



中国科学院化学研究所

分子纳米结构与纳米技术国家重点实验室

学 术 报 告

报告题目: Plenty of Room at the Bottom to Target Big Problems on the Top: Chemistry to the Fore

报告人: 杨世和 教授

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时间地点: 2013年5月30日(星期四) 下午2:00
中科院化学所5号楼405会议室



研究领域: Nanomaterials; Energy generation/storage; Fullerenes and Carbon materials; Soft molecular interfaces.

Education: B.Sc., Zhongshan University, 1982; Ph.D, Rice University, 1988

Awards and Honors:

- Ministry of Education Award for Research Excellence in Natural Science, First class, 2011; NSFC Young Investigator Award, 2004-2006; Robert A. Welch predoctoral
- fellowship (1985-1988), CGP postgraduate fellowship (1983-1984), Rice University

Representative Recent Publications:

- 1 "Significantly Enhanced Performance of Quantum Dot Sensitized Solar Cells by Linker Seeding Chemical Bath Deposition", *J. Phys. Chem. C* **2013**, *117*(1), 92-99.
- 2 "Dithiafulvenyl Unit as a New Donor for High-Efficiency Dye-Sensitized Solar Cells: Synthesis and Demonstration of a Family of Metal-Free Organic Sensitizers", *Org. Lett.* **2012**, *14*, 2214-2217.
- 3 "Secondary Branching and Nitrogen Doping of ZnO Nanotetrapods: Building a Highly Active Network for Photoelectrochemical Water Splitting", *Nano Letters* **2012**, *12*(1), 407-413.
- 4 "Surfactant directed self-assembly of size-tunable mesoporous titanium dioxide microspheres and their application in quasi-solid state dye-sensitized solar cells". *J. Power Sources* **2011**, *196*(24), 10806-10816.
- 5 "A Double-layered Photoanode Made of TiO₂ Nanotetrahedra and Agglutinate Mesoporous TiO₂ Microspheres for High Efficiency Dye Sensitized Solar Cell", *Energy & Environmental Science*. **2011**, *4*(6), 2168-2176 (2011).
- 6 "Double-layered Photoanodes from Variable-Size Anatase TiO₂ Nanospindles: A Promising Candidate for High-Efficiency Dye-Sensitized Solar Cells", *Angew. Chem., Int. Ed.* **49**(21), 3675-3679 (2010).
- 7 "Synthesis of TiO₂ Nanospindles and Their Assembly into Nitride-Graphene Nanocomposites for Rechargeable Lithium Ion Batteries with High Cycling Performance", *ACS Nano*, **4**(11), 6515-6526 (2010).
- 8 "In-Situ Fabrication of Inorganic Nanowire Arrays Grown from and Aligned on Metal Substrates. *Accounts of Chem. Res.* **42**(10), 1617-1627 (2009).
- 9 "Hollow and Sn-filled Nanotubes of Single-Crystalline In(OH)₃ Grown by a Solution-Liquid-Solid-Solid Route", *Angew. Chem., Int. Ed.* **118**, 4771 (2006).