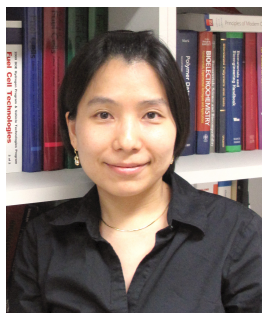


Curriculum Vitae: Moon Jeong Park



Date of Birth: August 7, 1977
Nationality: Republic of Korea
Affiliation: Rm228, Department of Chemistry
Pohang Univ. of Science and Technology
(POSTECH), Pohang 37673, Korea
E-mail: moonpark@postech.ac.kr
Tel (Fax): +82-54-279-2342 (Office), +82-10-3582-5019 (Cell)
+1-510-356-8760 (Cell-USA)

Education

Mar 2002 – Feb 2006: Ph.D., Chemical and Biological Engineering,
Seoul National University; Mentor: K. Char
Feb 2002 - Jul 2004 Visiting Scholar, University of Minnesota; Mentor: T. P. Lodge
Mar 2000 – Feb 2002: M.S., Chemical Engineering, Seoul National University
Mar 1996 – Feb 2000: B.S., Chemical Engineering, Seoul National University

Professional Positions

Mar. 2019 – present: Full Professor, Department of Chemistry, POSTECH
Feb 2009 – Jan 2019: Assistant, Associate Professor, Department of Chemistry and Division of
Advanced Materials Science, POSTECH
Mar 2006 – Feb 2009: Post Doctoral Fellow, Materials Science Division, Lawrence Berkeley
National Laboratory; Mentor: N. P. Balsara
June 2016 – present: Associate Editor, *Macromolecules* (ACS)
Mar 2013 – present: Editorial Advisory Board, *Journal of Applied Polymer Science*
Mar 2015 – present: Editorial Advisory Board, *Journal of Polymer Science: Polymer Physics*
Jan 2018 – present: Editorial Board, *Chinese Journal of Polymer Science*
Jan 2021 – present: Editorial Advisory Board, *Materials Horizons* (RSC)

Honors and Awards

- *Fellow*, American Physical Society, USA, 2021
- *Simgye Science Award*, KOSUA, Korea, 2018
- *John H. Dillon Medal*, American Physical Society, USA, 2017
- *Young Scientists Award*, The Korean Academy of Science and Technology, KOREA, 2016
- *IUPAC Young Polymer Scientists Award*, IUPAC Macro 2016, Turkey, 2016
- *The 15th Female Scientist and Engineer of the Year Award*, Ministry of Science, Korea, 2015
- *POSCO Technology Award*, POSCO, Korea, 2015
- *Young Scientist Award*, John Wiley & Sons and The Korean Polymer Society, 2013
- *Chong-Am Science Fellowship* for Young Professors, 2011
- *Best Lectureship* at POSTECH, 2011
- *Asia Excellence Award* for Young Scientists in Polymer Science, Osaka, Japan, 2011
- *Young Scientist Award*, KOREA-JAPAN-CHINA Young Researchers Workshop, 2010
- *Young Scientist Outstanding Paper Award*, NANO Systems Institute, 2005.
- *Best Paper Award*, The Korean Institute of Chemical Engineers, Korea, 2005.
- *Best Paper Award*, International Union of Pure and Applied Chemistry (IUPAC), France, 2004.
- *University Honors Scholarship* from Seoul National University, 1996-1999.

Research Interests

Moon Jeong Park's current research interests are the synthesis and characterization of model hard/soft materials to elucidate the mechanisms of charge and ion transport through these materials with a focus on nanoscale structures-ion transport properties relationship.

Lists of Publications

106. Hojun Lee, Sangwoo Kwon, Jaemin Min, Won Bo Lee, and **Moon Jeong Park***, "Discovery of Plumber's Nightmare Structures in Block Copolymers" *Science*, in revision.
105. Hyeonseong Ham, Myungsun Park, Taejun Park, Xuelang Gao, Yong-Lae Park and **Moon Jeong Park***, "Teleoperation of Soft Robots with Real-time Fingertip Haptic Feedback Using Small Batteries" *Adv. Mater. Technol.*, **2023**, 2300070.
104. Rui-Yang Wang, Seungwon Jeong, Hyeonseong Ham, Jihoon Kim, Hojun Lee, Chang Yun Son,* and **Moon Jeong Park***, "Superionic Bifunctional Polymer Electrolytes for Solid-State Energy Storage and Conversion" *Adv. Mater.* **2023**, 35, 2203413. <*Selected as inside back cover>
103. Jun Hyuk Lee, Jong Chan Shin, Jihoon Kim, Jeong-Won Ho, Won Jang Cho, **Moon Jeong Park**, Gi-Ra Yi, Minjae Lee*, Pil J. Yoo*, "Zwitterionic Surfactant-Stabilized Ionogel Electrolytes with High Ionic Conductivity for Lithium Secondary Batteries", *J. Power Sources* **2023**, 15, 232565.
102. Kyoungwook Kim, Jaemin Min, Minjong Lee, Geunhong Sim, Seung Soo Oh, **Moon Jeong Park***, "Porous Charged Polymer Nanosheets Formed Via Microplastic Removal from Frozen Ice for Virus Filtration and Detection", *Nanoscale* **2022**, 13, 17157-17162. <*Selected as front cover>
101. Soonyoung Cha, Minjeong Kim, Youmgjae Kim, Shinyoung Choi, Sejong Kang, Hoon Kim, Sangho Yoon, Gunho Moon, Taeho Kim, Ye Won Lee, Gil Young Cho, **Moon Jeong Park**, Cheol-Joo Kim, B. J. Kim, JaeDong Lee*, Moon-Ho Jo*, Jonghwan Kim*, "Gate-Tunable Quantum Pathways of High Harmonic Generation in Graphene", *Nat. Commun.* **2022**, 13, 6630.
100. Sejong Kang and **Moon Jeong Park***, "Tailoring intermolecular interactions in ion gels with rationally designed phosphonic acid polymers", *Polym. Chem.* **2022**, 13, 4372-4383. <*Selected as HOT Polymer Chemistry article> <*Selected as front cover>
99. Haneol Kang, Hoon Kim, Chuleun Yeom, and **Moon Jeong Park***, "Designing Hybrid Artificial Interphases with Dilithium Vinylphosphonate for Lithium Batteries with Si-Graphite Anodes" *ACS Applied Energy Materials*, **2022**, 5, 4673-4683.
98. Jihoon Kim, Kyeong-Jun Jeong, Kyoungwook Kim, Chang Yun Son, and **Moon Jeong Park***, "Enhanced Electrochemical Properties of Block Copolymer Electrolytes with Blended End-Functionalized Homopolymers" *Macromolecules*, **2022**, 55, 2028-2040.
97. Junhyuk Lee, Jeongseok Yeon, Jihoon Kim, Jeonghee Park, Seongsu Yoo, Sunghwan Hong, Minjun Kim and **Moon Jeong Park***, Ho Seok Park*, Pil J. Yoo*, "Accelerated Li-Ion Transport through a Zwitterion-Anchored Separator for High-Performance Li-S Batteries" *J. Mater. Chem. A*, **2021**, 9, 25463-25473.
96. Dipankar Barpuzary#, Hyeonseong Ham#, Dohyeon Park, Kyoungwook Kim, and **Moon Jeong Park***, "Smart Bioinspired Actuators: Crawling, Linear, and Bending Motions Through Multilayer Design" *ACS Appl. Mater. Interfaces* **2021**, 13, 50381-50391. <*Selected as front cover>
95. Kyoungwook Kim, Bomi Kim, Kitae Kim, and **Moon Jeong Park***, "Ten-Minute Synthesis of Highly Conductive Polymer Nanosheets on Ice Surfaces: Role of Ice Crystallinity" *Macromol. Rapid Commun.* **2021**, 42, 2100565. <*Special Issue on Top Korean Authors, 2D conducting polymers> <*Selected as front cover>
94. Jaemin Min, Dipankar Barpuzary, Hyeonseong Ham, Gyeong-Chan Kang, and **Moon Jeong Park***, "Charged block copolymers: From fundamentals to electromechanical applications" *Acc. Chem. Res.* **2021**, 54, 4024-4035 <*Selected as front cover>
93. Haneol Kang, and Moon Jeong Park*, "Thirty-Minute Synthesis of Hierarchically Ordered Sulfur

- Particles Enables High-Energy, Flexible Lithium-Sulfur Batteries” *Nano Energy* **2021**, 89, 106459
92. Jaemin Min, Ha Young Jung, Seungwon Jeong, Byeongdu Lee, Chang Yun Son,* and **Moon Jeong Park***, “Enhancing ion transport in charged block copolymers by stabilizing low symmetry morphology: Electrostatic control of interfaces” *Proc. Natl. Acad. Sci. U.S.A.* **2021**, 118, e2107987118.
 91. Rui-Yang Wang, Haneol Kang, **Moon Jeong Park***, “High-Capacity, Sustainable Lithium–Sulfur Batteries Based on Multi-Functional Polymer Binders” *ACS Applied Energy Materials* **2021**, 4, 2696-2706.
 90. Sejong Kang, **Moon Jeong Park***, “100th Anniversary of Macromolecular Science Viewpoint: Block Copolymers with Tethered Acid Groups: Challenges and Opportunities” *ACS Macro Letters* **2020**, 9, 1527-1541.
 89. Kyoungwook Kim, **Moon Jeong Park***, Ice-Assisted Synthesis of Functional Nanomaterials: The Use of Quasi-Liquid Layers as Nanoreactors and Reaction Accelerators, *Nanoscale* **2020**, 12, 14320-14338 (cover article).
 88. Seul-A Park, Youngho Eom, Hyeonyeol Jeon, Jun Mo Koo, Taehyung Kim, Jaemin Jeon, **Moon Jeong Park**, Sung Yeon Hwang*, Byeong-Su Kim*, Dongyeop X. Oh*, Jeyoung Park*, “Aramid Nanofiber Templated In Situ SNAr Polymerization for Maximizing the Performance of All-Organic Nanocomposites”, *ACS Macro Lett.* **2020**, 9, 558–564.
 87. Boram Kim, Haneol Kang, Kyoungwook Kim, Rui-Yang Wang and **Moon Jeong Park***, “All-Solid-State Lithium Organic Batteries Comprising Single-Ion Polymer Nanoparticle Electrolytes”, *ChemSusChem* **2020**, 13, 2271-2279 (cover article).
 86. Jihoon Kim, Ha Young Jung and **Moon Jeong Park***, “End-Group Chemistry and Junction Chemistry in Polymer Science: Past, Present, and Future”, *Macromolecules* **2020**, 53, 746-763 (cover article).
<Selected as ACS Editor’s Choice>
 85. Rui-Yang Wang, **Moon Jeong Park***, “Self-Assembly of Block Copolymers with Tailored Functionality: From the Perspective of Intermolecular Interactions”, *Annual Review of Materials Research* **2019**, 50, 521-549.
 84. Gurmukh K. Sethi, Ha Young Jung, Whitney S. Loo, Simar Sawhney, **Moon Jeong Park**, Nitash P. Balsara*, Irune Villaluenga*, “Structure and Thermodynamics of Hybrid Organic–Inorganic Diblock Copolymers with Salt”, *Macromolecules* **2019**, 52, 3165-3175.
 83. Dipankar Barpuzary, Kyoungwook Kim, **Moon Jeong Park***, “Two-Dimensional Growth of Large-Area Conjugated Polymers on Ice Surfaces: High Conductivity and Photoelectrochemical Applications”, *ACS Nano*, **2019**, 13, 3953-3963.
 82. **Moon Jeong Park***, “Confinement-Entitled Morphology and Ion Transport in Ion-Containing Polymers” *Molecular Systems Design & Engineering*, **2019**, 4, 239-251 (cover article).
 81. Dipankar Barpuzary, Kyoungwook Kim, **Moon Jeong Park***, “Two-dimensional Conducting Polymers: Synthesis and Charge Transport”, *J. Polymer Science: Polymer Physics*, **2019**, 57, 1169-1176.
<Selected as TOP downloaded paper 2018-2019>
 80. Onnuri Kim, Kyoungwook Kim, U Hyeok Choi, **Moon Jeong Park***, “Tuning Anhydrous Proton Conduction in Single-Ion Polymers by Crystalline Ion Channels”, *Nature Communications*, **2018**, 9, 5029.
<Selected as Editor’s Highlights>
 79. Haneol Kang, Hoon Kim, **Moon Jeong Park***, “Sulfur-Rich Polymers with Functional Linkers for High-Capacity and Fast-Charging Lithium-Sulfur Batteries, *Advanced Energy Materials*, **2018**, 8, 1802423 (cover article).
 77. Yeongjun Lee, Jin Young Oh, Wentao Xu, Onnuri Kim, Taeho Roy Kim, Jiheong Kang, Yeongin Kim, Donghee Son, Jeffery B.-H. Tok, **Moon Jeong Park**, Zhenan Bao*, Tae-Woo Lee*, “Stretchable Organic Optoelectronic Sensorimotor Synapse, *Science Advances*, **2018**, 4, 7387.

76. Daeyeon Lee, Ha Young Jung, **Moon Jeong Park***, "Solid-State Polymer Electrolytes Based on AB₃-type Miktoarm Star Copolymers, ASAP, *ACS Macro Letters*, **2018**, 7, 1046-1050.
75. Onnuri Kim, Seung Jae Kim, **Moon Jeong Park***, "Low-Voltage-Driven Soft Actuators", *Chem. Comm.* **2018**, Review Article, **2018**, 54, 4895-4904 (cover article).
74. Ji Eon Kwon*, Chang-Seok Hyun, Young Jun Ryu, Jounghphil Lee, Dong Joo Min, **Moon Jeong Park**, Byeong-Kwan*, Soo Young Park*, "Triptycene-based Quinone Molecules Showing Multi-Electron Redox Reactions for a Large Capacity and High Energy Organic Cathode Material in Li-ion Battery", *J. Mater. Chem. A* **2018**, 6, 3134-3140.
73. Sanghee Jang, Sung Yeon Kim, **Moon Jeong Park***, "Phosphonated Polymers with Fine-Tuned Ion Clustering Behavior: Toward Efficient Proton Conductors" *Macromolecules* **2018**, 3, 1120-1128.
72. Seung Jae Kim, Onnuri Kim, **Moon Jeong Park***, "True Low-Power Self-Locking Soft Actuators" *Advanced Materials*, **2018**, 30, 1706547 (cover article).
71. Jisu Back, Junbeom Park, Youngsuk Kim, Haneol Kang, Yonghwi Kim, **Moon Jeong Park**, Kimoon Kim, Eunsung Lee*, "Triazenyl Radicals Stabilized by N-Heterocyclic Carbenes", *J. Am. Chem. Soc.*, **2017**, 139, 15300-1530.
70. Kyoungwook Kim, Hyungmin Ahn, **Moon Jeong Park***, "Highly Catalytic Pt Nanoparticles Grown in Two-Dimensional Conducting Polymers at the Air-Water Interfaces" *ACS Appl. Mater. Interfaces* **2017**, 9, 30278-30282.
69. Yuxiang Li, Dae Hee Lee, Jounghphil Lee, Thanh Luan Nguyen, Sungu Hwang, **Moon Jeong Park**, Dong Hoon Choi, Han Young Woo*, "Two Regioisomeric π -Conjugated Small Molecules: Synthesis, Photophysical, Packing, and Optoelectronic Properties", *Adv. Funct. Mater.* **2017** 27, 1701942.
68. Taeyoung Kwon, Ilyoung Choi, **Moon Jeong Park***, "Highly Conductive Solid-State Hybrid Electrolytes Operating at Sub-zero Temperatures" *ACS Appl. Mater. Interfaces* **2017**, 9, 24250-24258.
67. Hayoung Jeong, Prithwiraj Mandal, Gyuha Jo, Minju Kim, Kyungwon Kwak, **Moon Jeong Park***, "Modulating Ion Transport and Self-Assembly of Polymer Electrolyte via End-Group Chemistry" *Macromolecules*, **2017**, 50, 3224-3233.
66. Jounghphil Lee, **Moon Jeong Park***, "Tattooing Dye as a Green Electrode Material of Lithium Batteries" *Advanced Energy Materials*, **2017**, 7, 1602279.
65. Ha Young Jung, **Moon Jeong Park***, "Thermodynamics and Phase Behavior of Acid-Tethered Block Copolymers with Ionic Liquids" *Soft Matter*, **2017**, 13, 250 (Invited paper, Emerging Investigators Themed Issue).
64. Onnuri Kim, Hoon Kim, U Hyeok Choi, **Moon Jeong Park***, "One-Volt-Driven Superfast Polymer Actuators Based on Single-Ion Conductors" *Nature Communications*, **2016**, 7, 13576.
63. Ha Young Jung, Onnuri Kim, **Moon Jeong Park***, "Ion Transport in Nanostructured Phosphonated Block Copolymers Containing Ionic Liquids" *Macromolecular Rapid Communications*, **2016**, 37, 1116 (Invited paper, Special Issue on Ionic Liquids in Polymer Design).
62. Jounghphil Lee, Hoon Kim, **Moon Jeong Park***, "Long-Life, High-Rate Lithium-Organic Batteries Based on Naphthoquinone Derivatives" *Chemistry of Materials*, **2016**, 28, 2408-2416.
61. Gil Ryeong Lee, Hiroyoshi Ohtsu, Jinyoung Koo, Yumi Yakiyama, **Moon Jeong Park**, Daishi Inoue, Daisuke Hashizume and Masaki Kawano* "Crystallinity-Dependence of Ionic Conductivity in the Ion Pairs of a Multi-Interactive Anion" *Chemical Communications*, **2016**, 52, 3962-3965.
60. Gyuha Jo, Onnuri Kim, Hoon Kim, U Hyeok Choi, Sang-Bok Lee, **Moon Jeong Park***, "End-Functionalized Block Copolymer Electrolytes: Effect of Segregation Strength on Ion Transport Efficiency" *Polymer Journal*, **2016**, DOI:10.1038/pj.2015.141 (Invited paper, Special Issue on Polymer Surfaces, Interfaces, and Thin Films).
59. Onnuri Kim, Sung Yeon Kim, Jounghphil Lee, **Moon Jeong Park***, "Building Less Tortuous Ion-Conduction Pathways Using Block Copolymer Electrolytes with a Well-Defined Cubic Symmetry" *Chemistry of Materials*, **2016**, 28, 318-325.
58. Ha Young Jung, Sung Yeon Kim, Onnuri Kim, **Moon Jeong Park***, "Effect of the Protogenic Group on the Phase Behavior and Ion Transport Properties of Acid-Bearing Block Copolymers"

- Macromolecules*, **2015**, 48, 6142.
57. Ilyoung Choi, Jounghphil Lee, Hyungmin Ahn, Jinho Lee, Hee Cheul Choi, **Moon Jeong Park***, "High-Conductivity Two-Dimensional Polyaniline Nanosheets Developed on Ice Surfaces" *Angewandte Chemie*, **2015**, DOI: 10.1002/anie.201503332 and 10.1002/ange.201503332 (selected as VIP, invited as front inside cover).
 56. Hoon Kim, Jounghphil Lee, Hyungmin Ahn, Onnuri Kim, **Moon Jeong Park***, "Synthesis of Three-Dimensionally Interconnected Sulfur-Rich Polymers for Cathode Materials of High-Rate Lithium-Sulfur Batteries" *Nature Communications*, **2015**, DOI: 10.1038/ncomms8278.
 55. Yumi Yakiyama, Gil-Ryeong Lee, Sung Yeon Kim, Yoshitaka Matsushita, Yasushi Morita, **Moon Jeong Park**, Masaki Kawano*, "Formation of Nanometer-Thick Water Layer at High Humidity on Dynamic Crystalline Material Composed of Multi-Interactive Molecules" *Chemical Communications*, **2015**, 51, 6828-6831.
 54. Gyuha Jo, Hongchan Jeon, **Moon Jeong Park***, "Synthesis of Polymer Electrolytes Based on Poly(ethylene oxide) and an Anion-Stabilizing Hard Polymer for Enhancing Conductivity and Cation Transport" *ACS Macro Lett.*, **2015**, 4, 225–230.
 53. Hyungmin Ahn, Jaewan Hong, Sung-Yeon Kim, Ilyoung Choi, **Moon Jeong Park***, "A pH-Responsive Molecular Switch with Tricolor Luminescence" *ACS Applied Materials & Interfaces*, **2015**, 7, 704-712.
 52. Ilyoung Choi, Hoon Kim, **Moon Jeong Park***, "Making A Better Organic-Inorganic Composite Electrolyte to Enhance Cycle Life of Lithium-Sulfur Batteries" *RSC Advances*, **2014**, 4, 61333-61336.
 51. Masayoshi Watanabe, Yuzo Kitazawa, Kaori Iwata, Satoru Imaizumi, Hyungmin Ahn, Sung-Yeon Kim, Kazuhide Ueno, **Moon Jeong Park** "Gelation of Solvate Ionic Liquid by Self-assembly of Block Copolymer and Characterization as Polymer Electrolyte" *Macromolecules*, **2014**, 47, 6009-6016.
 50. Onnuri Kim, Sung Yeon Kim, Byungrak Park, Woonbong Hwang, **Moon Jeong Park*** "Factors Affecting Electromechanical Properties of Ionic Polymer Actuators Based on Ionic Liquid-Containing Sulfonated Block Copolymers" *Macromolecules*, **2014**, 47, 4357-4368.
 49. Sung Yeon Kim, Jounghphil Lee, **Moon Jeong Park*** "Proton Hopping and Diffusion Behavior of Sulfonated Block Copolymers Containing Ionic Liquids" *Macromolecules*, **2014**, 47, 1099-1108.
 48. Gyuha Jo, Hyungmin Ahn, **Moon Jeong Park*** "Simple Route for Tuning the Morphology and Conductivity of Polymer Electrolytes: One End Functional Group is Enough" *ACS Macro Letters*, **2013**, 2, 990-995.
 47. Onnuri Kim, Gyuha Jo, Yongjun Park, Suhan Kim, **Moon Jeong Park*** "Ion Transport Properties of Self-assembled Polymer Electrolytes: The Role of Confinement and Interface" *The Journal of Physical Chemistry Letters*, **2013**, 4, 2111-2117.
 46. Hyungmin Ahn, Sungyeon Kim, Onnuri Kim, Ilyoung Choi, Chang-Hoon Lee, Ji Hoon Shim, **Moon Jeong Park*** "Blue-emitting Self-assembled Polymer Electrolytes for Fast, Sensitive, Label-free Detection of Cu(II)-ions in Aqueous Media" *ACS Nano* **2013**, 7, 6162-6169.
 45. Onnuri Kim, Tae-Ju Shin, **Moon Jeong Park*** "Fast Low-Voltage Electroactive Actuators Using Nanostructured Polymer Electrolytes" *Nature Communications*, **2013**, 4, 2208.
 44. **Moon Jeong Park***, Sung Yeon Kim, "Ion Transport in Sulfonated Polymers" *Journal of Polymer Science: Polymer Physics*, Feature Article, **2013**, 51, 481-493.
 43. **Moon Jeong Park***, Ilyoung Choi, Jaewan Hong, Onnuri Kim, "Ionic Liquids Integrated Polymer Electrolytes for Future Electrochemical Gears: Lithium Batteries, Fuel Cells, and Electro-active Actuators" *Journal of Applied Polymer Science*, Review Article (Front Cover), **2013**, 129, 2363. *Highlighted by MaterialsViews*, **2013**, 03. 22.
 42. Onnuri Kim, Sung Yeon Kim, Hyungmin Ahn, Chang Woo Kim, Young Min Rhee, **Moon Jeong Park***, "Phase Behavior and Conductivity of Sulfonated Block Copolymers Containing Heterocyclic Diazole-Based Ionic Liquids", *Macromolecules*, **2012**, 45, 8702-8713.

41. Eunyeong Kim, Sung Yeon Kim, Gyuha Jo, Suhan Kim, **Moon Jeong Park*** "Colorimetric and Resistive Polymer Electrolyte Thin Films for Real-time Humidity Sensors", *ACS Applied Materials and Interfaces*, **2012**, 4, 5179-5187.
40. Keon Woo Kwon, Hyoungjun Park, Kwang Hoon Song, Jong-Cheol Choi, Hyungmin Ahn, **Moon Jeong Park**, Kahp-Yang Suh, Junsang Doh, "Nanotopography-Guided Migration of T Cells", *The Journal of Immunology*, **2012**, 189, 2266.
39. **Moon Jeong Park***, Jaewan Hong, Sung Yeon Kim, "Role of Nanosstructures in Polymer Electrolytes for Energy Storage and Delivery", *ACS Symposium Series*, **2012**, Chapter 8, 129-146.
38. Joomi Yeo, Sung Yeon Kim, Suhan Kim, Taehwan Kim, Duyoul Ryu, **Moon Jeong Park***, "Mechanically and Structurally Robust Sulfonated Block Copolymer Membranes for Water Purification Applications", *Nanotechnology*, **2012**, 23, 245703.
37. Jungphil Lee, Hyungmin Ahn, Ilyoung Choi, **Moon Jeong Park***, "Enhanced Charge Transport in Enzyme-wired Organometallic Block Copolymers for Bioenergy and Biosensors", *Macromolecules* **2012**, 45, 3121-3128.
36. Gyuha Jo, Ilyoung Choi, Hyungmin Ahn, **Moon Jeong Park***, "Binder-free Ge Nanoparticles /Carbon Hybrids for Anode Materials of Advanced Lithium Batteries with High Capacity and Rate Capability", *Chem. Comm.* **2012**, 48, 3987-3989.
35. Ilyoung Choi, H. Ahn, **Moon Jeong Park***, "High Performance Lithium-Polymer Batteries from Surface Functionalized Si Nanoparticle Anodes and Self-Assembled Block Copolymer Electrolytes", *Macromolecules*, **2011**, 44, 7327-7334.
34. Sun Ju Lee, **Moon Jeong Park***, "Scaling Behavior of Proton Mobility in Sulfonated Block Copolymers", *Soft Matter*, **2011**, 7, 8838-8846.
33. Hyungmin Ahn, **Moon Jeong Park***, "Facile One-Pot Synthesis of Functional Gold Nanoparticles-Polymer Hybrids Using Ionic Block Copolymers as a Nanoreactor", *Macromol. Rapid. Commun.*, **2011**, 32, 1790-1797 (cover article).
32. Sung Yeon Kim, Eunjin Yoon, Taiha Joo, **Moon Jeong Park***, "Morphology and Conductivity in Ionic Liquid Incorporated Sulfonated Block Copolymers", *Macromolecules*, **2011**, 44, 5289-5298.
31. Suhan Kim, **Moon Jeong Park**, Nitash P. Balsara, G. Liu, Andrew. M. Minor, "Minimization of Focused Ion Beam Damage in Nanostructured Polymer Thin Films", *Ultramicroscopy*, **2011**, 111, 191-199.
30. Sun Ju Lee, **Moon Jeong Park***, "Morphological Manipulation of Ionic Block Copolymer Micelles Using Electric Field", *Langmuir*, **2010**, 26, 17827-17830.
29. Sung Yeon Kim, Suhan Kim, **Moon Jeong Park***, "Enhanced Proton Transport in Nanostructured Block Copolymer Electrolyte / Ionic Liquid Membrane under Water Free Condition", *Nature Communications*, **2010**, 1, 88.
28. Sung Yeon Kim, Andrew Jackson, Nitash P. Balsara, **Moon Jeong Park***, "Confinement Effects on Watery Domain in Hydrated Block Copolymer Electrolyte Membranes", *Macromolecules*, **2010**, 43, 8128-8135
27. Xin Wang, S. Yakovlev, Keith Beers, **Moon Jeong Park**, Scott Mullin, Ken Downing, Nitash P. Balsara, "On the Origin of Slow Changes in Ionic Conductivity of Model Block Copolymer Electrolyte Membranes in Contact with Humid Air", *Macromolecules*, **2010**, 43, 5306-5314.
27. **Moon Jeong Park***, Nitash P. Balsara*, "Anisotropic Proton Conduction in Aligned Block Copolymer Electrolyte Membranes at Equilibrium with Humid Air", *Macromolecules*, **2010**, 43, 292-298.
26. **Moon Jeong Park**, Suhan Kim, Andrew Minor, Nitash P. Balsara, "Control of Domain Orientations in Block Copolymer Electrolyte Membranes at the Interface with Humid Air", *Adv. Mater.*, **2009**, 21, 203-208.
25. P. Knychala, M. Banaszak, **Moon Jeong Park**, N. P. Balsara, "Microphase Separation in Sulfonated

- Block Copolymers Studied by Monte Carlo Simulations”, *Macromolecules*, **2009**, 42, 8925-8932.
24. Kookheon Char, **Moon Jeong Park**, “Selective distribution of interacting magnetic nanoparticles into block copolymer domains based on the facile inversion of micelles”. *Reactive & Functional Polymers*, **2009**, 69, 546-551.
 23. **M. J. Park**, N. P. Balsara, “Order-Disorder Transitions in Block Copolymer Electrolytes at Equilibrium with Humid Air”, *Macromolecules*, **2009**, 42, 6808-6815.
 22. **M. J. Park**, N. P. Balsara, “Phase Behavior of Symmetric Sulfonated Block Copolymers”, *Macromolecules*, **2008**, 41, 3678-3687.
 21. **M. J. Park**, N. P. Balsara, “Direct Imaging of Hydrated Polymer Electrolyte Membranes for Fuel Cell Application”, *ECS Trans.*, **2008**, 16, 1357-1363.
 20. **M. J. Park**, A. J. Nedoma, P. L. Geissler, A. Jackson, D. Cookson, N. P. Balsara, “Humidity-Induced Phase Transitions in Ion-Containing Block Copolymer Membranes”, *Macromolecules*, **2008**, 41, 2271-2277.
 19. **M. J. Park**, N. P. Balsara, “Nanostructured PEM Operates at High Temperature”, *MRS Bulletin* **2008**, 33, 1145.
 18. **M. J. Park**, K. H. Downing, A. Jackson, E. D. Gomez, A. M. Minor, D. Cookson, A. Z. Weber, N. P. Balsara, “Increased Water Retention in Polymer Electrolyte Membranes at Elevated Temperatures Assisted by Capillary Condensation”. *Nano Lett.*, **2007**, 7, 3547-3552.
 17. M. Singh, O. Odusanya, G. M. Wilmes, H. B. Eitouni, E. D. Gomez, A. J. Patel, V. L. Chen, **M. J. Park**, P. Fragouli, H. Iatrou, N. Hadjichristidis, D. Cookson, N. P. Balsara, “Effect of Molecular Weight on the Mechanical and Electrical Properties of Block Copolymer Electrolytes”. *Macromolecules*, **2007**, 40, 4578-4585.
 16. N. P. Balsara, **M. J. Park**, “Block Copolymers and Nanotechnology”, *J. Polym. Sci.: Part. B.*, **2006**, 44, 3429-3430.
 15. **M. J. Park**, J. Park, T. Hyeon, K. Char, “Effect of Casting Solvent on the Morphology of Poly(styrene-*b*-isoprene) Diblock Copolymer / Magnetic Nanoparticle Mixtures”, *Langmuir*, **2006**, 22, 1375-1378.
 14. **M. J. Park**, J. Park, T. Hyeon, K. Char, “Effect of Interacting Nanoparticles on the Ordered Morphology of Block Copolymer/Nanoparticle Mixtures.”, *J. Polym. Sci.: Part. B.*, **2006**, 44, 3571-3579.
 13. **M. J. Park**, J. Kim, T. P. Lodge, K. Char, “Solid-like Transient Behavior at the Vicinity of Cylinder/Disorder Transition in Block Copolymer Solutions”, *J. Phys. Chem. B.*, **2006**, 110, 15295-15301.
 12. **M. J. Park**, T. P. Lodge, K. Char, “Order-Disorder Transition and Critical Micelle Temperature in Concentrated Block Copolymer Solutions”, *Macromolecules*, **2005**, 38, 2449-2459.
 11. **M. J. Park**, J. Bang, T. P. Lodge, K. Char, “Interplay between Cubic and Hexagonal Cylinder Phases in Block Copolymer Solutions”, *Langmuir*, **2005**, 21, 1403-1411.
 10. **M. J. Park**, J. Bang, T. Harada, T. P. Lodge, K. Char, “Epitaxial Transitions Among FCC, HCP, BCC, Cylinder Phases in a Block Copolymer Solution”, *Macromolecules*, **2004**, 37, 9064-9075.
 9. J. Bang, K. Viswanathan, T. P. Lodge, **M. J. Park**, K. Char, “Temperature-Dependent Micellar Structures in Poly(styrene-*b*-isoprene) Diblock Copolymer Solutions Near the Critical Micelle Temperature”, *J. Chem. Phys.*, **2004**, 121, 11489-11500.
 8. T. P. Lodge, J. Bang, **M. J. Park**, K. Char, “Origin of the Thermoreversible fcc/bcc Transition in Block Copolymer Solutions”, *Phys. Rev. Lett.*, **2004**, 92, 145501-2.
 7. **M. J. Park**, K. Char, “Gelation of PEO-PLGA-PEO Triblock Copolymers Induced by Macroscopic Phase Separation”, *Langmuir*, **2004**, 20, 2456-2465.
 6. **M. J. Park**, K. Char, “Effect of Shear Flow on the Polymeric Gels Formed by Macroscopic Phase

- Separation”, *Macromol. Rapid Comm.*, **2004**, 25, 1082-1089.
5. B. Jeong, C. F. Jr. Windisch, **M. J. Park**, Y. S. Sohn, A. Gutowska, K. Char, “Phase Transition of the PLGA-g-PEG Copolymer Aqueous Solutions”, *J. Phys. Chem. B.*, **2003**, 107, 10032-10039.
 4. **M. J. Park**, K. Char, “Two Gel States of a PEO-PPO-PEO Triblock Copolymer Formed by Different Mechanisms”, *Macromol. Rapid Comm.*, **2002**, 23, 688-692.
 3. **M. J. Park**, K. Char, “Phase Behavior of a PEO-PPO-PEO Triblock Copolymer in Aqueous Solutions: Two Gelation Mechanisms”, *Macromol. Res.*, **2002**, 10, 325-331.
 2. **M. J. Park**, K.-W. Kwon, H. Kim, Y. H. Bae, K. Char, “Gelation Behavior of PEO-PLGA-PEO Triblock Copolymers in Water”, *Polymer*, **2002**, 43, 3353-3358.
 1. K.-W. Kwon, **M. J. Park**, J. Y. Hwang, K. Char, “Effect of Alcohol Addition on the Gelation in Aqueous Solutions of a Poly(ethyleneoxide)-Poly(propyleneoxide)-Poly(ethyleneoxide) Triblock Copolymer”, *Polymer J.*, **2001**, 33, 404-408.