene)-b-poly(lactide) diblock copolymers", 236th ACS National Meeting, Philadelphia, PA, August 17-21.
410. Yong-Cheng Shi, Liming Cai, Benjamin S. Hsiao, Lixia Rong, "Starch Structure via Small-Angle X-ray Scattering and Wide-angle X-ray Scattering", American Association of Cereal Chemists International Conference, Hawaii, September 21-24.
411. Cruz-Delgado, Víctor J.; Hernández-Hernández, Ernesto; Esparza-Juárez, M. Elena; Méndez-Padilla M. Guadalupe; Rodríguez-Hernández M. Teresa; Huerta-Martínez, Blanca M.; Medellín-Rodríguez, Francisco J.; Hsiao, Benjamin S.; Ávila-Orta, Carlos A. "In situ-polymerization route for the preparation of PET/MWCNT polymer nanocomposites", Preprint for Macromex, a joint meeting of the Polymer Society of Mexico and the ACS-Division of Polymer Chemistry, Los Cabos, Baja California Mexico, December 7-10



**2009**

412. Benjamin S. Hsiao and Benjamin Chu, "High Flux Nanofibrous Membranes for Water Purification", in the session of Physics of Polymer Membranes for Water Purification, Pittsburgh, Pennsylvania, APS March Meeting, March 18.
413. Yimin Mao, Christian Burger, Feng Zuo, Xiaowei Li, Benjamin S. Hsiao, Derek W. Thurman and Andy H. Tsou "A WAXD Study of Crystallization of Propylene-1-Butene Random Copolymer: Experiment and Simulation", 237th ACS National Meeting, Salt Lake City, UT, March 22-26.
414. Xiaowei Li, Jong Kahk Keum, Feng Zuo, Yimin Mao and Benjamin S. Hsiao, "Extensional Flow-Induced Crystallization in Multi-Component Polyolefin Melts", 237th ACS National Meeting, Salt Lake City, UT, March 22-26.
415. Feng Zuo, Yiming Mao, Benjamin S. Hsiao, Hongyu Chen, Debbie Chiu and Shih-Yaw Lai "Evolution of Monoclinic and Orthorhombic Phases during the Deformation of Olefin Block Copolymers", 237th ACS National Meeting, Salt Lake City, UT, March 22-26.
416. Hongyang Ma, Kyunghwan Yoon, Lixia Rong, Benjamin S. Hsiao and Benjamin Chu, "High flux nanofibrous membranes based on cellulose barrier processed by ionic liquids", 237th ACS National Meeting, Salt Lake City, UT, March 22-26.
417. Hongyang Ma, Ran Wang, Nan Li, Lixia Rong, Benjamin S. Hsiao and Benjamin Chu "Preparation, modification and characterization of nanoscale cellulose fibers", 237th ACS National Meeting, Salt Lake City, UT, March 22-26.
418. Rossana Iervolino, Elvira Somma, Maria Rossella Nobile and Benjamin S. Hsiao, "The combined effect of multi-walled carbon nanotubes and shear flow on the crystallization of isotactic poly(1-butene)", Blends, Copolymers and Nanocomposites Symposia at 5th Annual European Rheology Conference, AERC 2009 Meeting, Cardiff - United Kingdom, April 15-17.
419. E. Somma, O. Valentino, R. Iervolino, G.P. Simon, B. S. Hsiao, M. R. Nobile, "Temperature effect on the percolation network of multi-walled carbon nanotubes polymer nanocomposites", Blends, Copolymers and Nanocomposites Symposia at 5th Annual European Rheology Conference, AERC 2009 Meeting, Cardiff - United Kingdom, April 15-17.
420. Benjamin Chu and Benjamin S. Hsiao, "Energy-saving nanofibrous membrane technology for water purification", Division of Industrial & Engineering Chemistry, Symposium Honoring Professor Donald R. Paul on the Occasion of his 70th Birthday, ACS Fall Meeting, Washington, DC, August 18
421. Benjamin Chu and Benjamin S. Hsiao, "Application of Cellulose to Water Purification", The International Conference on Advanced Materials (ICAM), Rio de Janeiro, Brazil, September 20 – 25.
422. Chu B, Fang DF, Burger C, Hsiao B "Instrumentation on multi-scale scattering of bio-macromolecular solutions", Frontiers in Polymer Science, International Symposium Celebrating the 50th Anniversary of the Journal Polymer, Mainz, Germany, June 7 – 9.
423. Chu B, Hsiao B "Nanofiber Technology for Environmental Applications", Frontiers in Polymer Science, International Symposium Celebrating the 50th Anniversary of the Journal Polymer, Mainz, Germany, June 7 – 9.
424. Benjamin S. Hsiao "Probing Flow-Induced Crystallization in Polymers by Scattering", XIV International Conference on Small-Angle Scattering (SAS-2009), September 13-18, Oxford, UK
425. Benjamin S. Hsiao "In-Situ Structure Characterization Capability for Polymer Processing by Synchrotron X-Ray Scattering/Diffraction at the NSLS/BNL", Synchrotron Radiation in Polymer Science (SRPS)-IV Meeting, September 8-11, Rolduc Abby, Netherlands
426. F. Deplace, Z. Wang, N. A. Lynd, A. Hotta, G. H. Fredrickson, E. J. Kramer, H. Ohtaki, K. Hirokane, F. Yamada, Y-W Shin, F. Shimizu, J.M. Rose, E. B. Lobkovsky, G. W. Coates, S. Toki, L. Rong, J. Zhu and B. S. Hsiao "Processing - Structure - Mechanical Property Relationships of Semicrystalline Polyolefin-based Block Copolymers", Synchrotron Radiation in Polymer Science (SRPS)-IV Meeting, September 8-11, Rolduc Abby, Netherlands
427. Shigeyuki Toki, Benjamin S. Hsiao, Sureerut Amnuaypornsi and Jitladda Sakdapipanich, "Hierarchic Multi-Scaled Structures in Natural Rubber", American Chemical Society, 176th Technical Meeting of the Rubber Division, October 13-15, Pittsburg, KY

**2010**

428. F. Deplace, Z. Wang, P. Hustad, J Tian, G. W. Coates, J. M. Rose, F. Shimizu, S. Toki, L. Rong, J. Zhu, B.S. Hsiao, G. H. Fredrickson, and E. J. Kramer, "Structural changes of semicrystalline polyolefin block copolymer elastomers during step cycle mechanical processing", APS March Meeting, March 15 - 19, Portland, OR

429. Yimin Mao, Christian Burger, Xiaowei Li, Benjamin S. Hsiao, Andy H. Tsou, and Derek W. Thurman, "A 2D Synchrotron X-Ray Study on Stress-Induced Crystallization of Propylene-1-Butylene Random Copolymer: Polymorphism and Preferred Orientation", APS March Meeting, March 15 - 19, Portland, OR
430. Benjamin Chu and Benjamin S. Hsiao, Ma, Hongyang, "Micro- and ultra-filtration membranes for water purification", 239th ACS National Meeting, March 21-25, San Francisco, CA
431. Elluru, Mahati; Hsiao, Benjamin; Chu, Benjamin. "Customized smart gel for post lumpectomy patients", 239th ACS National Meeting, March 21-25, San Francisco, CA
432. Benjamin Chu, Benjamin S. Hsiao "Advances in Polymer Nanofiber Technology for Water Purification", ANTEC 2010, May 16-20, Orlando, FL
433. Takahiro Sakurai, Takeshi Kikutani, Takarada Wataru, Shigeyuki Toki, Benjamin S. Hsiao "Preparation of Elastomeric Fibers by Melt Spinning of Polypropylenes of Low Stereo-regularity", 5th Pacific Rim Conference on Rheology (PRCR-5), August 1-6, Sapporo, Japan
434. Ma, Hongyang; Hsiao, Benjamin S.; Chu, Benjamin. "High-flux thin-film nanofibrous composite ultrafiltration membranes containing cellulose barrier layer", 240th ACS National Meeting, August 22-26, Boston, MA
435. Wang, Ran; Liu, Yang; Ma, Hongyang; Fang, Dufei; Hsiao, Benjamin S.; Chu, Benjamin. "Polyacrylonitrile electrospun membrane for microfiltration", 240th ACS National Meeting, August 22-26, Boston, MA
436. Benjamin Chu and Benjamin S. Hsiao, "Breakthrough Nanofiber Technology for Environment and Health 23rd National Meeting of Mexican Polymer Society (SPM)", October 11-14, Tijuana, Baja, Mexico,
437. Shigeyuki Toki, Ryuichi Takagi, Masayoshi Ito, Benjamin S. Hsiao, "Rupture, orientation and strain-induced crystallization of polymer chain network in vulcanized polyisoprene during uniaxial deformation by Electron Spin Resonance (ESR) and synchrotron X-ray analysis", Japan Elastomer Conference, Dec.2, Kyoto, Japan

## 2011

438. Xiaowei Li, Yimin Mao Hongyang Ma and Benjamin S. Hsiao "An In-Situ X-ray Scattering Study during Uniaxial Stretching of Ionic liquid/Ultra-High Molecular Weight Polyethylene Blend", APS National Meeting, March 21-25, Dallas, Texas
439. Yimin Mao, Christian Burger, Xiaowei Li, Benjamin Hsiao, "Structure Evolution of Propylene-1-Butylene Random Copolymer under Uniaxial Stretching: from Unit Cells to Lamellae", APS National Meeting, March 21-25, Dallas, Texas
440. Ran Wang, Hongyang Ma, Benjamin S. Hsiao and Benjamin Chu, "High-Flux Functional Nanofibrous Membrane for Removal of Bacteria and Viruses", 241st ACS National Meeting, March 27-31, Anaheim, CA.
441. Yang Liu, Ran Wang, Hongyang Ma, Benjamin S. Hsiao and Benjamin Chu, "High-Flux Microfiltration Filters Based on Electrospun PVA Nanofibrous Mats", 241st ACS National Meeting, March 27-31, Anaheim, CA.
442. Hongyang Ma, Benjamin S. Hsiao and Benjamin Chu, "Thin-Film Nanofibrous Composite Ultrafiltration Membranes Based on Polyvinyl Alcohol Barrier Layer Containing Ultra-Fine Cellulose Nanofibers", 241st ACS National Meeting, March 27-31, Anaheim, CA.
443. Mahati Elluru, Benjamin Chu, Benjamin S. Hsiao, Michael Hadjiargyrou, "Nanostructured Hydrogel Implants for Post Lumpectomy Patients", 241st ACS National Meeting, March 27-31, Anaheim, CA.
444. Fanny Deplace, Zhigang Wang, Geoffrey W. Coates, Jeffrey M. Rose, Yong-Woo Shin, Fumihiko Shimizu, S. Toki, Lixia Rong, J. Zhu, Benjamin S. Hsiao, Glenn H. Fredrickson, Edward J. Kramer, "Tough organogels and elastomers from block copolymers with semicrystalline syndiotactic polypropylene blocks", 241st ACS National Meeting, March 27-31, Anaheim, CA.
445. Anna Sato, Ran Wang, Hongyang Ma, Benjamin S. Hsiao, Benjamin Chu and Yimei Zhu, "Novel Nanofibrous Scaffolds for Water Filtration with Bacteria and Virus Removal Capability", "Microscopy & Microanalysis 2011", Microscopy Society of America, August 7-11, Nashville, Tennessee.
446. Justin Che, Shigeyuki Toki, Lixia Rong, Benjamin S. Hsiao, Juan Valentin and Justo Brasero, "Strain-Induced Crystallization of Pre- and Post-Vulcanized Natural Rubber Latex During Uniaxial Deformation by In-Situ Synchrotron X-Ray Diffraction", Technical Meeting - American Chemical Society, Rubber Division, 180th, October 11-13, Cleveland, OH.
447. Shigeyuki Toki, Justin Che, Lixia Rong, Benjamin S. Hsiao, Adul Nimpaiboon, Jitladda Sakdapipanich, "The origin of strength of natural rubber studied by synchrotron X-ray: network in raw rubber and vulcanized rubber", Technical Meeting - American Chemical Society, Rubber Division, 180th, October 11-13, Cleveland, OH.

## 2012

448. Benjamin Hsiao, Hong-Wen Zhou, Christian Burger, Benjamin Chu, Melvin J. Glimcher, “Molecular packing in bone collagen fibrils prior to mineralization”, APS National Meeting, February 27 - March 2, Boston, Massachusetts
449. Xiaowei Li, Christian Burger, Yimin Mao, Benjamin Hsiao, “Time-resolved WAXD/SAXS Characterization on the Crystallization of Silica Filled HDPE Nanocomposite”, APS National Meeting, February 27 - March 2, Boston, Massachusetts.
450. Justin Che, Shigeyuki Toki, Juan Valentin, Justo Brasero, Lixia Rong, Benjamin S. Hsiao, “New Insights into Chain Order Dynamics and Structural Development in Sulfur-Vulcanized Natural Rubber Latex using Multiple Quantum NMR and Synchrotron X-Ray Diffraction” APS National Meeting, February 27 - March 2, Boston, Massachusetts.
451. Ying Su, Christian Burger, Benjamin S. Hsiao, Benjamin Chu, “Synchrotron SAXS and WAXD Studies of Cellulose Nascent Crystals: Experiment and Structure Analysis”, APS National Meeting, February 27 - March 2, Boston, Massachusetts.
452. Tsung-Ming Yeh, Devinder Mahajan, Benjamin S. Hsiao, Benjamin Chu, “Polymeric nanofibrous composite membranes for energy efficient ethanol dehydration”, ACS National Meeting, March 25 - 29, 2012, San Diego, CA
453. Fanny Deplace, Glenn H. Fredrickson, Edward J. Kramer, Geoffrey W. Coates, Hisashi Ohtaki, Yong-Woo Shin, Fumihiko Shimizu, Lixia Rong, Benjamin S. Hsiao, “Tough polyolefin elastomers from copolymers with semicrystalline sPP grafts”, The 15th international conference on Deformation, Yield and Fracture of Polymers (DYFP2012), April 1-5, Rolduc Abbey in Kerkrade, the Netherlands.
454. Rui Yang, Katherine B. Aubrecht, Robert B. Grubbs, Benjamin S. Hsiao and Benjamin Chu, “Surface Modification of Cellulose/Chitosan Nanofibers for Heavy Metal Adsorption”, Gordon Research Conference on Membrane Technology, July 28 -29 in New London, NH.
455. Xiao Wang , Benjamin S. Hsiao and Benjamin Chu, “Preparation of Thin-film Nanofibrous Composite (TFNC) Membranes by Reversed Interfacial Polymerization (RIP) Technique for Water Purification”, Gordon Research Conference on Membrane Technology, July 28 -29 in New London, NH.
456. Tsung-Ming Yeh, Devinder Mahajan, Benjamin S. Hsiao and Benjamin Chu, “Nanofibrous Composite Membranes for Energy Efficient Ethanol Dehydration by Pervaporation”, Gordon Research Conference on Membrane Technology, July 28 -29 in New London, NH.
457. Wang, Xiao; Fang, Dufei; Hsiao, Benjamin; Chu, Benjamin “Trade-off between rejection and flux for thin film nanocomposite (TFNC) nanofiltration (NF) membrane”, 244th ACS National Meeting, August 19-23, Philadelphia, PA.
458. Toki, Shigeyuki; Che, Justin; Rong, Lixia; Hsiao, Benjamin S.; Amnuaypornsrri, Sureerut; Nimpaiboon, Adul; Sakdapipanich, Jitladda “Entanglement and end linking network on stress-strain relation and strain-induced crystallization of un-vulcanized and vulcanized natural and synthetic rubbers”, Technical Meeting of the Rubber Division, American Chemical Society, 182nd, Cincinnati, OH.
459. Che, Justin; Burger, Christian; Toki, Shigeyuki; Rong, Lixia; Hsiao, Benjamin S.; Amnuaypornsrri, Sureerut; Sakdapipanich, Jitladda “Two-dimensional wide-angle X-ray diffraction simulation study on strain-induced crystallization and temperature-induced crystallization of un-vulcanized natural and synthetic rubber“, Technical Meeting of the Rubber Division, American Chemical Society, 182nd, Cincinnati, OH.

## 2013

460. Ying Su, Christian Burger, Benjamin S. Hsiao and Benjamin Chu, “ Structure of Cellulose Nascent Crystals Studied by X-ray Scattering”, 245th ACS National Meeting, Cellulose Division, April 7-11, New Orleans, Louisiana
461. Zhe Wang, Benjamin S. Hsiao, Benjamin Chu, “Preparation and Characterization of Poly (ethylene glycol) Diacrylate / Nanofibrous Cellulose Composite Top Layer with Excellent Anti-fouling Properties”, 245th ACS National Meeting, Cellulose Division, April 7-11, New Orleans, Louisiana
462. Rui Yang, Ran Wang, Katherine B. Aubrecht, Robert B. Grubbs, Benjamin S. Hsiao, Benjamin Chu “Surface Modification of Cellulose/chitosan Nanofibers for Chromium (VI) Adsorption”, 245th ACS National Meeting, Cellulose Division, April 7-11, New Orleans, Louisiana
463. Tsung Ming Yeh, Devinder Mahajan, Benjamin S. Hsiao, and Benjamin Chu, “High Flux Ethanol Dehydration using Multilayered Graphene Oxide Membranes”, 245th ACS National Meeting, Division of Organic Chemistry Materials, April 7-11, New Orleans, Louisiana.

464. Ma, Hongyang; Hsiao, Benjamin S.; Chu, Benjamin, “Highly permeable nanofibrous membranes for energy efficient water purification”, 245th ACS National Meeting, Division of Polymer Materials Science and Engineering, April 7-11, New Orleans, Louisiana.
465. Tsung Ming Yeh, Devinder Mahajan, Benjamin S. Hsiao and Benjamin Chu, “High Flux Ethanol Dehydration using Multilayered Graphene Oxide Membranes”, ACS “Water Purification 2013” Workshop, February 24 – 27, Asilomar Conference Grounds, Pacific Grove, CA.
466. Zhe Wang, Benjamin S. Hsiao and Benjamin Chu, “Nanofibrous Cellulose Composite Membrane with a Poly(ethylene glycol) Diacrylate Top Layer”, ACS “Water Purification 2013” Workshop, February 24 - 27, Asilomar Conference Grounds, Pacific Grove, CA.
467. Xiao Wang, Dufei Fang, Benjamin S. Hsiao and Benjamin Chu, “Thin-Film Nanofibrous Composite Membranes for Nanofiltration Applications”, ACS “Water Purification 2013” Workshop, February 24 - 27, Asilomar Conference Grounds, Pacific Grove, CA.
468. Toki, S.; Che, J.; Burger, C.; Hsiao, B. S.; Amnuayporn Sri, S.; Sakdapipanich, J., “Strain-induced crystallites and temperature-induced crystallites in poly-isoprene by 2D WAXD simulating analysis”, Constitutive Models for Rubber VIII, the European Conference on Constitutive Models for Rubber, June 25-28, San Sebastian, Spain.
469. Che, Justin; Burger, Christian; Toki, Shigeyuki; Rong, Lixia; Amnuayporn Sri, Sureerut; Sakdapipanich, Jitladda; Hsiao, Benjamin S., “Strain-induced crystal and crystallites structure of natural rubber and synthetic cis-1,4-polyisoprene by a new 2D wide angle X-ray diffraction simulation method”, 246th ACS National Meeting & Exposition, September 8-12, Indianapolis, IN.
470. Che, Justin; Locker, C. Rebecca; Lee, Sanghun; Rutledge, Greg C.; Hsiao, Benjamin S.; Tsou, Andy H., “Plastic deformation of semi-crystalline polyethylene by X-ray scattering: Comparison with atomistic simulations”, 246th ACS National Meeting & Exposition, September 8-12, Indianapolis, IN.
471. Che, Justin; Burger, Christian; Toki, Shigeyuki; Rong, Lixia; Hsiao, Benjamin S.; Amnuayporn Sri, Sureerut; Sakdapipanich, Jitladda, “New insights into strain-induced crystallization and temperature-induced crystallization of un-vulcanized and peroxide-vulcanized natural rubber”, Fall Technical Meeting of the Rubber Division, American Chemical Society, 184th, Oct. 8-10, Cleveland, OH.
472. Brian Momani, Xiaowei Li, Xiaoliang Wang, Benjamin Hsiao, H. Henning Winter “Rheological Expression of Clay Self-Exfoliation in a Polymer Nanocomposite”, October 13-17, 85th Annual Meeting of The Society of Rheology, Montréal, Québec, Canada.
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473. Benjamin Hsiao and Benjamin Chu, “Electro-Spinning Technology & its Applications to Fibrous Membranes” in Electrospinning and Nanofibers: Symposium in Honor of the 85th Birthday of Darrell Reneker, Division of Polymeric Materials Science and Engineering (PMSE), 247th American Chemical Society National Meeting, March 16-20, Dallas, TX.
474. Deplace, Fanny; Fredrickson, Glenn H.; Kramer, Edward J.; Coates, Geoffrey W.; Ohtaki, Hisashi; Shimizu, Fumihiko; Shin, Yong-Woo; Rong, Lixia; Hsiao, Benjamin S., “Polyolefin elastomers and gels from copolymers with semicrystalline sPP blocks and grafts”, Division of Polymeric Materials Science and Engineering (PMSE), 247th American Chemical Society National Meeting, March 16-20, Dallas, TX.
475. Benjamin S. Hsiao “High flux nanofibrous membranes for water purification”, POLYCHAR 22: The World Forum on Advanced Materials, April 7-11, Stellenbosch, South Africa.
476. Hristov, O. Thomas and B. Hsiao, “In-Situ SxS Study of Phase Segregation in Thermoplastic Elastomers”, Symposium H : ALTECH 2014 - Analytical techniques for precise characterization of nanomaterials of the E-MRS 2014 Spring Meeting, May 26-30, Lille, France.
477. Benjamin S. Hsiao and Benjamin Chu, “Highly Permeable Nanofibrous Membranes for Water Purification”, 11th International Symposium of Polymer Physics (PP2014), June 8-12, Nanjing, China.
478. Benjamin Chu, Benjamin S. Hsiao and Ying Su, “Characterization of Cellulose Nano-Fibers & Applications to Fibrous Membranes”, 30th International Conference of the Polymer Processing Society (PPS-30), June 8-12, Cleveland, OH.
479. Hongyang Ma, Benjamin Chu and Benjamin S. Hsiao, “Recent advances in porous nanofibrous membranes for water purification”, 248th ACS National Meeting, Aug 10-14, San Francisco, CA.
480. Benjamin S. Hsiao, “Breakthrough Water Purification Technologies based on Nanofibrous Membranes”, Kathmandu Symposia on Advanced Materials – 2014 (KaSAM-2014), September, 7-10, Kathmandu, Nepal.

481. Benjamin S. Hsiao, "Synchrotron X-ray study of extensional flow-induced crystallization in isotactic polypropylene", International Symposium on Fiber Science and Technology (ISF2014), Sept. 29 - Oct 1, Tokyo, Japan.

482. Benjamin S. Hsiao, "Structural study of cellulose nascent crystals", ICR Symposium on Polymer Crystals (ICRSPC2014), Oct. 2-3, Kyoto, Japan.

#### 2015

483. Ying Su, Benjamin S. Hsiao and Benjamin Chu, "Structure studies of natural cellulose microfibrils by synchrotron small-angle X-ray scattering", Division of Polymeric Materials Science and Engineering (PMSE), 249th ACS National Meeting, March 22-26, Denver, Colorado.

484. Benjamin S. Hsiao and Andy H. Tsou, "Crystallization of Polyolefins under Flow and Deformation", Division of Polymeric Materials Science and Engineering (PMSE), 249th ACS National Meeting, March 22-26, Denver, Colorado.

485. Benjamin Chu and Benjamin S. Hsiao, "Cellulose Nanofibers as a Key Component in Separation Membranes", Division of Polymeric Materials Science and Engineering (PMSE), 249th ACS National Meeting, March 22-26, Denver, Colorado.

486. Benjamin Hsiao, 267. "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", 35th Australasian Polymer Symposium, 12 – 15 July, Gold Coast, Australia.

487. Shanshan Xu, Benjamin S. Hsiao, Charles C. Han, Benjamin Chu, "Selective Cell Interactions and Antibacterial Behavior of Functional Fibrous Membranes", Division of Polymeric Materials Science and Engineering (PMSE), 250th ACS National Meeting, August 16-20, Boston, MA.

488. Benjamin S. Hsiao and Benjamin Chu, "Highly Permeable Nanofibrous Membranes for Water Purification", Division of Polymeric Materials Science and Engineering (PMSE), 250th ACS National Meeting, August 16-20, Boston, MA.

489. Benjamin Chu and Benjamin S. Hsiao, "Application of Green Technology to Fibrous Separation Membranes for Water Purification", Symposium on Green Technology, 8th China-US Joint Conference of Chemical Engineering, at the East China University of Science and Technology, October 12-16, Shanghai, China

490. Benjamin S. Hsiao and Benjamin Chu, "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", The 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem), December 15-20, Honolulu, Hawaii.

491. Benjamin S. Hsiao, Benjamin Chu and Ying Su, "Structure Characterization of Cellulose Nanofibers and Microfibrils", The 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem), December 15-20, Honolulu, Hawaii.

#### 2016

492. Benjamin S. Hsiao, "Highly permeable nanofibrous cellulose membranes for water purification", Division of Cellulose and Renewable Materials (Session: Structure of Native Celluloses & Variety of Nano-celluloses That Can Be Formed from Them: Anselme Payen Award Symposium in honor of Akira Isogai), 251st ACS National Meeting, March 13-17, San Diego, CA.

493. Benjamin S. Hsiao, "Probing shish-kebab precursor structures in model polyethylene blends under shear", Division of Polymeric Materials Science and Engineering (session: Flow-Induced Crystallization of Polymers), 251st ACS National Meeting, March 13-17, San Diego, CA.

494. Yimin Mao, Kai Liu and Benjamin S. Hsiao, "Multi-scale Characterization of Cellulose TEMPO-Nanofiber Suspension", APS March Meeting, March 14-18, Baltimore, Maryland.

495. Benjamin S. Hsiao, "Breakthrough Water Purification Technologies Based on Nanofibrous Membranes", 2016 MRS Spring Meeting & Exhibit, March 28-April 1, Phoenix, Arizona.

496. Priyanka R. Sharma and Prof. Benjamin, "Cost Effective and Environment Friendly Method to Produce Carboxycellulose Nanofibers", 2016 Advanced Energy Conference, April 20- 22, New York City, NY.

497. Plinio Guzman, Luis Lituma and Benjamin S. Hsiao, "Inexpensive and robust thermally-driven water desalination", 2016 Advanced Energy Conference, April 20- 22, New York City, NY.

498. Benjamin Chu, Benjamin S. Hsiao and Hongyang Ma, "Perception on New Membrane Structures for Air Purification", 12<sup>th</sup> International Symposium on Polymer Physics, Session 5 Multi-phase & Multi-component Systems, June 10-14, Guiyang City, Guizhou, China.

499. Benjamin S. Hsiao, "Breakthrough water filtration membrane technology based on nanofibers", 252<sup>nd</sup> ACS National Meeting, August 21-25, Philadelphia, PA.

500. Benjamin S. Hsiao, "Highly permeable membranes with nanofibrous composite barrier layer for reverse osmosis and nanofiltration", 252<sup>nd</sup> ACS National Meeting, August 21-25, Philadelphia, PA.

501. Jin Luo, Wei Zhao, Shiyao Shan, Jack Lombardi, Darshana Weerawarne, Thomas Rovere, Ning Kang, Zakiya Skeete, Yvonne Xu, Amber Vargas, Bonggu Shim, Benjamin Hsiao, Mark Poliks, Chuan-Jian Zhong, "Understanding low-temperature sintering and adhesion properties of metal nanoparticles printed sensor devices", 252<sup>nd</sup> ACS National Meeting, August 21-25, Philadelphia, PA.
502. Ning Kang, Jack Lombardi, Fang Lin, Shan Yan, Juhee Kim, Mihdhar Almihdhar, Yvonne Xu, Brandon Burg, Jin Luo, Benjamin Hsiao, Mark Poliks, Chuan-Jian Zhong, "Electrochemical characterization of nanoparticle-nanofibrous composites and potential application in wearable sensors", 252<sup>nd</sup> ACS National Meeting, August 21-25, Philadelphia, PA.
503. Benjamin S. Hsiao, "Processing of Highly Permeable Membranes for Water Purification", Polymer Processing Society Asia/Australia Conference 2016 (PPS-2016), October 11-14, Chengdu, China.
504. Benjamin S. Hsiao, "Highly permeable nanocellulose membranes for water purification", International Union of Materials Research Societies, International Conferences in Asia (IUMRS-ICA 2016), October 20-24, Qingdao, China.
505. Benjamin S. Hsiao, "Nanocelluloses for Water Purification", International Union of Materials Research Societies, International Conferences in Asia (IUMRS-ICA 2016), October 20-24, Qingdao, China.
- 2017**
506. Benjamin S. Hsiao, "Breakthrough Water Purification Technologies based on Nanofibrous Membranes", Advances in Functional Materials (ICA2017) at Anna University, January 6-8, Chennai, India.
507. Benjamin S. Hsiao "Nanocelluloses for Water Purification", International Conference on Polymer Science and Technology (MACRO 2017), Advances in Polymer Science and New Generation Technologies, SPSI-ACS Jubilee Symposium, January 8-11, Thiruvananthapuram, India
508. Yimin, Kai Liu, Chengbo Zhan, Lihong Geng, Benjamin Chu and Benjamin S. Hsiao, "Characterization of Nanocelluloses Using Small-angle Neutron, X-ray and Dynamic Light Scattering Techniques", 253<sup>rd</sup> ACS National Meeting, April 2-6, San Francisco, CA.
509. Priyanka Sharma, Benjamin Chu, and Benjamin Hsiao, "A Novel One Step Method to Prepare Carboxycellulose Nanofibers from Raw Biomass and their Applications in Heavy Metal Ions Remediation", 253<sup>rd</sup> ACS National Meeting, April 2-6, San Francisco, CA.
510. Yaopeng Zhang, Alexander Norman, Joseph A. Throckmorton, Antonios K. Doufas, Andy Tsou, Benjamin S. Hsiao, "Shear Induced Crystallization of Bimodal and Unimodal High Density Polyethylene", 253<sup>rd</sup> ACS National Meeting, April 2-6, San Francisco, CA.
511. Kai Liu, Hongyang Ma, Benjamin Chu and Benjamin S. Hsiao, "Highly permeable thin film composite membranes with nanocomposite barrier layer for desalination applications", 253<sup>rd</sup> ACS National Meeting, April 2-6, San Francisco, CA.
512. Benjamin S. Hsiao, "Advancing Nanocellulose Technologies for Water Purification", International Conference on Advanced Fibers and Polymer Material (ICAFPM), Donghua University, October 8-10, Shanghai, China.
513. Benjamin S. Hsiao and Benjamin Chu, "Nanocelluloses for Water Purification", 9th Sino-US Joint Conference of Chemical Engineering, Green Chemical Engineering, Beijing University of Chemical Technology, October 15-19, Beijing, China.
514. Benjamin S. Hsiao, "Advancing Nanocellulose Technologies for Water Purification", African Materials Research Society (AMRS) Conference, "Addressing Africa's Challenges through Materials Development" December 9-14, Gaborone, Botswana.
515. Shigeyuki Toki, Benjamin S. Hsiao and Krisda Suchiva, "Strain-Induced Crystallization and Mechanical Properties of Rubber and Thermo-Plastic Elastomer", International Conference on Nanotechnology: Ideas, Innovations and Initiatives (ICN:3I-2017), December 6 - 8, IIT Roorkee, Uttarakhand, India.
516. Acacia Leakey, Ritika Roshi, Tom Lindstrom, Plinio Guzman, Benjamin S. Hsiao "Solar-Powered Membrane Distillation for Desalination of Brackish Water: from Robust System Design to Sustainable Membrane Development" African Materials Research Society (AMRS) Conference, "Addressing Africa's Challenges through Materials Development", December 10-14, Gaborone, Botswana.
- 2018**
517. Xiangyu Huang, Pejman Hadi, Benjamin S Hsiao, "Fabrication of cationic cellulose from natural bioresources for waste activated sludge dewatering treatment", 255<sup>rd</sup> ACS National Meeting, March 18-22, New Orleans, LA.
518. Mengying Yang, Benjamin S Hsiao, Pejman Hadi, "Effect of the surface zeta potential on the fouling reduction of nanocellulose coated ultrafiltration membranes", 255<sup>rd</sup> ACS National Meeting, March 18-22, New Orleans, LA.

519. Benjamin S Hsiao, "Advancing Nanocellulose Membrane Technology for Water Purification", 34th International Conference of the Polymer Processing Society (PPS-34), Taipei International Convention Center, May 21-25, Taipei, Taiwan.
520. Shan Yan, Chirag S. Soni, Brianna L. Perris, Stephen E. Ruiz, Cameron L. Ghazvini, Jack Lombardi, Jin Luo, Benjamin S Hsiao, Mark David Poliks, Chuanjian Zhong, "Biosensors printed on paper and embedded with functional nanoparticle assemblies for human performance monitoring", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
521. Shan Yan, Brianna L. Perris, Chirag S. Soni, Stephen E. Ruiz, Cameron L. Ghazvini, Jack Lombardi, Jin Luo, Benjamin S Hsiao, Susan Lu, Mark David Poliks, Ivan Gitsov Ivanov, Chuanjian Zhong, "Tunable chemical sensing interfaces using dendronized nanoparticles coupled with nanofibrous paper substrates", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
522. Ritika Joshi, Benjamin S Hsiao, "Extraction of nanocellulose from a unique grass - spinifex via different methods and its application in water purification", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
523. Sunil Kumar Sharma, Priyanka R Sharma, Hui, Benjamin S Hsiao, "Highly proton conductive nitro-oxidized cellulose nanopaper for polymer electrolyte membrane (PEM) fuel cell", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
524. Priyanka R Sharma, Sunil Kumar Sharma, Richard Antoine, Benjamin S Hsiao, "Efficient removal of arsenic from water using regenerated microfibrillated cellulose supported zinc oxide/hydroxide nanoparticles", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
525. Pejman Hadi, Mengying Yang, Harold Walker, Benjamin S Hsiao, "Sustainable biomass-derived nanocellulose as anti-biofouling layer for membranes", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
526. Shan Yan, Stephen E. Ruiz, Chirag S. Soni, Brianna L. Perris, Cameron L. Ghazvini, Jack Lombardi, Jin Luo, Mark David Poliks, Benjamin S Hsiao, Chuanjian Zhong, "Printed paper sensors for detecting chemical/biological species", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
527. Chengbo Zhan, Hongrui He, Sunil Kumar Sharma, Ruifu Wang, Priyanka Radhey Sharma, Benjamin S Hsiao, "Nanosized titanium dioxide embedded in nanocellulose scaffold as photocatalyst for dye degradation and bacterial inactivation", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
528. Qinyi Fu, Benjamin Ocko, Hongyang Ma, Benjamin S Hsiao, "Structural study of polyamide barrier layers in reverse osmosis membrane", 256rd ACS National Meeting, August 19 - 23, Boston, MA.
529. T. Rosén, C. Zhan, R. Wang, S. Chodankar, L. Yang and B.S. Hsiao, "Time-Resolved Characterization of Nanocellulose Gelation Processes", XVII International Small Angle Scattering Conference - SAS2018, October 7-12, Traverse City, Michigan.
530. Qinyi Fu, Benjamin Ocko, Hongyang Ma, Benjamin S Hsiao, "Structural Study of Polyamide Barrier Layers In Reverse Osmosis Membranes", XVII International Small Angle Scattering Conference - SAS2018, October 7-12, Traverse City, Michigan.
531. Benjamin S. Hsiao, "Advancing Nanocellulose Technologies for Water Purification", 2018 MRS Fall Meeting, November 25-30, Boston, Massachusetts.
- 2019**
532. Tomas Rosen, Chengbo Zhan, Ruifu Wang, Shirish Chodankar, Benjamin Hsiao, "Angular dynamics of cellulose nanofibrils in channel flow", APS March Meeting, March 4-8, Boston, Massachusetts.
533. Ruifu Wang, Tomas Rosen, Chengbo Zhan, Benjamin Hsiao, "The morphology and flowing behaviors of TEMPO-oxidized cellulose nanofibers dispersed in non-aqueous solutions", PS March Meeting, March 4-8, Boston, Massachusetts.
534. Qinyi Fu, Nisha Verma, Hongyang Ma, Francisco J. Medellin-Rodriguez, Ruipeng Li, Masafumi Fukuto, Benjamin S. Hsiao, and Benjamin M. Ocko, "Molecular structure of aromatic reverse osmosis polyamide barrier layers prepared at the oil/water interface", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
535. Benjamin M. Ocko, Qinyi Fu, Nisha Verma, Ruipeng Li, Masafumi Fukuto, Christopher Stafford, and Benjamin S. Hsiao, "The molecular structure of commercial reverse osmosis polyamide barrier layers", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
536. Sunil K. Sharma, Ken Johnson, Priyanka R. Sharma and Benjamin S. Hsiao, "Bionanomaterials derived from carboxy cellulose nanofibers-Al<sup>3+</sup> composite for effective removal of fluoride from water", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
537. Jackie Zheng, Nancy Li, Pejman Hadi Myavagh, Benjamin S Hsiao, "High flux nanocellulose-embedded mixed matrix membranes", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.

538. Hui Chen, Sunil Sharma, Priyanka Radhey Sharma, Heidi Yeh, Benjamin S Hsiao, "Efficient removal of Arsenic (III) by novel micro and nano dialdehyde cellulose-cysteine complex extracted from wood pulp cellulose", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
539. Priyanka Sharma, Sunil Sharma, Kuan Che-Fang, Miriam Rafailovich, Benjamin S Hsiao, "Study the effect of nitro-oxidized cellulose nanofibers on growth of fibroblast and dental pulp cells", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
540. Ken I. Johnson, Sunil K Sharma, Priyanka R Sharma, Hao-Yen Chang, Benjamin S Hsiao "Ammonium remediation using nitro-oxidized cellulose nanofibers as a slow release fertilizer", 257th ACS National Meeting, March 31-April 4, Orlando, Florida.
541. Priyanka Sharma, Sunil K Sharma, Benjamin S Hsiao, "Nanocellulose scaffold for water purification", 258th ACS National Meeting, August 25-29, San Diego, CA.
542. Sunil Sharma, Priyanka Sharma and Benjamin S Hsiao, "Efficient removal of hazardous fluoride from drinking water by using bionanomaterial derived from nitro-oxidized carboxynanocellulose", 258th ACS National Meeting, August 25-29, San Diego, CA.
543. Xiangyu Huang, Guilherme Dognani, Pejman Hadi Myavagh, Benjamin S Hsiao, "Removal of chromium (VI) from aqueous solutions by cationic nanostructured cellulose", 258th ACS National Meeting, August 25-29, San Diego, CA.
544. Ritika Joshi, Tom Lindstrom and Benjamin S Hsiao, "Developing hydrophobic cellulosic membrane for membrane distillation", 258th ACS National Meeting, August 25-29, San Diego, CA.
545. Sunil Sharma, Priyanka Sharma and Benjamin S Hsiao, "Nitro-oxidized carboxy nanocellulose derived from agave for effective removal of lanthanides from water", 258th ACS National Meeting, August 25-29, San Diego, CA.
546. Priyanka Sharma, Sunil K Sharma and Benjamin S Hsiao, "Nitro-oxidized carboxycellulose nanofibers", 258th ACS National Meeting, August 25-29, San Diego, CA.
547. Mengying Yang, Pejman Hadi Myavagh, Hongyang Ma, Harold Walker and Benjamin S Hsiao, "Improving the fouling resistance of nanocellulose membranes for ultrafiltration", 258th ACS National Meeting, August 25-29, San Diego, CA.
548. Madani A Khan, Dale Gene Drueckhammer, Benjamin S Hsiao, Sunil K Sharma, "Removal of water toxins via ligandfunctionalized cellulose-based membranes", 258th ACS National Meeting, August 25-29, San Diego, CA.
549. HongRui He, Tomas Rosén, Chengbo Zhan, Ruifu Wang, Shirish Chodankar, Lin Yang and Benjamin S Hsiao "Time resolved characterization of metal ioninduced nanocellulose gelation by small angle X-ray scattering" 258th ACS National Meeting, August 25-29, San Diego, CA.

## 2020

550. Benjamin S. Hsiao, "Fabrication, characterization and applications of nanocellulose for water purification", Symposium on Polymer Rheology, Processing, and Characterization in Honor of Dr. Montgomery T. Shaw's 77th Birthday and Many Contributions, Society of Plastic Engineering, ANTEC 2020, March 31, San Antonio, TX.
551. Benjamin S Hsiao, Tomas Rosen, Daniel Soderberg, "Synchrotron enabled soft matter research: From polymers to nanocellulose", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
552. Benjamin S Hsiao, Priyanka R Sharmar, "Sustainable water purification using biomass nanofibers", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
553. Isha Brahmhatt, Sunil Sharma, Priyanka R. Sharma, Marc Nolan, Benjamin S Hsiao, "Removal of rare earth metal ions from contaminated water by sustainable carboxycellulose nanofibers derived from agave through nitro oxidation process", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
554. Priyanka R. Sharma, Sunil Kumar Sharma, Benjamin Hsiao, "Reinforcement of guayule and natural rubber latex using nitro-oxidized jute nanofibers", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
555. Ken Johnson, William Borges, Priyanka R. Sharma, Sunil Sharma, Hao-Yen Jefferson Chang, Min Liu, Benjamin S Hsiao, "Cellulose sulfate nanofibers for ammonium removal and water purification applications", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
556. Madani Khan, Wenjing Yang, Jenny Gao, Benjamin S Hsiao, Dale Gene Drueckhammer, "Incorporation of iron on nanocellulose for arsenic removal from water", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
557. Tomas Rosen, Ruifu Wang, HongRui He, Chengbo Zhan, Shirish Chodankar, Benjamin S Hsiao, "Time-resolved structural transition during nanocellulose gel formation using an in situ SAXS/flow-focusing technique", ACS National Meeting, March 22 - March 26, Philadelphia, PA.
558. Sunil Sharma, Priyanka Sharma, Songtao Li, George Cai, Songze Wu, Aniket Raut, Miriam Rafailovich, Benjamin S Hsiao, "Highly cross-linked carboxycellulose nanofiber-based sustainable membrane with high



- proton conduction and PEM fuel cell performance”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
559. Sarah Lotfikatouli, Pejman Hadi, Mengying Yang, Harold Walker, Benjamin S Hsiao, Xinwei Mao, “Enhanced anti-fouling performance in nitrogen removing MBRs using nanocellulose coated membrane”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
560. Ritika Joshi, Jackie Zheng, Tom Lindstrom, Benjamin S Hsiao, “Fabrication of a composite nanostructured cellulose membrane for direct contact membrane distillation”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
561. Xiangyu Huang, Hongbin Zhuo, Pejman Hadi, Benjamin S Hsiao, “Selective adsorption and separation of dyes by dialdehyde cellulose and cationic dialdehyde cellulose”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
562. HongRui He, Tomas Rosen, Ruifu Wang, Chengbo Zhan, Andreas B Fall, Christian Aulin, Shirish Chodankar, Tom Lindström, Benjamin S Hsiao, “Cellulose nanofibril’s cross-section determined through quantized polydispersity fitting of small-angle X-ray scattering data”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
563. Ruifu Wang, Tomas Rosen, HongRui He, Chengbo Zhan, Shirish Chodankar, Benjamin S Hsiao, “Dynamics of the nanocellulose in dispersions under the confined flow”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
564. Ruifu Wang, Tomas Rosen, Mengying Yang, HongRui He, Evan Wang, Shirish Chodankar, Benjamin S Hsiao, “Chemical cross-linking of cellulose nanofibers assisted by hydrodynamic alignment using flow-focusing”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
565. Nisha Verma, Qinyi Fu, Benjamin S Hsiao, Benjamin Ocko, “Molecular structure study-facilitated selection of monomers for fabricating reverse osmosis polyamide membranes”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
566. Hui Chen, Priyanka R. Sharma, Sunil Sharma, Eric Fung, Rangjian Cao, Duning Li, Benjamin S Hsiao, “Fundamental study of nitro-oxidation method on biomass (jute)”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
567. Lexin Chen, Nisha Verma, Hongyang Ma, Benjamin S Hsiao, “Ionic liquid surfactant-assisted interfacial polymerization for high flux composite reverse osmosis membranes”, ACS National Meeting, March 22 - March 26, Philadelphia, PA.
568. Ken Imaoka Johnson, William Borges, Priyanka R Sharma, Sunil K Sharma, Hao-Yen Jefferson Chang, Jianfeng Jim Lin, Benjamin S Hsiao, “CELL 50: Cellulose sulfate nanofibers for ammonium removal and water purification applications”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
569. Priyanka R. Sharma, Benjamin S Hsiao, Sunil Sharma, “CELL 54: Structure properties relationships of nitro-oxidized carboxycellulose nanofibers”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
570. Madani Khan, Jenny Gao, Wenjing Yang, Samuel Soliman, Antoine Mialon, Dale Gene Drueckhammer, Benjamin S Hsiao, “CELL 55: Characterization of lytic polysaccharide monooxygenase mediated cellulose from underutilized biomass”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
571. Priyanka R. Sharma, Sunil K Sharma, Hui Chen, Benjamin S Hsiao, “ENVR 51: Nanocellulose from synthesis to application in environmental remediation”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
572. Sarah Lotfikatouli, Pejman Hadi, Mengying Yang, Harold Walker, Benjamin S Hsiao, Xinwei Mao, “ENVR 63: Mitigation of biofouling in nitrogen removing MBRs employing environmentally sustainable Thin Film Nanofibrous Composite membrane”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
573. Qinyi Fu, Nisha Verma, Benjamin Ocko, Benjamin S Hsiao, “POLY 18: Water adsorption in aromatic reverse osmosis polyamide barrier layers observed by grazing incidence wide-angle X-ray scattering”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
574. Nisha Verma, Lexin Chen, Qinyi Fu, Benjamin S Hsiao, Benjamin Ocko, “POLY 74: Surfactant-assisted interfacial polymerization: High permeance reverse osmosis membranes”, ACS Fall 2020 Virtual Meeting, August 17 - August 20.
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575. Tomas Rosén, HongRui He, Ruifu Wang, Chengbo Zhan, Shirish Chodankar, Andreas Fall, Christian Aulin, Per Tomas Larsson, Tom Lindström, and Benjamin S. Hsiao, “Analyzing Cross-Sections of Cellulose Nanofibrils with X-ray Scattering Assuming Quantized Polydispersity of Elementary Microfibrils” ACS Spring 2021 Virtual Meeting, Division of Cellulose and Renewable Materials: Nanocellulose - from fundamentals to function, April 5-16.
576. Tomas Rosén, Ruifu Wang, HongRui He, Chengbo Zhan, Shirish Chodankar, and Benjamin S. Hsiao, “Time-resolved ion-induced phase transition of nanocellulose using flow-focusing mixing and scanning SAXS”, ACS

Spring 2021 Virtual Meeting, Division of Cellulose and Renewable Materials: Nanocellulose - from fundamentals to function, April 5-16.

577. Ruifu Wang, Tomas Rosen, Benjamin Hsiao, "Thermal Reversible Gelation of TEMPO-Oxidized Cellulose Nanofibers Dispersed in Propylene Glycols", APS March 2021, Virtual Meeting, March 15–19.
578. Mengying Yang, Sarah Lotfikatouli, Xinwei Mao, Benjamin Hsiao, "Development of All-Cellulose Ultrafiltration Membranes for High-performance Wastewater Treatment", APS March 2021, Virtual Meeting, March 15–19.
579. Benjamin S. Hsiao, "Sustainable water purification using biomass nanofibers", Symposium on Polymer Materials from Natural Renewable Ingredients, Pacificchem 2021, Virtual Meeting, December 16-21.
580. Benjamin S. Hsiao, "Advancing sustainable nanocellulose technologies for water purification" Advanced Nanomaterials Congress, International Association of Advanced Materials, Virtual Meeting, October 24-27, Sweden.

## 2022

581. Lindström, T., Chi, K., Sharma, P, Hsiao, B. S., "Nitrogen-oxidation technologies to make nanocellulose", 17<sup>th</sup> Fundamental Research Symposium, Advances in Pulp and Paper Research, September 4-19, Cambridge, UK.
582. Ken Johnson; Priyanka Sharma; Dufei Fang; Rasel Das; Kai Chi; Sunil Sharma; Grenalynn Ilacas; Madani Khan; Doyoung Noh; Hao-Yen Chang; Yifei Wang; Benjamin Hsiao, "Nitro-oxidation optimization and scale-up process to extract carboxycellulose from various lignocellulosic feedstocks", ACS Spring Meeting, Division of Cellulose and Renewable Materials, March 20, San Diego, CA.
583. Tomas Rosen; Ahmad Reza Motezakker; HongRui He; Ruifu Wang; Korneliya Gordeyeva; Andrei Fluerasu; Daniel Soderberg; Benjamin Hsiao, "Diffusive dynamics of nanoparticles in nanocellulose networks obtained by X-ray photon correlation spectroscopy", ACS Spring Meeting, Division of Cellulose and Renewable Materials, March 20, San Diego, CA.
584. Lynn R Terry; Huiyuan Guo; Benjamin Hsiao; Priyanka Sharma, "Simultaneous detection and removal of environmental contaminants through a novel multifunctional nanofilm", ACS Spring Meeting, Division of Analytical Chemistry, March 21, San Diego, CA.
585. Amy Yen Phung Ngo; Ken Johnson; Priyanka Sharma; Benjamin Hsiao, "Nitro-oxidation modification of loofah biomass for recovery of ammonium nutrient in aquaculture", ACS Spring Meeting, Division of Cellulose and Renewable Materials, March 21, San Diego, CA.
586. Nisha Verma; Benjamin Hsiao; Milinda Abeykoon; Benjamin Ocko, "Analysis of polyamide barrier layers in reverse osmosis membranes using pair distribution function", ACS Spring Meeting, Division of Polymer Chemistry, March 22, San Diego, CA.
587. Ahmad Reza Motezakker; Tomas Rosen; Benjamin Hsiao; Fredrik Lundell; Daniel Soderberg, "Understanding the role of flexibility and aspect ratio of nanofibers on transport phenomena in nanofibrous networks", ACS Spring Meeting, Division of Cellulose and Renewable Materials, March 23, San Diego, CA.
588. Duning Li, Cheng-Shiuan Lee; Yi Zhang; Rasel Das; Fahmida Akter; Dr. Arjun Venkatesan; Benjamin Hsiao, "Development of cationic cellulose nanofibrous adsorbent for PFAS remediation", ACS Fall Meeting, Division of Environmental Chemistry, August 23, Chicago, IL.
589. Madani Khan, Audri Wong; Sera Picillo; Isaac Liu; Benjamin Hsiao; Dale Drueckhammer, "Synthesis of a model disaccharide compound to understand the mechanisms of nitro-oxidation and related reaction on cellulose", ACS Fall Meeting, Division of Cellulose and Renewable Materials, August 23, Chicago, IL.
590. Jiajun Tian, Tomas Rosén; Andrei Fluerasu; Benjamin Hsiao, "Investigate the resting time-dependent dynamics of charge-stabilized cellulose nanocrystals network by X-ray photon correlation spectroscopy", ACS Fall Meeting, Division of Cellulose and Renewable Materials, August 23, Chicago, IL.
591. Ken Johnson, Christian Dimkpa, Benjamin Hsiao, "Nanocellulose-enabled nanofertilizers to enhance the food and water nexus", SESSION: Materials & Nano: Nanotechnology & Agriculture: A Path To Global Food Security, ABCChem 2022, December 16, Marrakech, Morocco.

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592. Benjamin Hsiao, "New circular solutions for the nexus of food, energy and water by nanocellulose technologies", ACS Spring Meeting, Division of Polymer Chemistry, Crossroads of Polymer, Composite, and Sustainable Energy, March 29, Indianapolis, IN.
593. Grenalynn Ilacas, Rasel Das, Benjamin Hsiao, "Utilization of Nitro-oxidation process (NOP) for agronomic applications", ACS Fall Meeting, Division of Polymer Chemistry, August 15, San Francisco, CA.
594. Jiajun Tian, Michelle Chu, Benjamin Hsiao, "In-situ zinc oxide nanoparticle growth in nanocellulose scaffold", ACS Fall Meeting, Division of Cellulose and Renewable Materials, August 15, San Francisco, CA.

595. Madani Khan, Aliya John, Sera Picillo, Audri Wong, Dale Drueckhammer, Benjamin Hsiao, "Optimization of nitro-oxidation process for nanocellulose extraction from raw biomass", ACS Fall Meeting, Division of Cellulose and Renewable Materials, August 15, San Francisco, CA.
596. W. A. Kaushanie Gunarathne, Jiajun Tian, Benjamin Hsiao, "Anti-freezing behavior of metal-ion induced nanocellulose gels", ACS Fall Meeting, Division of Cellulose and Renewable Materials, August 15, San Francisco, CA.
597. Duning Li, Arjun Venkatesan, Benjamin Hsiao, "Mechanistic study to assess the removal mechanism of PFAS by alkylamine modified cellulose-based bioadsorbent", ACS Fall Meeting, Division of Environmental Chemistry, August 16, San Francisco, CA.
598. Noel Womack, Rasel Das, Christian Dimkpa, Paul Aikpokpodion, and Benjamin S. Hsiao, "Nitro-Oxidization Process (NOP) as a Sustainable Means to Convert Waste into Plant Nutrients", 12th SNO (Sustainable Nanotechnology Organization) Conference, November 10-12, Marina del Rey, CA.

#### **2024**

599. Benjamin S. Hsiao "From Nanocellulose Technologies to New Circular Solutions for Horticulture and Agriculture" ACS Spring Meeting, Cellulose and Renewable Materials Division, Anselme Payen symposium, March 17-21, New Orleans, LA.
600. T. Rosén, B. S. Hsiao, D. S. Söderberg, "Bio-Based Colloids in Multi-Phase Systems", ACS Spring Meeting, Cellulose and Renewable Materials Division, March 17-21, New Orleans, LA.
601. Duning Li, Arjun Venkatesan, Benjamin S. Hsiao, "Design of alkylamine modified nanocellulose-based bioadsorbent for PFAS remediation in water", ACS Spring Meeting, Cellulose and Renewable Materials Division, a symposium on Cellulose And Other Carbohydrate Materials for Water and Air Purification, March 17-21, New Orleans, LA.
602. Size Zheng, Tao Wei, Benjamin Hsiao, "Interfacial polymerization of aromatic polyamide reverse osmosis membrane", ACS Fall Meeting, Division of Colloid & Surface Chemistry, a symposium on Recent Development of Polymer Interface & Polymer Thin Film Preparation, Characterization & Modeling: Polymer Membranes, Interfaces & Thin Films, August 20, Denver, CO.