

Zhaoliang Liao

University of Twente, Carre, 3215 P.O. Box 217, 7500 AE Enschede, The Netherlands

Email: z.liao@utwente.nl

■ Education

Ph.D in Physics	Louisiana State University, Baton Rouge, LA	12/2012
Ph.D in Physics	Institute of Physics, CAS, China	11/2011
B.S. in Physics	University of Science and Technology of China, China	07/2006

■ Research Experience

Postdoc Researcher, University of Twente	(08/13-present)
Research Assistant, Institute of Physics, Chinese Academy of Sciences	(09/06-12/09)
Research Assistant, Louisiana State University	(01/10-12/12)

■ Publications (15)

- Z. L. Liao** *et al.*, Tuning Properties of Columnar Nanocomposite Oxides, *Appl. Phys. Lett.* 103 (4), 043112 (2013).
- Z. L. Liao**, D. M. Chen, Metal Oxide Heterostructure for Resistive Random Access Memory Devices, *Chin. Phys. Lett.* 30, 047701 (2013).
- Z. L. Liao** *et al.*, Evidence for electric-field-driven migration and diffusion of oxygen vacancies in $\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$, *J. Appl. Phys.* 111, 114506 (2012).
- Z. L. Liao** *et al.*, Engineering of electrodes to improve resistive switching performance in single crystalline CeO_2 thin film, *Solid-State Electronics* 72, 4 (2012).
- Z. L. Liao** *et al.*, Electroforming and endurance behavior of $\text{Al}/\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{Pt}$ devices, *Appl. Phys. Lett.* 98, 203108 (2011).
- Z. L. Liao** *et al.*, Categorization of resistive switching of metal- $\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$ -metal devices, *Appl. Phys. Lett.* 94, 253503(2009).
- S. L. Li, **Z. L. Liao**, J. Li, J. L. Gang and D. N. Zheng, Resistive switching properties and low resistance state relaxation in $\text{Al}/\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{Pt}$ junctions, *J. Phys. D: Appl. Phys.* 42,045411 (2009).
- Y. Wang, **Z. L. Liao** (co-first author), G. W. She, L. X. Mu, D. M. Chen, and W. S. Shi, Optical modulation of persistent photoconductivity in ZnO nanowires, *Appl. Phys. Lett.* 98, 203108 (2011).
- P. Liu, G. W. She, **Z. L. Liao**, Y. Wang, Z. Z. Wang, W. S. Shi, X. H. Zhang, Shuit-Tong Lee, and D. M. Chen, Observation of persistent photoconductance in single ZnO nanotube. *Appl. Phys. Lett.* 94, 063120 (2009).
- J. L. Gang, S. L. Li, Y. Meng, **Z. L. Liao**, X. J. Liang, D. M. Chen, Reproducible low-current resistive switching of metal/ $\text{Pr}_{0.7}\text{Ca}_{0.3}\text{MnO}_3/\text{Pt}$ junctions with a point-contact top electrode, *Acta. Phys. Sin.* 58, 5730 (2009).
- Y. Meng, P. J. Zhang, Z.Y. Liu, **Z. L. Liao**, X. Y. Pan, X. J. Liang, H. W. Zhao, D. M. Chen, Enhanced resistance switching stability of transparent ITO/ TiO_2 /ITO sandwiches, *Chin. Phys. B* 19, 37304 (2010).
- P. Gao, Z. Z. Wang, W. Y. Fu, **Z. L. Liao**, K. H. Liu, W. L. Wang, X. D. Bai, E. G. Wang, In situ imaging of oxygen vacancy migration for electrically induced resistance change effect in cerium oxides, *Journal of Micron* 41, 301(2009).
- J. L. Gang, S. L. Li, Y. Meng, **Z. L. Liao**, X. J. Liang, and D. M. Chen, Clockwise vs.counter-clockwise I-V

hysteresis of point-contact metal-tip/Pr_{0.7}Ca_{0.3}MnO₃/Pt devices, *Chin. Phys. Lett.* 27, 027301 (2009).

14. P. Gao, K. H. Liu, L. Liu, Z. Z. Wang, **Z. L. Liao**, Z. Xu, W. L. Wang, X. D. Bai, E. G. Wang and Y. Q. Li, Higher-order harmonic resonances and mechanical properties of individual cadmium sulphide nanowires measured by in situ transmission electron microscopy, *J. Electron Microsc (Tokyo)*. 59, 285 (2010).

15. F. Pang, X. J. Liang, **Z. L. Liao**, S. L. Yin, D. M. Chen, Origin of the metallic to insulating transition of an epitaxial Bi(111) film grown on Si(111), *Chin. Phys. B* 19, 087201 (2010).

■ Patents (4)

1. **Z. L. Liao**, L. Li, D. M. Chen, Manual precise grinding polisher for preparing TEM sample, CN201537844.

2. Y. Meng, **Z. L. Liao**, *et al.*, Transparent resistance non-volatile random access memory, CN101478031.

3. P. J. Zhang, H. W. Zhao, Y. Meng, Z. Y. Liu, **Z. L. Liao**, *et al.*, Memister, CN101546811.

4. L. Li, **Z. L. Liao**, *et al.*, Process for manufacturing novel TEM sample supporting film, CN101794694.

■ Presentations (8)

Oral Presentations

- ◆ Invited talks at *International Workshop on Functionality of Complex Materials in an Environment of Reduced Dimensionality or Broken Symmetry*, Institute of Physics, CAS, 07/2013.
- ◆ Three times oral presentation on March meeting of American Physics Society (APS).
- ◆ Seminar Talks at Yale University and Argonne National Lab.
- ◆ Chinese Physics Society Annual meeting (Shandong 2008, China).

Poster Presentations: EP2DS-18, 2009, Japan.

■ Awards and Fellowships

Talented student of IOP	2009
Selected into "Top 100 Program" of CAS	2007
Five-Chess Program Champion	2007
Scholarship for Outstanding Students	2005
Scholarship for Outstanding Students	2004
Kwang-Hua Scholarship	2003

■ Membership

American Physical Society Member (01/2010-Present)