

## Kunlun Hong

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Macromolecular Nanomaterials Group  
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### Education

Univ. of Science and Tech. of China	Polymer Sciences	M.S.,	1989
University of Alabama-Birmingham	Material Sciences	Ph.D.,	2001

### Professional Experience

2008–present	Research Staff Member, Center for Nanophase Materials Sciences Division, ORNL
2004–2008	Research Staff Member, CSD and CNMS, ORNL
2002–2004	Research Scientist, Chemical Sciences Division, ORNL
2001–2002	Research Associate, Department of Chemistry, University of Alabama-Birmingham (UAB)
1996–2001	Research Assistant, Material Science Program, University of Alabama System
1995–1996	Research Associate, Structure Research Laboratory, University of Science and Technology of China (USTC)
1994–1995	Visiting Scientist, Department of Applied Physics, Hong Kong Polytechnic University
1990–1994	Research Assistant, Structure Research Laboratory and Department of Polymer Science and Engineering, USTC

### Professional and Synergistic Activities

1998–present	Member: American Chemical Society, Polymer Chemistry (POLY) and Polymeric Materials Science and Engineering (PMSE) Divisions
2004–2008	Dedicated Reviewer, <i>European Physical Journal E - Soft Matter</i>
2010-present	External Advisory Board member of CREST, Norfolk State University

### Honors and Awards

2001	Outstanding Graduate Student Award, University of Alabama-Birmingham
1994	Outstanding Accomplishment Award, Elucidating Microstructures of Polyolefins using NMR Techniques, (award shared with Qingren Zhu), Chinese Academy of Science

**Publications** Full list follows CV

### Research Interests

Synthesis and characterization of linear and branched polymers and copolymers with controlled structures; post-polymerization reaction, polymeric self-assembling; polyelectrolytes; stimuli-responsive polymers; optoelectronic active polymers for energy storage and conversions; polymerizations in room temperature ionic liquids.

**Collaborations Outside ORNL During Past Two Years:** Jiaping Lin (East China University of Science and Technology); Yun Liu (NIST); Jimmy Mays (University of Tennessee-Knoxville); Stergios Pispas (Theoretical and Physical Chemistry Institute, National Hellenic Research Foundation, Greece); Lionel Porcar (ILL, France), Mac Rodasz (Wyoming University); Shuiqin Zhou (City University of New York)

**Graduate and Postdoctoral Advisors:**

**Graduate Advisor:** Prof. Jimmy W. Mays (formerly University of Alabama-Birmingham, currently University of Tennessee-Knoxville)

**Postgraduate Advisors:** David Beach and Phillip Britt (ORNL)

**Thesis Advisor and Postgraduate-Scholar Sponsor**

**Postdoctoral Scholars (recent):** Fengjun Hua (2006–2007); Jun Yang (2008–p); Xiang Yu (2008–p)

Total Graduate Students Advised: 0

Total Postdoctoral Scholars Advised: 3

**Published (Referred Journal):**

- 1 G. E. Zhou, Q. R. Zhu, R. R. Qi, J. F. Gao, **K. L. Hong**, Z. F. Ye *Journal of China University of Science & Technology*, **22**, 425 (1992)
- 2 Y. L. Qian, **K. L. Hong**, H. J. Zong, J. L. Huang “Isomerization of 1,5-Hexadiene as Catalyzed by Polymer-Supported Titanocene Complexes” in *Chinese Journal of Reactive Polymers* **2(2)**, 164-173(1993)
- 3 Y. Zhou, **K. L. Hong**,\* P. S. He “Recent Advances in Polyimide LB Films” (Invited Review) in *Chinese Journal of Applied Chemistry*, **11(4)**, 14-20 (1994)
- 4 Q. R. Zhu, R. R. Qi, **K. L. Hong**, J. F. Gao, G. E. Zhou, M. S. Song “Effect of Annealing on the Structure of UHMWPE Gel-films with Single-crystal Mats” in *Acta Polymerica Sinica*, No. 5 552-558(1994)
- 5 Q. J. Zhang, B. Wang, **K. L. Hong**, Q. R. Zhu “Ring-opening Polymerization of  $\epsilon$ -Caprolactone in the Presence of Dicarboxylic Acids” *Macromolecular Chemistry & Physics*, **196**, 1319(1994)
- 6 D. Z. Ma, X. Q. Li, R. Y. Zhang, **K. L. Hong**, X. L. Luo “Characteristics of Polypropylene Copolymers with Low Ethylene Contents” in *Chinese Journal of Polymer Science*, **12(2)**, 164-172(1994)
- 7 D. Z. Ma, X. Q. Li, **K. L. Hong**, R. Y. Zhang, X. L. Luo “ Monomer Sequence Distribution Characteristics of High-Impact Polypropylene” in *Chemical Journal of Chinese Universities*, **15(1)**, 140-144(1994)
- 8 Q. R. Zhu, F. Lu, **K. L. Hong**, G. E. Zhou, Z. S. Yang “Microstructure Studies of Polyolefins by  $^{13}\text{C}$ -NMR with Different Magnetic Field” in *Journal of China University of Science & Technology*, **24(4)**, 470-476 (1994)
- 9 Q. R. Zhu, **K. L. Hong**, R. R. Qi, F. Lu, G. E. Zhou “Morphological Changes in UHMWPE Gel-films Studied by Low Angle X-ray Scattering” in *Polymeric Material Science & Engineering*, **11**, 58-64(1994)
- 10 Q. R. Zhu, S. C. Wang, **K. L. Hong**, R. R. Qi, F. Lu, “Ring Structures in Atactic Polyvinyl Alcohol Ketals as Studied by  $^{13}\text{C}$ -NMR (I) Determination of Different Ring Structures” in *Chinese Journal of Magnetic Resonance*, **12(1)**, 39-46(1995)
- 11 Q. R. Zhu, F. Lu, **K. L. Hong**, J. Wen, L. Wang, G. Z. Xu “Ring Structures in Atactic Polyvinyl Alcohol Ketals as Studied by  $^{13}\text{C}$ -NMR (II) “Theoretical Predication and Experimental Observation of Ring Contents” in *Chinese Journal of Magnetic Resonance*, **12(2)**, 189-194(1995)
- 12 Y. Zhou, P. S. He, K. S. Chen, C. E. Li, **K. L. Hong** “Studies of the Imization of Polyamic Acid LB Films by IR Spectroscopy” *Journal of China Univ. of Science & Technology*, **25(1)**, 21-26(1995)
- 13 Q. R. Zhu, **K. L. Hong**, R. R. Qi, F. Lu, G. E. Zhou, Y. W. Wong “Morphological Changes in Annealed UHMWPE Gel-films” in *Journal of Polymer Science, Polymer Physics Edition* **33(5)**, 739(1995)

- 14 Q. R. Zhu, R. R. Qi, **K. L. Hong**, F. Lu, G. E. Zhou, Y. K. Chen “Deformation Steps in Oriented Ultrahigh Molecular Weight Polyethylene Gel Films” in *Chemical Journal of Chinese Universities*, **16(2)**, 307-311(1995)
- 15 Q. R. Zhu, **K. L. Hong**, F. Lu, R. R. Qi, W. M. Pang, G. E. Zhou, M. S. Song “Studies of the Phase Structures in Ultra-high Drawn UHMWPE Gel-films by High Resolution Solid State <sup>13</sup>C-NMR Spectroscopy” in *Science in China B, Chinese Edition* **25(4)** , 350 (1995); *English Edition*, **38(11)**, 1288-1297(1995)
- 16 Q. J. Zhang, X. S. Hu, D. Z. Ma, **K. L. Hong**, Q. R. Zhu “Structures and Properties of High-impact Polypropylenes” in *Polymeric Material Science and Engineering*, **11(4)**, 77-81(1994)
- 17 S. Y. Shen, S. Z. Zhang, J. H. Lou, **K. L. Hong**, Q. R. Zhu, X. Y. Zhou “The Relationship between Ultra-high Drawing Ability and Annealing Process In UHMWPE Gel-films as Studied by Positron Annihilation Technique (PAT)” In *Chinese Journal of Chemical Physics*, **8(3)**, 387-390(1995)
- 18 S. Y. Shen, J. H. Lou, J. X. Cheng, **K. L. Hong**, Q. R. Zhu, X. Y. Zhou “Studies on the Free-volume Change in Annealed UHMWPE by PAT” in *Phys. Status Solidi (A)*, **147**, 447(1995)
- 19 Q. R. Zhu, **K. L. Hong**, L. Ji, R. R. Qi, G. E. Zhou, M. S. Song “The Relationship between the Gauche Conformations and the Ultrahigh Draw-ability in UHMWPE Gel-films as Studied by FTIR” in *Acta Polymerica Sinica*, No. 6, 658-663(1995)
- 20 P. Wang, **K. L. Hong**, Q. R. Zhu “Surface Analyses of Polyacrylonitrile-based Activated Carbon Fibers by XPS” in *Journal of Applied Polymer Science*, **62**, 1987(1996)
- 21 F. Lu, **K. L. Hong**, Q. R. Zhu, L. Liu “Determination of Ketonization Degree of Poly(Vinyl Alcohol)” in *Chinese Journal of Analytical Chemistry*, **24(4)**, 415-418(1996)
- 22 F. Lu, Q. R. Zhu, **K. L. Hong**, J. F. Gao “Investigation of Sequence Distribution in Vinyl Alcohol-Vinyl Acetate Copolymers as studied by C-13 NMR” in *Journal China University of Science & Technology*, **26(1)**, 119-123(1996)
- 23 F. Lu, **K. L. Hong**, Q. R. Zhu, Q. J. Zhang, X. S. Hu “Investigations on the Microstructures on Impact Polypropylenes” in *Chinese Journal of Magnetic Resonance*, **13(6)**, 539-545(1996)
- 24 X. Y. Zhou, **K. L. Hong**, Q. R. Zhu, S. Y. Shen, J. X. Cheng, L. H. Zhai, L. J. Wang “Analysis of free volume in Ultrahigh-molecular-weight polyethylene-polypropylene blends” In *Chinese Journal of Chemical Physics*, **9(6)**, 537-542(1996)
- 25 P. Wang, **K. L. Hong**, Q. R. Zhu “The Reduction Properties of Thermally Treated Polyacrylonitrile Fibers” *Polymer*, **37**, 5533(1996)
- 26 Y. L. Qian, **K. L. Hong**, H. J. Zong, J. L. Huang “The Preparation of a Substituted Titanocene-Supported Polymer and Its Application in Catalytic Reactions” in *Polymers for Advanced Technologies* **7**, 619 (1996)
- 27 Q. R. Zhu, J. Su, J. L. Wang, **K. L. Hong**, Y. Chen, F. Lu, Y. H. Huang “Influence of Moisture on the Electrorheological Response of Polyelectrolyte Particles” in *Journal of Functional Polymers*, **10(1)**, 61-66(1997)

- 28 Q. R. Li, **K. L. Hong**, B. L. Li, “Complete Assignments of  $^1\text{H}$ ,  $^{13}\text{C}$ -NMR of 4'-Dimethyl-epipodophyllotoxin by 2D-NMR Techniques” in *Journal China Univ. of Science & Technology*, **27**, 113(1997)
- 29 Qian, Yanlong; Mohammed Abu Saleque; Cai, Liangzhen; **Hong, Kunlun**; Lu, Jiaqi “highly Effective and Selective Isomerization of 4-Vinyl-cyclohexene Catalyzed by Titanocene Complexes” in *Cuihua Xuebao*, **20(4)**, 389-390(1999)
- 30 J. L. David, S. P. Gido, **K. L. Hong**, J. Zhou, J. W. Mays, N. Beck Tan “Core-Shell Cylinder Morphology in Poly(styrene-b-1,3-cyclohexadiene) Diblock Copolymers” in *Macromolecules*, **32**, 3216 (1999)
- 31 Y. Huang, L. Bu, D. Z. Zhang, C. W. Su, Z. D. Xu, **K. L. Hong**, J. W. Mays “Use of Multiple Detectors GPC/SEC in Polymer Characterization: Effect of Deuterated Polymer on Its Hydrodynamics” in *Functional Polymers* **4**, 391 (1999)
- 32 **K. L. Hong**; D. Uhrig; J. W. Mays “Living Anionic Polymerization” in *Current Opinion in Solid State and Material Science* **4**, 531 (1999)
- 33 G. M. Wise, M. M. Denn, A. T. Bell, J. W. Mays, **K. L. Hong**, H. Iatrou “Surface Mobility and Slip of Polybutadiene Melts in Shear Flow” in *Journal of Rheology*, **44(3)**, 549(2000)
- 34 **K. L. Hong**, J. W. Mays “1,3-Cyclohexadiene Polymers I. Anionic Polymerizations” in *Macromolecules*, **34**, 782 (2001)
- 35 **K. L. Hong**; Y. Wan; J. W. Mays “1,3-Cyclohexadiene Polymers II. Near Mono-disperse Star and Star-Block Polymers Based on Poly(1,3-cyclohexadiene)” in *Macromolecules*, **34**, 2482 (2001)
- 36 **K. L. Hong**, J. W. Mays “1,3-Cyclohexadiene Polymers III. Synthesis and Characterization of Poly(1,3-cyclohexadiene-block-styrene) Copolymers” in *Macromolecules*, **34**, 3540 (2001)
- 37 T. Tsoukatos, A. Avgeropoulos, N. Hadjichristidis, **K. L. Hong**, J. W. Mays “Model Linear Block Co- Ter- and Quaterpolymers of 1,3-Cyclohexadiene with Styrene, Isoprene and Butadiene” *Macromolecules*, **35**, 7928 (2002)
- 38 **K. L. Hong**, H. W. Zhang, Jimmy W. Mays, A. E. Visser, C. Brazel, J. Holbrey, W. M. Reichert, R. D. Rogers “Conventional Free Radical Polymerization in Room Temperature Ionic Liquids: A Green Approach to Commodity Polymers” *Chem. Commun.* 1368 (2002).
- 39 H. W. Zhang, **K. L. Hong**, J. W. Mays “Synthesis of Block Copolymers of Styrene and Methyl Methacrylate by Conventional Free Radical Polymerization in Room Temperature Ionic Liquid” *Macromolecules*, **35**, 5738 (2002).
- 40 C. D. Liang, , **K. L. Hong**, G. A. Guiochon, J. W. Mays; S. Dai “Synthesis of a large-scale highly ordered porous carbon film by self-assembly of block copolymers” *Angew. Chem. International Edition*, **43(43)**, 5785-5789 (2004)
- 41 H. W. Zhang, **K. L. Hong**, J. W. Mays “First report of nitroxide mediated polymerization in an ionic liquid” *Polymer Bulletin*, **52(1)**, 9-16(2004)

- 42 K. Terao; B. S. Farmer; Y. Nakamura; H. Iatrou; **K. Hong**; J. W. Mays “Radius of Gyration of Polystyrene Combs and Centipedes in a theta Solvent” *Macromolecules* **38(4)**, 1447-1450 (2005)
- 43 B. Kesanli; **K. Hong**; K. Meyer; H.-J. Im; S. Dai “Highly efficient solid-state neutron scintillators based on hybrid sol-gel nanocomposite materials” *Applied Physics Letters* **89(21)**, 214104(2006)
- 44 J.-F. Huang; G. A. Baker; H. Luo; **K. Hong**; Q.-F. Li; N. Bjerrum; S. Dai “Bronsted acidic room temperature ionic liquids derived from N,N-dimethylformamide and similar protophilic amides” *Green Chemistry* **8(7)**, 599-602(2006)
- 45 S. I. Yun; K. Terao; **K. Hong**; Y. B. Melnichenko; G. D. Wignall; P. F. Britt; J. W. Mays, “Solution Properties of 1,3-Cyclohexadiene Polymers by Laser Light Scattering and Small-Angle Neutron Scattering” *Macromolecules* **39(2)**, 897-899(2006)
- 46 G. Cheng; Y. B. Melnichenko; G. D. Wignall; F. Hua; K. Hong; J. W. Mays “Conformation of oligo(ethylene glycol) grafted polystyrene in dilute aqueous solutions” *Polymer* **48(14)**, 4108-4113(2007)
- 47 T. Huang; H. Zhou; K. Hong; J. M. Simonson; J. W. Mays “Architecturally and chemically modified poly(1,3-cyclohexadiene)” *Macromolecular Chemistry and Physics* **209(3)**, 308-314(2008)
- 48 G. Cheng; Y. B. Melnichenko; G. D. Wignall; F. Hua; **K. Hong**; J. W. Mays “Small Angle Neutron Scattering Study of Conformation of Oligo(ethylene glycol)-Grafted Polystyrene in Dilute Solutions: Effect of the Backbone Length” *Macromolecules*, **41**, 9831-9836(2008)
- 49 T.-F. Li; **K. Hong**; L. Porcar; R. Verduzco, P. D. Butler; G. S. Smith, Y. Liu; W-R Chen “Assess the Intramolecular Cavity of a PAMAM Dendrimer in Aqueous Solution by Small-Angle Neutron Scattering” *Macromolecules*, **41**, 8916–8920 (2008)
- 50 D. Uhrig, **K. Hong**, J. W. Mays, S. M. Kilbey, II; P. F. Britt “Synthesis and characterization of an ABC miktoarm star terpolymer of cyclohexadiene, styrene, and 2-vinylpyridine” *Macromolecules*, **41(23)**, 9480-9482(2008)
- 51 L. Porcar; Y. Liu; R. Verduzco; **K. Hong**; P. D. Butler; L. J. Magid; G. S. Smith; W.-R. Chen “Structural Investigation of PAMAM Dendrimers in Aqueous Solutions Using Small-Angle Neutron Scattering: Effect of Generation” *Journal of Physical Chemistry B* **112(47)**, 14772-14778 (2008)
- 52 G. Cheng; F. Hua; Y. B. Melnichenko; **K. Hong**; J. W. Mays; B. Hammouda; G. D. Wignall “Conformation of oligo(ethylene glycol) grafted poly(norbornene) in solutions: A small angle neutron scattering study” *European Polymer Journal* **44(9)**, 2859-2864(2008).
- 53 J. Lin; W. W. Ding; **K. Hong**; J. W. Mays; Z. Xu; Y. Yuan “Micellization coupled with facilitation of J-aggregation for poly(1,3-cyclohexadiene)-based amphiphilic block copolymers” *Soft Matter* **4(8)**, 1605-1608(2008)
- 54 G. Cheng, Y. B. Melnichenko, G. D. Wignall, F. Hua, **K. Hong**, J. W. Mays “Association and structure of thermosensitive comblike block copolymers in aqueous solutions” *Macromolecules*, **41(13)**, 4824-4827(2008)
- 55 P. X. Ye; L. Liu; D. Hayes; A. Womac; K. Hong; S. Sokhansanj “Fast classification and compositional analysis of cornstover fractions using Fourier transform near-infrared techniques” *Bioresource Technology* **99(15)**, 7323-7332 (2008).

- 56 B. Chen; X. Zhao; A. Putkham; **K. Hong**; E. B. Lobkovsky; E. J. Hurtado; A. J. Fletcher; K. M. Thomas “Surface Interactions and Quantum Kinetic Molecular Sieving for H<sub>2</sub> and D<sub>2</sub> Adsorption on a Mixed Metal-Organic Framework Material” *Journal of the American Chemical Society* **130(20)**, 6411-6423(2008)
- 57 W. Winoto; Y. Shen; M. Radosz; **K. Hong**; J. W. Mays “Deuteration Impact on Micellization Pressure and Cloud Pressure of Polystyrene-block-polybutadiene and Polystyrene-block-polyisoprene in Compressible Propane” *Journal of Physical Chemistry B* **113(46)**, 15156-15161(2009)
- 58 W. Winoto; S. P. Tan; Y. Shen; M. Radosz; **K. Hong**; J. W. Mays “High-Pressure Micellar Solutions of Symmetric and Asymmetric Styrene-Diene Diblocks in Compressible Near-Critical Solvents: Micellization Pressures and Cloud Pressures Respond but Micellar Cloud Pressures Insensitive to Copolymer Molecular Weight, Concentration, and Block Ratio Changes” *Macromolecules*, **42**, 7155-7163 (2009)
- 59 W. Winoto, S. P. Tan, Y. Shen; M. Radosz, **K. Hong**, J. W. Mays “High-Pressure Micellar Solutions of Polystyrene-*block*-polybutadiene and Polystyrene-*block*-polyisoprene in Propane Exhibit Cloud-Pressure Reduction and Distinct Micellization End Points” *Macromolecules*, **42**, 3823–3826 (2009)
- 60 W. Winoto, M. Radosz, **K. Hong**, J. W. Mays “Amorphous polystyrene-block-polybutadiene and crystallizable polystyrene-block-(hydrogenated polybutadiene) solutions in compressible near critical propane and propylene – Hydrogenation effects” *Journal of Non-Crystalline Solids* **355**, 1393–1399 (2009)
- 61 X. Li; **K. Hong**; Y. Liu; C.-Y. Shew; E. Liu; K. W. Herwig; G. S. Smith; J. Zhao; G. Zhang; S. Pispas, W.-R. Chen “Water distributions in polystyrene-block-poly[styrene-g-poly(ethylene oxide)] block grafted copolymer system in aqueous solutions revealed by contrast variation small angle neutron scattering study” *Journal of Chemical Physics* **133(14)**, 144912/1-144912/8(2010)
- 62 S. de Castro; H. Maruoka; **K. Hong**; S. M. Kilbey, II; S. Costanzi; B. Hechler; G. G. Brown, Jr.; C. Gachet; T. K. Harden; K. A. Jacobson “Functionalized Congeners of P2Y<sub>1</sub> Receptor Antagonists: 2-Alkynyl (N)-Methanocarpa 2'-Deoxyadenosine 3',5'-Bisphosphate Analogues and Conjugation to a Polyamidoamine (PAMAM) Dendrimer Carrier” *Bioconjugate Chemistry* **21(2)**, 1190-1205 (2010)
- 63 Y. Liu; C.-Y. Chen; H.-L. Chen; **K. Hong**; C.-Y. Shew; X. Li; L. Liu; Y. B. Melnichenko; G. S. Smith; K. W. Herwig; L. Porcar; W.-R. Chen “Electrostatic Swelling and Conformational Variation Observed in High-Generation Polyelectrolyte Dendrimers” *Journal of Physical Chemistry Letters* **1(13)**, 2020-2024(2010)
- 64 Y. Liu; L. Porcar; **K. Hong**; C.-Y. Shew; X. Li; L. Liu; P. D. Butler; K. W. Herwig; G. S. Smith.; W.-R. Chen “Effect of counterion valence on the pH responsiveness of polyamidoamine dendrimer structure” *Journal of Chemical Physics* **132(12)**, 124901/1-124901/6 (2010)
- 65 D. K. Tosh; L. S. Yoo; M. Chinn; **K. Hong**; S. M. Kilbey, II; M. O. Barrett; I. P. Fricks; T. D. Harden; Z.-G. Gao; K. A. Jacobson “Polyamidoamine (PAMAM) Dendrimer Conjugates of “Clickable” Agonists of the A<sub>3</sub> Adenosine Receptor and Coactivation of the P2Y<sub>14</sub> Receptor by a Tethered Nucleotide” *Bioconjugate Chemistry* **21(2)**, 372-384(2010)

- 66 L. Porcar; **K. Hong**; P. D. Butler; K. W. Herwig; G. S. Smith; Y. Liu; W.-R. Chen  
“Intramolecular Structural Change of PAMAM Dendrimers in Aqueous Solutions Revealed by Small-Angle Neutron Scattering” *Journal of Physical Chemistry B* **114(5)**, 1751-1756(2010)
- 67 L. Porcar; P. Falus; W.-R. Chen; A. Faraone; E. Fratini; **K. Hong**; P. Baglioni; Y. Liu “Formation of the Dynamic Clusters in Concentrated Lysozyme Protein Solutions” *Journal of Physical Chemistry Letters* **1(1)**, 126-129(2010)
- 68 R. N. Dansby-Sparks; J. Jin; S. J. Mechery; U. Sampathkumaran; T. W. Owen; B. D. Yu; K. Goswami; **K. Hong**; J. Grant; Z.-L. Xue “Fluorescent-dye-doped sol-gel sensor for highly sensitive carbon dioxide gas detection below atmospheric concentrations” *Analytical chemistry* **82(2)**, 593-600(2010)
- 69 B. Wu; X. Li; C. Do; T.-H. Kim; C.-Y. Shew; Y. Liu; J. Yang; **K. Hong**; L. Porcar; C.-Y. Chen; W.-R. Chen “Spatial distribution of intra-molecular water and polymeric components in polyelectrolyte dendrimers revealed by small angle scattering investigations” *Journal of Chemical Physics* **135(14)**, 144903/1-144903/9(2011)
- 70 W. Wu; J. Shen; Z. Gai; **K. Hong**; P. Banerjee; S. Zhou “Multi-functional core-shell hybrid nanogels for pH-dependent magnetic manipulation, fluorescent pH-sensing, and drug delivery” *Biomaterials* **32(36)**, 9876-9887(2011)
- 71 Pai, Sheetal S.; Hammouda, Boualem; Hong, Kunlun; Pozzo, Danilo C.; Przybycien, Todd M.; Tilton, Robert D. “The Conformation of the Poly(ethylene glycol) Chain in Mono-PEGylated Lysozyme and Mono-PEGylated Human Growth Hormone” *Bioconjugate Chemistry* (2011), 22(11), 2317-2323
- 72 Alonzo, Jose; Chen, Jihua; Messman, Jamie; Yu, Xiang; **Hong, Kunlun**; Deng, Suxiang; Swader, Onome; Dadmun, Mark; Ankner, John F.; Britt, Phillip; “Assembly and characterization of well-defined high-molecular-weight poly(p-phenylene) polymer brushes” *Chemistry of Materials* (2011), **23(19)**, 4367-4374
- 73 Wang, Xiaojun; **Hong, Kunlun**; Baskaran, Durairaj; Goswami, Monojoy; Sumpter, Bobby; Mays, Jimmy “Asymmetrical self-assembly from fluorinated and sulfonated block copolymers in aqueous media” *Soft Matter* (2011), 7(18), 7960-7964
- 74 Yang, Jun; **Hong, Kunlun**; Bonnesen, Peter V. “A method for preparing sodium acrylate-d3, a useful and stable precursor for deuterated acrylic monomers” *Journal of Labelled Compounds and Radiopharmaceuticals* (2011), **54(12)**, 743-748
- 75 Chen, Wei; Xu, Tao; He, Feng; Wang, Wei; Wang, Cheng; Strzalka, Joseph; Liu, Yun; Wen, Jianguo; Miller, Dean J.; Chen, Jihua; **Hong, Kunlun**; Yu, Luping; Darling, Seth B “Hierarchical Nanomorphologies Promote Exciton Dissociation in Polymer/Fullerene Bulk Heterojunction Solar Cells” *Nano Letters* (2011), **11(9)**, 3707-3713
- 76 Zhang, Shanju; Liu, Zhan; Bucknall, David G.; He, Lihong; **Hong, Kunlun**; Mays, Jimmy W.; Allen, Mark G. “Thermally switchable thin films of an ABC triblock copolymer of poly(n-butyl methacrylate)-poly(methyl methacrylate)-poly(2-fluoroethyl methacrylate)” *Applied Surface Science* (2011), **257(22)**, 9673-9677
- 77 He, Zhengran; Xiao, Kai; Durant, William; Hensley, Dale K.; Anthony, John E.; **Hong, Kunlun**; Kilbey, S. Michael; Chen, Jihua; Li, Dawen “Enhanced Performance Consistency in Nanoparticle/TIPS Pentacene-Based Organic Thin Film Transistors” *Advanced Functional Materials* (2011), **21(19)**, 3617-3623



- 78 Xiang, Sheng-Chang; Zhang, Zhangjing; Zhao, Cong-Gui; **Hong, Kunlun**; Zhao, Xuebo; Ding, De-Rong; Xie, Ming-Hua; Wu, Chuan-De; Das, Madhab C.; Gill, Rachel; Thomas, K. Mark; Chen, Banglin "Rationally tuned micropores within enantiopure metal-organic frameworks for highly selective separation of acetylene and ethylene" *Nature Communications* (2011), 2(Feb.), 1206/1-1206/7
- 79 Green, Jade; Tyrrell, Zachary; Radosz, Maciej; **Hong, Kunlun**; Mays, Jimmy W. "Nanostructure of Solid Precipitates Obtained by Expansion of Polystyrene-block-Polybutadiene Solutions in Near Critical Propane: Block Ratio and Micellar Solution Effects" *Journal of Physical Chemistry C*, **115(19)**, 9465-9470(2011)
- 80 Curry, Michael L.; Crews, Kristy; Warke, Vishal; Bakker, Martin Gerard; **Hong, Kunlun**; Mays, Jimmy; Britt, Phillip; Li, Xuefa; Wang, Jin "Electrodeposition of cobalt nanowires on H-terminated conductive Si(111) surfaces using coblock polymer templating" *Journal of Vacuum Science & Technology, A: Vacuum, Surfaces, and Films* **29(3)**, 031401/1-031401/5(2011)
- 81 Yu, Xiang; Xiao, Kai; Chen, Jihua; Lavrik, Nickolay V.; **Hong, Kunlun**; Sumpter, Bobby G.; Geohegan, David B. "High-Performance Field-Effect Transistors Based on Polystyrene-b-Poly(3-hexylthiophene) Diblock Copolymers" *ACS Nano* (2011), **5(5)**, 3559-3567
- 82 Cardoso, Mateus B.; Smolensky, Dmitriy; Heller, William T.; **Hong, Kunlun**; O'Neill, Hugh "Supramolecular assembly of biohybrid photoconversion systems" *Energy & Environmental Science* (2011), **4(1)**, 181-188
- 83 Li, Xin; Zamponi, Michaela; **Hong, Kunlun**; Porcar, Lionel; Shew, Chwen-Yang; Jenkins, Timothy; Liu, Emily; Smith, Gregory S.; Herwig, Kenneth W.; Liu, Yun; Chen, Wei-Ren "pH Responsiveness of polyelectrolyte dendrimers: a dynamical perspective" *Soft Matter*, **7(2)**, 618-622 (2011)
- 84 Verduzco, Rafael; Botiz, Ioan; Pickel, Deanna L.; Kilbey, S. Michael; Hong, Kunlun; Dimasi, Elaine; Darling, Seth B. "Polythiophene-block-polyfluorene and Polythiophene-block-poly(fluorene-co-benzothiadiazole): Insights into the Self-Assembly of All-Conjugated Block Copolymers" *Macromolecules*, **44(3)**, 530-539(2011)
- 85 L. He; J. P. Hinestrosa; J. M. Pickel; S. Zhang; D. G. Bucknall; S. M. Kilbey, II; J. W. Mays; K. Hong "Fluorine-containing linear block terpolymers: Synthesis and self-assembly in solution" *Journal of Polymer Science, Part A: Polymer Chemistry* **49(2)**, 414-422(2011)
- 86 Liu, Yun; Porcar, Lionel; Chen, Jinhong; Chen, Wei-Ren; Falus, Peter; Faraone, Antonio; Fratini, Emiliano; **Hong, Kunlun**; Baglioni, Piero "Lysozyme Protein Solution with an Intermediate Range Order Structure" *Journal of Physical Chemistry B* (2011), **115(22)**, 7238-7247
- 87 Sun, Zhenzhong; Xiao, Kai; Keum, Jong Kahk; Yu, Xiang; **Hong, Kunlun**; Browning, Jim; Ivanov, Ilia N.; Chen, Jihua; Alonzo, Jose; Li, Dawen; "PS-b-P3HT Copolymers as P3HT/PCBM Interfacial Compatibilizers for High Efficiency Photovoltaics" *Advanced Materials* (2011), **23(46)**, 5529-5535
- 88 Shew, Chwen-Yang; Do, Changwoo; **Hong, Kunlun**; Liu, Yun; Porcar, Lionel; Smith, Gregory S.; Chen, Wei-Ren "Conformational effect on small angle neutron scattering behavior of interacting polyelectrolyte solutions: A perspective of integral equation theory" *J. Chem. Phys.* **137(2)**, 024907(2012)

- 89 Chen, Jihua; Yu, Xiang; **Hong, Kunlun**; Messman, Jamie M.; Pickel, Deanna L.; Xiao, Kai; Dadmun, Mark D.; Mays, Jimmy W.; Rondinone, Adam J.; Sumpter, Bobby G, S. M. Kilbey “Ternary behavior and systematic nanoscale manipulation of domain structures in P3HT/PCBM/P3HT-b-PEO films” *J. Mater. Chem.* **22(26)**, 13013-13022 (2012)
- 90 Wang, Xiaojun; Chen, Jihua; **Hong, Kunlun**; Mays, Jimmy W. “Well-Defined Polyisoprene-b-Poly(acrylic acid)/Polystyrene-b-Polyisoprene-b-Poly(acrylic acid) Block Copolymers: Synthesis and Their Self-Assembled Hierarchical Structures in Aqueous Media” *ACS Macro Letters*, **1(6)**, 743-747 (2012)
- 91 Das, Madhab C.; Guo, Qunsheng; He, Yabing; Kim, Jaheon; Zhao, Cong-Gui; **Hong, Kunlun**; Xiang, Shengchang; Zhang, Zhangjing; Thomas, K. Mark; Krishna, Rajamani; Banglin Chen “Interplay of Metalloligand and Organic Ligand to Tune Micropores within Isostructural Mixed-Metal Organic Frameworks (M<sup>2</sup>MOFs) for Their Highly Selective Separation of Chiral and Achiral Small Molecules” *J. Am. Chem. Soc.* **134(20)**, 8703-8710 (2012)
- 92 Zhang, Zhangjing; Xiang, Shengchang; **Hong, Kunlun**; Das, Madhab, C.; Arman, Hadi D.; Garcia, Maya; Mondal, Jalal U.; Thomas, K. Mark; Chen, Banglin “Triple Framework Interpenetration and Immobilization of Open Metal Sites within a Microporous Mixed Metal-Organic Framework for Highly Selective Gas Adsorption” *Inorg. Chem.*, **51(9)**, 4947-4953(2012)
- 93 Wang, Yangyang; Agapov, Alexander L.; Fan, Fei; **Hong, Kunlun**; Yu, Xiang; Mays, Jimmy; Sokolov, Alexei P. “Decoupling of ionic transport from segmental relaxation in polymer electrolytes” *Physical Review Letters* (2012), **108(8)**, 088303/1-088303/5
- 94 Wu, Bin; Kerkeni, Boutheina; Egami, Takeshi; Do, Changwoo; Liu, Yun; Wang, Yongmei; Porcar, Lionel; **Hong, Kunlun**; Smith, Sean C.; Liu, Emily L. “Structured water in polyelectrolyte dendrimers: Understanding small angle neutron scattering results through atomistic simulation” *Journal of Chemical Physics* (2012), **136(14)**, 144901/1-144901/9
- 95 Faraone, Antonio; **Hong, Kunlun**; Kneller, Larry R.; Ohl, Michael; Copley, John R. D. “Coherent dynamics of meta-toluidine investigated by quasielastic neutron scattering” *Journal of Chemical Physics* (2012), **136(10)**, 104502/1-104502/12
- 96 **Hong, Kunlun**; Liu, Yun; Porcar, Lionel; Liu, Dazhi; Gao, Carrie Y.; Smith, Gregory S.; Herwig, Kenneth W.; Cai, Sheng; Li, Xin; Wu, Bin; et al “Structural response of polyelectrolyte dendrimer towards molecular protonation: the inconsistency revealed by SANS and NMR” *Journal of Physics: Condensed Matter* (2012), **24(6)**, 064116/1
- 97 Falus, Peter; Porcar, Lionel; Fratini, Emiliano; Chen, Wei-Ren; Faraone, Antonio; Hong, Kunlun; Baglioni, Piero; Liu, Yun “Distinguishing the monomer to cluster phase transition in concentrated lysozyme solutions by studying the temperature dependence of the short-time dynamics” *Journal of Physics: Condensed Matter* (2012), **24(6)**, 064114/1-064114/8
- 98 Huang, Tianzi; Wang, Xiaojun; Malmgren, Thomas; **Hong, Kunlun**; Mays, Jimmy W “Thermal stability of fluorinated polydienes synthesized by addition of difluorocarbene” *Macromolecular Chemistry and Physics* (2012), **213(1)**, 49-56
- 99 Huang, Tianzi; Messman, Jamie M.; **Hong, Kunlun**; Mays, Jimmy W. “Novel amphiphilic block copolymers derived from the selective fluorination and sulfonation of poly(styrene-block-1,3-cyclohexadiene)” *Journal of Polymer Science, Part A: Polymer Chemistry* (2012), **50(2)**, 338-345

- 100 G. Cheng; M. S. Kent; L. L. He; P. Varanasi; D. Dibble; R. Arora; K. Deng; **K. Hong**; Y. B. Melnichenko; B. A. Simmons; S. Singh “Effect of Ionic Liquid Treatment on the Structures of Lignins in Solutions: Molecular Subunits Released from Lignin” *Langmuir*, **28(32)**, 11859-11866 (2012)
- 101 B. Wu; W.-R. Chen; T. Egami; X. Li; Y. Liu; Y.-M. Wang; C. Do; L. Porcar; **K. Hong**; L. Liu; G. S. Smith; S. C. Smith “Molecular dynamics and neutron scattering study of the dependence of polyelectrolyte dendrimer conformation on counterion behavior” *J. Chem. Phys.* **137(6)**, 064902 (2012)
- 102 J. M. Mays; R. Kumar; S. W. Sides; M. Goswami; B. S. Sumpter; **K. L. Hong**; X. D. Wu; T. P. Russell; S. P. Gido; A. Avgeropoulos; T. Tsoukatos; N. Hadjichristidis; F. L. Beyer “Morphologies of poly(cyclohexadiene) diblock copolymers: Effect of conformational asymmetry” *Polymer*, **53**, 5155-5162(2012)
- 103 J. Yang; **K. Hong**; P. V. Bonnesen “Synthesis of N1-tritylethane-1,1,2,2-d4-1,2-diamine: a novel mono-protected C-deuterated ethylenediamine synthon” *J. Labelled Compounds and Radiopharmaceuticals* **55(13)**, 463-466(2012)
- 104 Y.-Z. Ma; R. W. Shaw; X. Yu; H. M. O'Neill; **K. Hong** “Excited-State Dynamics of Water-Soluble Polythiophene Derivatives: Temperature and Side-Chain Length Effects” *J. Phys. Chem., B.*, 2012, in print