

Chun Zhang

Contact:

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Professional Experiences

Assistant Professor, Department of Physics/Chemistry, National University of Singapore (06/2008-Present)
Postdoc fellow, School of Physics, Georgia Institute of Technology (02/2005-05/2008)

Education

University of Florida, Ph. D. at physics department, (08/2000-12/2004)
Fudan University, Shanghai, China, MS at physics department (2000)
Fudan University, Shanghai, China, BS at department of nuclear science (1996)

Research Interests

Theoretical modeling and computer simulation of physical/chemical properties of materials at nanoscale.

Awards

2. CNMS Outstanding Research Scholar Award (Oak Ridge National Lab), 2004-2005
1. Alumni Graduate Fellowship of University of Florida, 2000-2004

Selected Recent Publications (* Corresponding Author)

21. Y. Cai, A. Zhang, Y. Feng, C. Zhang, “Adsorbate and defect effects on electronic and transport properties of gold nanotubes”, *Nanotechnology* **22**, 215702 (2011).
20. M. Zhou, Y. Cai, A. Zhang, Y. Feng, C. Zhang, “Mn-doped thiolated Au₂₅ clusters: Atomic configuration, magnetic properties, and a possible high-performance spin filter”, *Appl. Phys. Lett.* **98**, 143103 (2011).
19. D. Zheng, A. Nurbawono, A. Zhang, C. Zhang, “C-doped ZnO nanowires: Electronic structures, magnetic properties, and a possible spintronic device”, *J. Chem. Phys.* **134**, 104706 (2011).
18. A. Zhang, H. Teo, Z. Dai, Y. Feng, C. Zhang, “Bandgap engineering in graphene and h-BN antidote lattices”, *Appl. Phys. Lett.* **98**, 023105 (2011).
17. E. Zhao, C. Zhang, M. Lababidi, “Mott scattering at the interface between a metal and a topological insulator”, *Phys. Rev. B.* **82**, 205331 (2010).
16. A. Zhang, Z. Dai, L. Shi, Y. Feng, C. Zhang, “Energy gap opening and quenching in graphene under periodic external potentials”, *J. Chem. Phys.* **133**, 224705 (2010).
15. A. Nurbawono, Y. Feng, C. Zhang, “The roles of potential symmetry in transport

- properties of superconducting quantum point contacts*”, J. Comp. Theo. Nano Sci. **7**, 2248 (2010).
14. L. Shen, M. Zeng, S. Yang, C. Zhang, X. Wang, Y. Feng* “*Electron transport properties of atomic carbon nanowires between graphene electrodes*”, J. Am. Chem. Soc. **132**, 11481 (2010).
 13. M. Zhou, Y. Lu, C. Zhang,* Y. Feng, “*Strain effects on hydrogen storage capability of metal-decorated graphene*”, Appl. Phys. Lett. **97**, 103109 (2010).
 12. A. Nurbawono, Y. Feng, C. Zhang, “*Electron tunneling through a hybrid superconducting-normal mesoscopic junction under microwave radiation*”, Phys. Rev. B **82**, 014535 (2010).
 11. M. Zhou, A. Zhang, Z. Dai, C. Zhang, Y. Feng, “*Greatly enhanced adsorption and catalytic activity of Au and Pt clusters on defective graphene*”, J. Chem. Phys. **132**, 194704 (2010).
 10. M. Yang, A. Nurbawono, C. Zhang, Y. Feng, Ariando, “*Two-dimensional graphene superlattice made with partial Hydrogenation*”, Appl. Phys. Lett., **96**, 193115 (2010).
 9. F. Wang, Y. Han, C. Lim, Y. Lu, J. Wang, J. Xu, H. Chen, C. Zhang, M. Hong, *X. Liu, “*Simultaneous phase and size control of upconversion nanocrystals through lanthanide doping*”, Nature, **463**, 1061 (2010).
 8. Y. Cai, A. Zhang, *Y. Feng, C. Zhang, H. Teo, G. Ho, “*Strain effects on work functions of pristine and potassium-decorated carbon nanotubes*”, J. Chem. Phys. **131**, 224701 (2009) (Cover Image)
 7. Y. Lu, L. Shi, C. Zhang, and Y. Feng, “*Electric-field control of magnetic states, charge transfer, and patterning of adatoms on graphene*”, Phys. Rev. B. **80**, 233410 (2009).
 6. C. Jiang, S. Ranjit, Z. Duan, Y. Zhong, K. Loh, C. Zhang, and X. Liu*, “*Nanocontact-induced catalytic activation in palladium nanoparticles*”, Nanoscale **1**, 391 (2009).
 6. Y. Lu, M. Zhou, C. Zhang, and *Y. Feng, “*Metal-embedded graphene: A possible catalyst with high activity*”, J. Phys. Chem. C **113**, 20156 (2009).
 5. A. Nurbawono, Y. Feng, E Zhao, and C. Zhang, “*Differential conductance anomaly in superconducting quantum point contacts*”, Phys. Rev. B. **80**, 184516 (2009).
 4. C. Zhang, R. N. Barnett, U. Landman, “*Bonding, conductance, and magnetization of oxygenated Au nanowires*”, Phys. Rev. Lett. **100**, 046801 (2008).
 3. C. Zhang, B. Yoon, *U. Landman, “*Predicted oxidation of CO catalyzed by Au nanoclusters on a thin defect-free MgO film supported on a Mo(100) surface*”, J. Am. Chem. Soc. **129**, 2228 (2007).
 2. A. Marchenkov, Z. Dai, C. Zhang, R. N. Barnett, *U. Landman, “*Atomic dimer shuttling and two-level conductance fluctuations in Nb nanowires*”, Phys. Rev. Lett. **98**, 046802 (2007).
 1. C. Zhang, Maohua Du, *Hai-Ping Cheng, X.-G. Zhang et al. “*Coherent electron transport through an azobenzene molecule: A light driven molecular switch*”, Phys. Rev. Lett. **92**: 158301 (2004).