

- [20] Cheng W, Ding L, Ding S J et al. A simple electrochemical cytosensor array for dynamic analysis of carcinoma cell surface glycans. *Angew Chem Int Ed*, 2009, 48: 6465—6468.
- [21] Lu J, Ma S L, Sun J Y et al. Manganese ferrite nanoparticle micellar nanocomposites as MRI contrast agent for liver imaging. *Biomaterials*, 2009, 30: 2919—2928.
- [22] Cui R, Liu H H, Xie H Y et al. Living yeast cells as a controllable biosynthesizer for fluorescent quantum dots. *Adv Funct Mater*, 2009, 19: 2359—2364.
- [23] Xu R, Ma J, Sun X C et al. Ag nanoparticles sensitize IR-induced killing of cancer cells. *Cell Res*, 2009, 19: 1031—1034.
- [24] Zhang L S, Jiang L Y, Chen C Q et al. Programmed fabrication of metal oxides nanostructures using dual templates to spatially disperse metal oxide nanocrystals. *Chem Mater*, 2010, 22: 414—419.
- [25] Yao H B, Fang H Y, Tan Z H et al. Biologically inspired, strong, transparent, and functional layered organic-inorganic hybrid films. *Angew Chem Int Ed*, 2010, 49: 2140—2145.
- [26] Zhao Y, Cao X Y, Jiang L. Bio-mimic multichannel microtubes by a facile method. *J Am Chem Soc*, 2007, 129: 764—765.
- [27] Tang L H, Wang Y, Li Y M et al. Preparation, structure, and electrochemical properties of reduced graphene sheet films. *Adv Funct Mater*, 2009, 19: 2782—2789.
- [28] Mao Y D, Chang S, Yang S X et al. Tunable non-equilibrium gating of flexible DNA nanochannels in response to transport flux. *Nat Nanotechnol*, 2007, 2: 366—371.

REVIEW ON THE 45TH SHUANGQING FORUM ENTITLED “BIOMIMETIC MATERIALS AND DEVICES”

Jiang Lei^{1,2*} Zhang Xi^{3*} Liu Kesong¹

(1 *College of Chemistry and Environment, Beihang University, Beijing 100191;*

2 *Institute of Chemistry, The Chinese Academy of Sciences, Beijing 100190;*

3 *Department of Chemistry, Tsinghua University, Beijing 100084*)

Abstract The 45th Shuangqing Forum sponsored by National Natural Science Foundation of China entitled “Biomimetic Materials and Devices” was held in Sanya, Hainan Province during January 25—29, 2010. More than 50 experts and scholars from approximately 20 universities and research institutions in the fields of chemistry, bionics, biology, materials science, nanoscience, and life sciences attended the forum. Among the participants, there are 13 academicians of the Chinese Academy of Sciences and 10 chief scientists of National Basic Research Project. In combination with national imperatives and international research frontiers in the field of bionics, the participants further discussed the research status and development trends of biomimetic materials and devices. Some concrete suggestions for the prior research fields were also proposed in this forum.

Key words biomimetic materials, biomimetic devices, shuangqing forum

· 资料 · 信息 ·

第 48 期双清论坛“清洁能源与节能减排的科学基础”召开

国家自然科学基金委员会第 48 期双清论坛于 2010 年 3 月 10—11 日在重庆召开。本次论坛的主题为：清洁能源与节能减排的科学基础。来自国内化学、化工、工程热物理和能源利用等相关领域的 28 个大学和科研院所的 60 余名专家学者出席了会议。

与会专家围绕化石资源的高效利用、清洁能源、储能材料和技术、化工及冶金行业节能减排、CO₂ 减排及转化利用、面向清洁能源的稀土资源高效利用等热点内容进行了广泛研讨，初步凝练了 6 方面内容的

基本科学问题：(1) 清洁能源的高效转化与存储；(2) 化工过程节能减排的共性科学基础；(3) 石油资源高效清洁转化的科学与工程基础；(4) 煤炭资源洁净高效转化的催化与化学工程基础；(5) 面向清洁能源的稀土资源高效利用；(6) 面向清洁能源与节能减排的 CO₂ 活化、转化与资源化科学基础。

(化学科学部 供稿)