

Jianguo Fan

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EDUCATION

- Doctorate of Philosophy, Physics** **December 2007**
University of Georgia, Athens, GA
Dissertation: Static and dynamic wetting of aligned nanorod arrays
Advisor: Yiping Zhao
- Master of Science, Optics** **July 2002**
Shanghai Jiao Tong University, Shanghai, China
Thesis: Interactions of dielectric particles in an optical standing wave under vacuum
Advisor: Yuxing Xia
- Bachelor of Science, Applied Physics; minor: Applied electronic engineering** **July 1999**
Shanghai Jiao Tong University, Shanghai, China
Thesis: Ion exchange for fabricating LiNbO₃ waveguides
Advisor: Yuxing Xia

HONORS/AWARDS

- Graduate Student Excellence in Research Award, University of Georgia, Athens, GA (2008)
- Dorothy M. and Earl S. Hoffman Scholarship, American Vacuum Society (AVS) top-level student award, Seattle, WA (2007)
- 1st prize of best posters at the 2nd Annual University of Georgia Engineering Conference, University of Georgia, Athens, GA (2005)
- Anderson-Pioletti Memorial Award for “outstanding early graduate student” in the Physics and Astronomy department, University of Georgia, Athens, GA (2003)

WORK EXPERIENCE

Academic Professional Associate, Center for Advanced Ultrastructural Research, University of Georgia, Athens, GA. April 2008 – present

Temporary Postdoctoral Research Associate, Department of Physics and Astronomy, University of Georgia, Athens, GA. Supervisor: Yiping Zhao, February 2008 – April 2008

Research Assistant/Ph.D. Research, Department of Physics and Astronomy, University of Georgia, Athens, GA. Supervisor: Yiping Zhao, August 2002 – December 2007

Research Assistant, Department of Physics, Hong Kong University of Science and Technology, Kowloon, Hong Kong. Supervisor: Xudong Xiao, March 2001 – February 2002

PUBLICATIONS

16. **J.-G. Fan** and Y.-P. Zhao, *Au coated Si nanorod arrays as highly sensitive SERS substrates*, *Langmuir*, **24**, 14172 (2008)
15. Sara Orski, **J.-G. Fan**, Y.-P. Zhao, and Jason Locklin, *Autonomous motion of silicon nanorods using microgels fabricated by surface initiated polymerization*, *Polymer Preprints* (American Chemical Society, Division of Polymer Chemistry), 49(1), 996 (2008)
14. **J.-G. Fan** and Y.-P. Zhao, *Freezing a Water Droplet on an Aligned Si Nanorod Array Substrate*, *Nanotechnology*, **19**, 155707 (2008)
13. **J.-G. Fan**, J.-X. Fu, A. Collins, and Y.-P. Zhao, *The effect of the Shape of Nanorod Arrays on the Nanocarpets Effect*, *Nanotechnology* **19**, 045713, (2008)
12. S. Cheng, X. Luo, S. M. Bhandarkar, **J.-G. Fan**, and Y.-P. Zhao, *Video-based Metrology of Water Droplet Spreading on Nanostructured Surfaces*, *wacv*, p16, IEEE Workshop on Applications of Computer Vision (2007)
11. **J.-G. Fan** and Y.-P. Zhao, *Spreading of a Water Droplet on a Vertically Aligned Si Nanorod Array*, *Appl. Phys. Lett.* **90**, 013102 (2007)
10. **J.-G. Fan**, Y.-J. Liu, and Y.-P. Zhao, *Integrating Aligned Nanorod Array onto Optical Fibers for SERS Probes*, *SPIE Proceeding Vol 6327*, 63270R (2006)
9. Y. Liu, **J.-G. Fan**, S. Shanmukh, R. A. Dluhy, and Y.-P. Zhao, *Angle Dependent Surface Enhanced Raman Scattering Obtained From a Ag Nanorod Array Substrate*, *Appl. Phys. Lett.*, **89**, 173134(2006).
8. Y.-P. Zhao and **J.-G. Fan**, *Clusters of Bundled Nanorods in Nano-Carpets Effect*, *Appl. Phys. Lett.*, **88**, 103123 (2006)
7. **J.-G. Fan** and Y.-P. Zhao, *Characterization of Watermarks Formed in Nano-Carpets Effect*, *Langmuir*, **22**, 3662 (2006)
6. Y.-P. Zhao, S.-H. Li, S. B. Chaney, S. Shanmukh, **J.-G. Fan**, R. A. Dluhy, and W. Kisaalita, *Designing Nanostructures for Sensor Applications*, *J. Electron. Mater.* **35**, 846 (2006)
5. **J.-G. Fan** and Y.-P. Zhao, *Direct Deposition of Aligned Nanorod Array onto Cylindrical Objects*, *J. Vac. Sci. Technol. B.* **23**, 947 (2005).
4. G. Zhang, Y.-P. Zhao, W. Kisaalita, C. Keith, **J.-G. Fan**, F. Haq, D. Dyer, G. Sawaya, and K. Uyesugi, *Nanostructured terrain for supporting neurite growth*, *Transactions of the Society For Biomaterials*, **25**, 727 (2004)
3. **J.-G. Fan**, D. Dyer, G. Zhang, and Y.-P. Zhao, *Nano-Carpets Effect: Pattern Formation during the Wetting of Vertically Aligned Nanorod Arrays*, *Nanoletters*, **4**, 2133 (2004)
2. **J.-G. Fan**, X.-J. Tang, and Y.-P. Zhao, *Water Contact Angles of Vertically Aligned Si Nanorod Arrays*, *Nanotechnology*, **15**, 501 (2004)
1. **J.-G. Fan** and Y.-X. Xia, *An Optical Method for Determining the Adhesion of Microparticles on a Solid Surface*, *Chinese Journal of Lasers*, **30**, 1023 (2003)

PATENT

2. **J.-G. Fan** and Y.-P. Zhao, *Au coated Si nanorod arrays as highly sensitive SERS substrates*, patent filed, Sep. 2007
1. Y.-P. Zhao and **J.-G. Fan**, *Direct Deposition of Aligned Nanorod Array onto cylindrical objects and its applications*, Patent filed, Oct. 2005

PRESENTATION/POSTER

11. J.-G. Fan and Y.-P. Zhao, *Superhydrophobic nanorod arrays*, **Oral presentation** at the 54th AVS international symposium and exhibition, Seattle, WA. Oct. 2007
10. J.-G. Fan, *Wetting of aligned nanorod arrays*, **Oral presentation** for the top-level graduate student award competition at the 54th AVS international symposium and exhibition, Seattle, WA. Oct. 2007
9. J.-G. Fan and Y.-P. Zhao, *Spreading of water drops on vertically aligned Si nanorod arrays*, **poster** presented at the MRS Fall meeting, Boston, MA. Nov 2006
8. J.-G. Fan, Y.-J. Liu and Y.-P. Zhao, *Integrating aligned nanorods arrays onto optical fibers*, **poster** presented at the 53rd AVS international symposium and exhibition, San Francisco, CA. Nov. 2006
7. J.-G. Fan and Y.-P. Zhao, *Nanocarpet effect: formation and characterization of watermarks formed on aligned silicon nanorod arrays*, **Oral presentation** at the 53rd AVS international symposium and exhibition, San Francisco, CA. Nov 2006
6. J.-G. Fan and Y.-P. Zhao, *The Static and Dynamic Wetting of Si Nanorod Arrays*, **Oral presentation** at the 3rd NanoSEC annual meeting. University of Georgia, Athens, GA. May 2006
5. J.-G. Fan and Y.-P. Zhao, *The Static and Dynamic Wetting of Si Nanorod Arrays*, **oral presentation** at the APS March meeting, Baltimore, MA. Mar. 2006
4. J.-G. Fan and Y.-P. Zhao, *Integrating Aligned Nanorod Arrays onto Optical Fibers*, **poster** presented at the 2nd Annual University of Georgia Engineering Conference, University of Georgia, Athens, GA. Oct. 2005. 1st prize of best posters
3. J.-G. Fan and Y.-P. Zhao, *Integrating Aligned Nanorod Arrays onto Optical Fibers*, **oral presentation** at the SPIE Optics in the Southeast, Atlanta, GA. Oct. 2005
2. J.-G. Fan and Y.-P. Zhao, *Characterization of Watermarks Formed on Si Nanorod Arrays*, **poster** presented at the 2nd NanoSEC annual meeting, University of Georgia, Athens, GA. May 2005
1. J.-G. Fan and Y.-P. Zhao, *Nano-Carpet Effect*, **poster** presented at the 1st NanoSEC annual meeting, University of Georgia, Athens, GA. May 2004