学术报告

报告题目： **Molecular-like Metal Nanoclusters Tailored by Core-ligand Interfaces**

报 告 人： Prof. Gangli Wang

报告时间： 2014年6月30日（周一）下午2：00

报告地点：固体所三号楼321会议室

报告摘要：

Metal Nanoclusers (NCs) are at the exciting transition regime between small molecules and larger nanomaterials. Metal NCs are composed of few, tens or hundreds of metal atoms in the core stabilized by a monolayer of chemically bonded organic molecules as ligands. The fundamental interest in these nanomaterials resides in the definitive chemical composition and atomic structures elucidated. Such information is foundational to establish the much needed structure-function correlations for broad applications in energy and biomedical sciences such as catalysis, sensing and bioimaging. Our group has developed a multidentate dithiolate approach to tailor the chemical bonding at the core-ligand interfaces, inspired by the RS-Au-SR ‘staple’ thiol bridging motif discovered from Au NCs passivated by monothiolate ligands. The unique interfacial design opens an unexplored paradigm to tune the electronic structures and energetics of the metal NCs. This talk will discuss our recent progresses in 1, 3 and 1, 4 dithiolate stabilized gold NCs. Electron transfer activities, near infrared photoluminescence, chemical reactivity and other pertinent physicochemical properties will be discussed. Further, proper interfaces enable efficient cell internalization. Imaging of cancerous and normal cells loaded with these Au NCs will also be discussed.

报告人简介:

B.S. (1996): Peking University, China
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The main research thrust in GWang’s lab is nanoelectrohemistry. We are interested in energy conversion at nanometer scale interfaces. The research in GWang’s group has been funded primarily by National Science Foundation and Department of Energy of the United State.

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