

Name: Kunlun Hong
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Oak Ridge National Laboratory
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Position Title: Senior R&D Staff
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Education:

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

Professional Experience:

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

Professional Activities, Honors, Awards:

Organizer: CNMS soft matter workshop (09/2015)
NSF proposal review panel (11/2014)
External Advisory Board member of CREST, Norfolk State University 2010-present
Reviewer, European Physical Journal E - Soft Matter, 2004–2008
Outstanding Graduate Student Award, University of Alabama-Birmingham, 2001
Outstanding Accomplishment Award, Elucidating Microstructures of Polyolefins using NMR Techniques, (award shared with Qingren Zhu), Chinese Academy of Science, 1994

Professional Memberships:

American Chemical Society; Polymer Chemistry (POLY) and Polymeric Materials Science and Engineering (PMSE) Divisions

Selected Peer-Reviewed Publications (out of ~140):

PD Godfrin, SD Hudson, **K Hong**, L Porcar, P Falus, NJ Wagner, Y Liu “Short-Time Glassy Dynamics in Viscous Protein Solutions with Competing Interactions” *Physical review letters* 115 (22), 228302 (2015)
Z Zhang, M Ohl, SO Diallo, NH Jalarvo, K Hong, Y Han, GS Smith, C Do “Dynamics of Water Associated with Lithium Ions Distributed in Polyethylene Oxide” *Physical review letters* 115 (19), 198301 (2015)
Honghai Zhang, Peter Bonnesen and **Kunlun Hong** “Palladium-catalyzed Br/D exchange of arenes: Selective deuterium incorporation with versatile functional group tolerance and high efficiency” *Organic Chemistry Frontier*, 2015, 2(9), 1071-1075
Sanjib Das, Jong Keum, Jim Browning, Gong Gu, Bin Yang, Ondrej Dyck, Changwoo Do, Wei Chen, Jihua Chen, Iliia N Ivanov, **Kunlun Hong**, Adam Rondinone, Pooran C. Joshi, David Geohegan, Gerd Duscher and Kai Xiao “Correlating High Power Conversion Efficiency of PTB7:PC71BM Inverted Organic Solar Cells to Nanoscale Structure” *Nanoscale*, 7 (38), 15576-15583 (2015)

Jiahua Zhu, Youngkyu Han, Rajeev Kumar, Youjun He, **Kunlun Hong**, Peter Bonnesen, Bobby G Sumpter, Sean C Smith, Greg Smith, Ilia N Ivanov and Changwoo Do “Controlling Molecular Ordering in Solution-State Conjugated Polymers” *Nanoscale*, 2015, Accepted Manuscript (DOI: 10.1039/C5NR02037A)

Hui Wang, Guixin Cao, Zheng Gai, **Kunlun Hong**, Probal Banerjee and Shuiqin Zhou “Magnetic/NIR-responsive drug carrier, multicolor cell imaging, and enhanced photothermal therapy of gold capped magnetite-fluorescent carbon hybrid nanoparticles” *Nanoscale*, 2015, **7**, 7885-7895

Che-Nan Sun, Thomas A. Zawodzinski, Wyatt E. Tenhaeff, Fei Ren, Jong Kahk Keum, Sheng Bi, Dawen Li, Suk-Kyun Ahn, **Kunlun Hong**, Adam J. Rondinone, Jan-Michael Y. Carrillo, Changwoo Do, Bobby G. Sumpter and Jihua Chen “Nanostructure enhanced ionic transport in fullerene reinforced solid polymer electrolytes” *Phys. Chem. Chem. Phys.*, 2015, **17**, 8266-8275

Zhang, Q Hu, **K Hong** “Accessing conjugated polymers with precisely controlled heterobisfunctional chain ends via post-polymerization modification of the OTf group and controlled Pd (0)/t-Bu₃P-catalyzed Suzuki cross-coupling polymerization” *Chemical Communications* 51 (80), 14869-14872

Andrew Goodwin, Sachin Bobade, Nam-Goo Kang, Durairaj Baskaran, **Kunlun Hong** and Jimmy Mays “Poly(styrene-graft-hyperbranched polyglycidol): synthesis and solution behavior of a hyperbranched polyelectrolyte” *RSC Adv.*, 2015, **5**, 5611-5616

Hong-Hai Zhang, Chun-Hui Xing, Qiao-Sheng Hu, and **Kunlun Hong** “Controlled Pd(0)/t-Bu₃P-Catalyzed Suzuki Cross-Coupling Polymerization of AB-Type Monomers with ArPd(t-Bu₃P)X or Pd₂(dba)₃/t-Bu₃P/ArX as the Initiator” *Macromolecules*, 2015, **48**, 967-978.

Collaborators:

Prof. Jiaping Lin (East China University of Science and Technology); Dr. Yun Liu (National Institute of Standards Technology, NIST); Prof. Jimmy Mays (University of Tennessee-Knoxville); Dr. Stergios Pispas (Physical Chemistry Institute, National Hellenic Research Foundation, Greece); Prof. Shuiqin Zhou and Prof. Qiao-Sheng Hu (City University of New York); Dr. Wei Chen (Argonne National Laboratory), Dr. Antonio Faraone (NIST); Panchao Yin (ORNL); Wei-Ren Chen (ORNL); Changwoo Do (ORNL); Dawen Li (University of Alabama); Lionel Porcar (Institut Laue-Langevin, France); Wei Chen, (Argonne National Laboratory), Banglin Chen (University of Texas-San Antonio), Prof. Dan Zhu (Nanjing Normal University)

Graduate and Postdoctoral Advisors:

Graduate Advisor: J. W. Mays, formerly University of Alabama-Birmingham, currently with University of Tennessee-Knoxville

Postdoc Advisors: D. Beach and P. Britt, Oak Ridge National Laboratory

Thesis Advisor and Postgraduate-Scholar Sponsor:

Postdocs: Fengjun Hua; Jun Yang (jointed supervised with Peter Bonnsen); Xiang Yu (jointed supervised with Hugh O’Neill); Jianguo Zhang; Youjun He, Yuwen Xu, Honghai Zhang, Weiyu Wnag

Graduate student: Justin Roop (graduate student, jointed supervised with Jimmy Mays)

Visiting scholar: Prof. Weizhong Yuan, Prof. Mi ZHou

Total Graduate Students Advised: 1

Total Postdoctoral Scholars Advised: 8