

## SHANLIN PAN

Assistant Professor of Chemistry, University of Alabama

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### Education and Professional Training

Oct. 2006-Aug. 2008 *Irving S. Sigal Postdoctoral fellow* Center for Electrochemistry, Chemistry and Biochemistry, University of Texas at Austin, Advisor: Professor Allen J. Bard;

2001-2006 *Ph.D. in Chemistry* University of Rochester; Advisor: Prof. Lewis J. Rothberg; Thesis title: "Photoluminescence enhanced by surface plasmon resonance of metallic nanostructures and applications in organic electronics"

1994-2001 *B.S. and M.S. in Chemistry* Lanzhou University, China. Advisor: Prof. Hulin Li

### Position Held

08/2008-present Assistant Professor, Department of Chemistry, The University of Alabama, Tuscaloosa, Alabama

### Professional Societies

American Chemical Society (ACS); Electrochemical society (ECS); American Physical Society (APS)

### Selected Awards

Irving S. Sigal Postdoctoral fellowship 2006-2008 (*Chemical & Engineering news*, September 25, 2006)

Messersmith Fellowship (*one of two, university-wide*) University of Rochester 2005-2006

Elon Huntington Hooker Graduate Fellowship, University of Rochester 2004-2005

Sherman-Clarke Fellowship, University of Rochester 2002-2006

Stipend from Chinese Academy of Science for excellence in a graduate student, 2000

Outstanding member of student association Fellowship, Lanzhou University, 2000

Excellent undergraduate student awards, Lanzhou University 1995-1997

First level undergraduate Fellowship, Lanzhou University 1995-1997

### Research interests

Electrogenerated chemiluminescence (ECL) of nonmaterial and ECL generation at nanoelectrode; single molecule/nanoparticle ECL generation investigation using single molecule spectroscopy; photoelectrochemistry of semiconductors for directly water splitting and photovoltaics; Plasmon antenna application in photoelectrochemistry; single molecule technique application in electrochemical system; electrochemical and optical biosensors.

### Five Recent Publications (2007-2008)

- J. Lee, H. C. Ye, S. L. Pan, and A. J. Bard, "Rapid Screening of Photocatalysts by Scanning Electrochemical Microscopy", *Anal. Chem.* **2008**, July (accepted and in press).
- J. G. Yu, F. R. F. Fan, S. L. Pan, V. M. Lynch, K. M. Omer, and A. J. Bard, "Spontaneous Formation and Electrogenerated Chemiluminescence of Tris(bipyridine) Ru(II) Derivative Nanobelts", *J. Am. Chem. Soc.* **130**: 7196 (2008).
- A. B. Nepomnyashchii, M. A. Alpuche-Aviles, S. L. Pan, D. P. Zhan, F. R. F. Fan and A. J. Bard,

- "Cyclic Voltammetry Studies of Cd<sup>2+</sup> and Zn<sup>2+</sup> Complexation with Hydroxyl-Terminated Polyamidoamine Generation Dendrimer at a Mercury Microelectrode", *J. Electroanal. Chem.* **621**: 286 (2008).
- W. M. Li, S. L. Pan and L. J. Rothberg, "Emissive Efficiency Enhancement of Alq<sub>3</sub> and Prospects for Plasmon-enhanced Organic Electroluminescence", *Proc. SPIE* **2008** (*invited paper*)
- S. L. Pan and L. J. Rothberg, "Photovoltaic Efficiency Enhancement by Silver Metallic Ultrathin Film Incorporated in Pentacene/C<sub>60</sub> Tandem Cell", *Proc. SPIE* **2007**: #664109/01 (*invited paper*).
- C. C. Zhao, Y. Zhang, S. L. Pan, L. J. Rothberg, and M. K. Ng, "Synthesis, Characterization, and Properties of Homopolymers Functionalized with Oligothiophene Derivatives in the Side Chain", *Macromolecules* **40**: 1816 (2007).
- L. J. Rothberg and S. Pan, "Surface-Enhanced Photoluminescence and Applications in Organic Electronics, in *Metal-Enhanced Fluorescence*, Ed. by C. D. Geddes (The Institute of Fluorescence of Medical Biotechnology Center, University of Maryland, 2008).

**Undergraduate research students at UA (2 total, Current)**

- Jordan L. Jackson**, starting, Electrogenerated chemiluminescence (ECL) generation from photocatalytic nanoparticles under visible light irradiation
- Rachel M. Rose**, starting ECL generation from photocatalytic nanoparticles under visible light irradiation