

NONJIAN TAO

Professor of Electrical Engineering and Chemistry, Arizona State University

Professional Preparation

Anhui University	Physics	B.S., 1984
Arizona State University	Biophysics	Ph.D., 1988

Appointments

Aug. 2001 – present	Professor, Electrical Engineering & Chemistry, Arizona State Univ.
Aug. 1997- Aug. 2001	Associate Professor, Physics, Florida Int'l University. Adjunct Professor, Chemistry, University of Miami.
Aug. 1992 - Aug. 1997	Assistant Professor, Florida International University.
Sept. 1990 - Aug. 1992	Research Associate, Arizona State University.
Oct. 1988 - Sept. 1990	Postdoctoral Fellow, City College of City University of New York.

Publications

(i) Five Publications Related to the Proposal

- Z. F. Huang, F. Chen, P. A. Bennett, and N. Tao, "Single Molecule Junctions Formed via Au-Thiol Contact: Stability and Breakdown Mechanism", *J. Am. Chem. Soc.* **129**: 13225-13231 (2007).
- Z. F. Huang, F. Chen, R. D'Agosta, P. A. Bennett, M. Di Ventra, and N. J. Tao, "Local-Heating in Single Molecule Junctions: Evidence of Electron-Phonon and Electron-Electron Interactions", *Nature Nano* **2**: 698-703 (2007).
- J. Hihath, C. R. Arroyo, G. Rubio-Bollinger, N. J. Tao, and N. Agrait, "Study of Electron-Phonon Interactions in a Single Molecule Covalently Connected to Two Electrodes", *Nano Lett.* **8**: 1673-1678(2008).
- X. Li, J. Hihath, F. Chen, T. Masuda, L. Zang, and N. J. Tao, "Thermally Activated Electron Transport in Single Redox Molecules", *J. Am. Chem. Soc.* **129**: 11535-11542 (2007).
- N. J. Tao, "Electron Transport in Molecular Junctions", *Nature Nano* **1**: 173-181(2006).

Five Other Publications

- K. Foley and N. J. Tao, "A Surface Impedance Imaging Technique", *Anal. Chem.* **80**: 5146-5151 (2008).
- N. Ly, K. Foley, and N. J. Tao, "Integrated Label-free Protein Detection and Separation in Real-time using Confined SPR-Imaging", *Anal. Chem.* **79**: 2546-2551 (2007).
- E. Forzani, X. L. Li, and N. J. Tao, "Hybrid Amperometric and Conductimetric Chemical Sensor Based on Conducting Polymer Nanojunctions" *Anal. Chem.* **79**: 5217-5224 (2007).
- F. X. Shan and N. J. Tao, "A Label-Free Optical Detection Method for Biosensors and Microfluidics", *Appl. Phys. Lett.* **92**: #133901 (2008).
- F. Chen, Z. Huang, and N. J. Tao, "Forming Single Molecular Junctions between ITO Electrodes", *Appl. Phys. Lett.* **91**: #162106 (2007).

Synergistic Activities

- Co-Organizer, Symposium on Nanomaterials, Electrochemical Society Meeting, 2007.
- Co-Organizer, NanoGiga Conference, Phoenix, March 2007.
- Editorial board, Research Letters in Nanotechnology
- Co-Organizer, Symposium on Molecular-Scale Electronics, Material Research Society Meeting, 2006.
- National Science Foundation, Review Panel, 2004, 2006.

e. Collaborators and Other Affiliations

- (i) **Collaborators and Co-Editors (last 48 months).** Peter Bennett (Arizona State U.), Harsh Chopra (State University of New York at Buffalo), Justin Gooding (U. New South Wales), Pete

He (Dial), Cliff Kubiak (UC-San Diego), Jinghong Li (Tsinghua U.), Marcel Mayor (University of Basel), Larry Nagahara (Motorola Labs), Michael Paddon-Row (U. New South Wales), Zhongqun Tian (Xiamen U.), Ray Tsui (Motorola Labs), Thomas Wandlowski (Institute for Thin Films and Interfaces, Jülich, Germany).

(ii) Graduate and Postdoctoral Advisors. S. M. Lindsay (Ph.D. advisor), Arizona State University; H.Z. Cummins (Postdoctoral Advisor), City University of New York.

(iii) Thesis Advisor and Postgraduate-Scholar Sponsor in Last 5 Years. Katie He (Rutgers Univ.) Salah Boussaad (Du Pont), Xiaoyin Xiao (UT Texas), Bingqian Xu (U. Georgia), Erica Forzani (ASU). Raman Vaidyanathan (Intel), Fang Chen (ASU), Takuya Masuda (Hokkaido U.), Isma Perez (ASU), Haiqian Zhang (Nanjing U.), Xiulan Li (Pole Star), V. Vasanth (Intel), Win Ly (Biosensing Inc.), Minghan Ren (ASU), Zhifeng Huang (ASU), Josh Hihath (ASU), Al Diaz (ASU) Kyle Foley (ASU), Francis Tsow (ASU), Xiaonan Shan (ASU), Jilin Xia (ASU), Shaoyin Guo (ASU), Jianan Song (ASU), Hank Peng (ASU), Rui Wang (ASU).