Jingsong Huang

Research and Development Staff
Nanomaterials Theory Institute
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Education

Southwest University, Chongqing, China	Chemistry	B.S., 1991
Nankai University, Tianjin, China	Physical Chemistry	M.S., 1994
Georgetown University, Washington, DC	Physical Chemistry	Ph.D., 2006

Professional Experience

2010–present	R&D Staff, Center for Nanophase Materials Sciences, ORNL
2007–2010	Postdoc, Computer Science and Mathematics Division, ORNL
2006–2007	Research Fellow, Chemistry Department, Georgetown University
1994–1999	Engineer, Southwest R&D Institute of Chemical Industry, Chengdu, China

Professional and Synergistic Activities

2011	ISRN Physical Chemistry Editor
2009	Invited speaker and panel discussion in the 2009 Advanced Automotive Battery and Capacitor Conference (AABC-09), Long Beach, CA
2008	Session chair of the International Conference on the Theory and Application of Computational Chemistry, Shanghai, China
2006–present	Reviewer for journals of American Chemical Society, American Physical Society Chinese Academy of Sciences, Elsevier, Royal Society of Chemistry, Springer, Wiley-VCH, and World Scientific
2000–present	Member of American Chemical Society

Honors and Awards

2011	Directorate's Distinguished Contributor, CCSD, ORNL
2008	IBM-Löwdin Fellowship, the 48th Sanibel Symposium
2006	Harold N. Glassman Dissertation Award in Sciences, Graduate School of Arts and Sciences, Georgetown University

Research Interests

Research interests focus on the theoretical studies of nanophase (in)organic functional materials with diverse properties. Examples are porous carbons in supercapacitors for energy storage, organic metals without metal elements, structure-property correlations in conducting molecular materials, reaction mechanism, molecular magnetism, and unusual chemical bonding. With a background of an experimental chemist and the expertise of a theoretical chemist, my primary goal in research is to establish the bridge between experimental observations and theoretical rationalizations, which will hopefully lend supports for experimental optimization of material properties. Recent projects include layered materials of TTF-TCNQ, hexagonal boron nitride, and CdS/Se/Te, spin- functionalized helicenes, and electric double layer at the interface of porous carbon and electrolyte.

Collaborators Outside ORNL: Prof. Pulickel Ajayan, Rice University; Prof. Yury Gogotsi, Drexel University; Prof. Gleb Yushin, Georgia Institute of Technology; Prof. Miklos Kertesz, Georgetown University; Prof. Vincent Meunier, Rensselaer Polytechnic Institute; Prof. Rui Qiao, Clemson University

Graduate and Postdoctoral Advisors: Prof. Miklos Kertesz (Georgetown University), Dr. Vincent Meunier, and Dr. Bobby G. Sumpter.