

Dr. Yongan YANG

Department of Chemistry
University of Florida, P. O. Box 117200
Gainesville, FL, 32611

Tel: +1 (352) 392 7261
Fax: +1 (352) 392 4651
Email: yonganyang@chem.ufl.edu

Education

Ph.D. Chemistry, Institute of Photographic Chemistry, Chinese Academy of Sciences, 1999.

Supervisor: Prof. JianNian Yao

B.S. Chemistry, NanKai University, China, 1994.

Honors

Max-Planck Research Fellowship at Max-Planck-Institute for Solid State Research (Mar. 2002~Jul. 2004).

Alexander von Humboldt Research Fellowship at Free University, Berlin (Nov. 1999 ~ Feb. 2002).

Excellent PhD thesis award (WeiHua KeJi award), Chinese Academy of Sciences (1999).

Excellent graduate student award (YiLiDa award), Chinese Academy of Sciences (1995).

Experience

Postdoctoral research with Prof. Charles Cao, University of Florida (Aug. 2004 - present).

- Developed a versatile and efficient synthesis method for making high quality II-VI group of colloidal semiconductor nanocrystals without precursor injection.
- Developed a new synthesis approach for producing Mn-doped semiconductor nanocrystals with Mn radial-position and amount well-controlled.
- Developed an organic-phase synthesis method for making monodispersed uranium-dioxide nanocrystals.

Postdoctoral research with Prof. Klaus Kern, Max-Planck-Institute for Solid State Research (Mar. 2002 - Jul.2004).

- Devised a new SERS-active sandwich structure by electroless plating and electrodeposition of silver nanopartilces with activated carbon in between.
- Co-directing an industry-joint project—investigation of the aging mechanism of electrochemical double layer supercapacitors.

Postdoctoral research with Prof. Helmut Baumgaertel, Freie University, Berlin (Mar. 2000 - Feb.2002).

- Studied the adsorption mechanism of 2,3-dimercaptopropane sulfonate on Au(111) electrode.

Graduate research with Prof. JianNian Yao, Institute of Photographic Chemistry, Chinese Academy of Sciences, China (1994-1999).

- Investigated UV-light photochromism and electrochromism of WO₃, MoO₃ and V₂O₅ thin films.
- Discovered visible-light photochromism of WO₃ thin film after electrochemical pretreatment.
- Improved photochromic and electrochromic performance of WO₃ and MoO₃ thin films by surface modification with noble metal nanoparticles.
- Synthesized and studied novel organic/WO₃ nanoparticle composite films with higher photochromic efficiency.
- Developed a method for electroless plating of copper nanoparticle films on ZnO-coated insulators by UV light induction.

Publications

1. **Yang, Yongan**; H. M. Wu, K. R. Williams and Y. C. Cao, "Synthesis of high-quality CdSe and CdTe nanocrystals without precursor injection", *Angewandte Chemie International Edition*, **2005**, *44*, 6712.
2. **Yang Yongan**; Chen, O.; Angerhofer A.; Cao, Y, C. "Radial-position-controlled doping in CdS/ZnS core/shell nanocrystals", *Journal of American Chemistry Society*, **2006**, *128*, 12428.
3. Wu, H; **Yang, Yongan**; Cao, Y. Charles, "Synthesis of colloidal uranium-dioxide nanocrystals", *Journal of American Chemistry Society*, **2006**, *128*, 16522.
4. **Yang, Yongan**; Bittner, A. M.; Kern, K. "A new SERS-active sandwich structure", *J. Solid State Electrochem.* 2007, *11*, 150.
5. Donner, C.; Valet, O.; **Yang, Yongan**; Baumgärtel, H. "The chemisorption of 2,3-dimercapto-n-propane sulfonate at the Au(111)-electrode", *Zeitschrift fuerPhysicalische Chemie*, **2003**, *217*, 1319.
6. **Yang, Yongan**; Valet, O.; Donner, C.; Baumgärtel, H "The adsorption of 2,3-dimercaptopropane sulfonate at the Au(111) electrode in alkaline solution", *Zeitschrift fuerPhysicalische Chemie*, **2003**, *217*, 493.
7. **Yang, Yongan**; Ma, Y.; Loo, B. H.; Yao, J. N. "Simulation of sublimation process in preparation of photochromic WO₃ films by laser microprobe mass spectrometry", *Journal of Non-Crystalline Solids*, **2000**, *272*, 71.
8. **Yang, Yongan**; Yao, J. N. "Microstructural study of WO₃ thin film during the electrochromic process using EXAFS", *Journal of Physics and Chemistry of Solids*, **2000**, *61*, 647.
9. **Yang, Yongan**; Cao, Y. W.; Loo, B. H.; Yao, J. N. "Microstructures of electrochromic MoO₃ thin films colored by injection of different cations", *Journal of Physical Chemistry B*, **1998**, *102*, 9392.
10. Guan, Z. S.; Yao, J. N.; **Yang, Yongan**; Loo, B. H. "Electrochromism of annealed vacuum-evaporated V₂O₅ films", *Journal of Electroanalytical Chemistry*, **1998**, *443*, 175.
11. **Yang, Yongan**; Cao, Y. W.; Chen, P.; Loo, B. H.; Yao, J. N. "Visible-light photochromism in the electrolytically pretreated WO₃ thin films", *Journal of Physics and Chemistry of Solids*, **1998**, *59*, 1667.
12. Yao, J. N.; **Yang, Yongan**; Loo, B. H. "Enhancement of photochromism and electrochromism in MoO₃/Au and MoO₃/Pt thin films", *Journal of Physical Chemistry B*, **1998**, *102*, 1856.
13. Yao, J. N.; **Yang, Yongan** "Photochromic enhancements of Au/MoO₃ and Pt/MoO₃ thin films", *Progress in Natural Science*, **1999**, *10*, 153.
14. Chen, Z. H.; **Yang, Yongnan**; Qiu, J. B.; Yao, J. N. "Fabrication of photochromic WO₃/4,4'-BAMBP superlattice films", *Langmuir*, **2000**, *16*, 722.
15. **Yang, Yongan**; Wei, Y. B.; Loo, B. H.; Yao, J. N. "UV-light-induced electroless copper plating by means of ZnO film", *Journal of Electroanalytical Chemistry*, **1999**, *462*, 259.
16. Wang, J. T.; Yuan, Y. F.; Xu, Y. M.; **Yang, Yongan**; Wang, Ye, S. M. "The relationship between the intramolecular hydrogen bond of acylthiourea and its N-aromatic substituents", *Chemical Journal of Chinese University*, **1995**, *16*, 1233.
17. Wang, J. T.; Xu, Y. M.; Yuan, Y. F.; Wang, B.; **Yang, Yongan**; Ye, S. M. "Multicomponent redox systems consisting of N-ferrocenyl-N'-ferrocenyl(ethylferrocene) thiourea and its copper (II) complexes", *Chemical Journal of Chinese University*, **1995**, *16*, 1415.

Patent & Book Chapter

1. “Light-induced metallization of insulators via ZnO thin film”, Yao, J. N.; **Yang, Yongan**. *Patent CN1192485A, 1999*.
2. “Introduction of photonic- and electronic-functional materials of transitional metal oxide semiconductors”, Yao, J. N.; **Yang, Yongan** in “Mechanism of photo-induced reactions and photonic-material science” (Chinese), Ed. M. G. Fan, *et al.*, Chinese Scientific Publisher, **2001**, Ch. 17.