

## Peer-Reviewed Publications

(with publication dates in 2007)

**Publications are listed alphabetically by department and by first author. Faculty are shown in bold face print**

1. Balakrishnan, K., Datar, A., Huang, J., Yang, X., Moore, J.S., **Zang, L.** (2007). Arylene ethynylene macrocycles: investigating the self-assembly and their respective binding with fullerenes - a new insight for development of opto-electronic devices. *PMSE Preprints*, 96, 938-939.
2. Basnyat, P., Luster, B., Kertzman, Z., Stadler, S., **Kohli, P.**, Aouadi, S., Xu, J., Mishra, S. R., Eryilmaz, O. L., Erdemir, A. (2007). Mechanical and tribological properties of CrAlN-Ag self-lubricating films. *Surface and Coatings Technology*, 202, 1011-1016.
3. Buyukserin, F., **Kohli, P.**, Wirtz, M. O., Martin, C. R. (2007) Electroactive nanotube membranes and redox-gating *Small*, 3, 266-270.
4. Che, Y., Datar, A., Yang, X., Naddo, T., Zhao, J., **Zang, L.** (2007). Enhancing one-dimensional charge transport through cofacial pi-electronic delocalization: Conductivity improvement for organic nanobelts. *J. Am. Chem. Soc.*, 129(20) 6354-6355.
5. Che, Y., Datar, A., Balakrishnan, K., **Zang, L.** (2007). Ultralong nanobelts self-assembled from an asymmetric perylene tetracarboxylic diimide. *J. Am. Chem. Soc.*, 129(23); 7234-7235. Highlighted in *ACS Weekly News*, June 6, 2007.
6. Cheng, L., **Ge, Q.** (2007). Effect of  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> substrate on NO<sub>2</sub> interaction with supported BaO clusters. *Surf. Sci. Lett.*, 601, L65-L68. [DOI:10.1016/j.susc.2007.04.112](https://doi.org/10.1016/j.susc.2007.04.112).
7. Chung, K.-C., Lee, J.-C., Lee, K.-C, Lee, J.-E., Lee, S.-Y, Eom, S.-Y, Park, Y.-C, **Dave, B.C.** (2007). Preparation and characterization of octyl methoxy cinnamate (OMC; 2-ethylhexyl-p-methoxy cinnamate)-trapped mesoporous silica using lecithin. *Materials Science Forum*, 539-543, 657-662.
8. Chung, K.-C, Kim, M. -A., Lee, H., Suh, Y.-J., Kil, D.-S., **Dave, B.C.**, Lee, J.-C. (2007). Preparation of ion-sieve type (H)[M<sub>0.5</sub>Mn<sub>1.5</sub>]O<sub>4</sub> (M=Mg, Zn) and their lithium adsorption properties in seawater. *Solid State Phenomena*, 124-126, 739-742.
9. Donahue, N. M., Tischuk, J. E., Marquis, B. J., **Huff Hartz, K. E.** (2007). Secondary organic aerosol from limona ketone: Insights into terpene ozonolysis via synthesis of key intermediates. *Physical Chemistry Chemical Physics*, 9, 2991-2998.
10. Han, Y., C.-J. Liu, **Ge, Q.** (2007). Effect of Surface Oxygen Vacancy on Pt Cluster Adsorption and Growth on the Defective Anatase TiO<sub>2</sub>(101) Surface. *J. Phys. Chem. C*. 111, 16397. [DOI:10.1021/jp075602k](https://doi.org/10.1021/jp075602k).

11. **Huff Hartz, K. E.**, Weitkamp, E., Sage, A. M., Donahue, N. M., Robinson, A. L. (2007). Laboratory measurements of the oxidation kinetics of organic aerosol mixtures using a relative rate constants approach. *Journal of Geophysical Research*, 112, D04204.
12. **Lee, B.M.**, Buck-Koehntop, B.A., Martinez-Yamout, M.A., Dyson, H.J., Wright, P.E. (2007). Embryonic Neural Inducing Factor Churchill Is not a DNA-binding Zinc Finger Protein: Solution Structure Reveals a Solvent-exposed beta-Sheet and Zinc Binuclear Cluster. *Journal of Molecular Biology*, 371, 1274-89.
13. Li, M., Fernando, G., van Waasbergen, L.G., Cheng, X., Ratner, B.D., **Kinsel, G.R.** (2007). Thermoresponsive MALDI probe surfaces as a tool for protein on-probe purification. *Anal. Chem.*, 79(17) 6840-6844.
14. Li, X., Hihath, J., Chen, F., Masuda, T., **Zang, L.**, Tao, T. (2007). Thermally Activated Electron Transport in Single Redox Molecules. *J. Am. Chem. Soc.*, 129(37); 11535-11542.
15. Liu, J., **Ge, Q.** (2007) A first-principles study of Sc-doped NaAlH<sub>4</sub> for reversible hydrogen storage. *J. Alloys Compd*, 446-447, 267-270. [DOI:10.1016/j.jallcom.2007.01.052](https://doi.org/10.1016/j.jallcom.2007.01.052).
16. Liu, S., **Davis, J.M.** (2007). Comparison of Micellar Isotherms of Benzene Determined by Headspace and Micellar Electrokinetic Chromatographies: Assessment on Impact of Buffer and Solubilization-Induced Conductivity Change. *J. Chromatogr. A*, 1147, 111-119.
17. Mayer, R., **Ge, Q.**, Lochmeyer, J., Yeasts, R., Lemanski, M., Reinalda, D. Neurock, M. (2007). An ab initio analysis of adsorption and diffusion of silver atoms on alumina surfaces. *Surf. Sci.* 601, 134-145. [DOI:10.1016/j.susc.2006.09.028](https://doi.org/10.1016/j.susc.2006.09.028).
18. Mei, D., Deskins, N. A., Dupuis, M., **Ge, Q.** (2007). Methanol Adsorption on the Clean CeO<sub>2</sub>(111) Surface: A Density Functional Theory Study. *J. Phys. Chem. C*. 111, 10514-10522. [DOI: 10.1021/jp072181y](https://doi.org/10.1021/jp072181y).
19. Naddo, T., Che, Y., Zhang, W., Balakrishnan, K., Yang, X., Yen, M., Zhao, J., Moore, J.S., **Zang, L.** (2007). Detection of Explosives with a Fluorescent Nanofibril Film. *J. Am. Chem. Soc.*, 129(22) 6978-6979. Highlighted in ACS Weekly News, May 30, 2007, Nature Nanotechnology, May 25, 2007, and Materials Today, issue of July, 2007.
20. Pawluk, T., Xiao, L., Yukna, J., **Wang, L.** (2007). The impact of PES on MD results of the coalescence of M<sub>2</sub> + M with M = Ir, Pt, Au, Ag. *J. Chem. Theory Comput.*, 3, 328-335.
21. Pawluk T., **Wang, L.** (2007). Molecular dynamics simulations of the coalescence of iridium clusters. *J. Phys. Chem. C*, 111, 6713-6719.
22. Stoll, R., **Lee, B.M.**, Debler, E.W., Laity, J.H., Wilson, I.A., Dyson H.J., Wright, P.E. (2007). Structure of the Wilms Tumor Suppressor Protein Zinc Finger Domain Bound to DNA. *Journal of Molecular Biology*, 372, 1227-45.

23. **Wang, L.** (2007). CO adsorbs upside-down on small Pt<sub>m</sub>Au<sub>n</sub> clusters. *Chem. Phys. Lett.*, 443, 304-308.
24. Watson, N.E., **Davis, J.M.**, Synovec, R.E. (2007). Observations on 'Orthogonality' in Comprehensive Two-Dimensional Separations. *Anal. Chem.* 79, 7924-7927.
25. Williamson, Y., **Davis, J.M.** (2007). Verification of Theory of n-Column Separations with Gas Chromatograms Predicted by Commercial Software. *J. Sep. Sci.* 30, 74-85.
26. Xiao L., **Wang, L.** (2007). Methane activation on Pt and Pt<sub>4</sub>: A density functional theory study. *J. Phys. Chem. B*, 111, 1657-1663.
27. Yukna, J., **Wang, L.** (2007). Molecular dynamics studies of the coalescence of silver clusters. *J. Phys. Chem. C*, 111, 13337-13347.
28. Zakeri, R., Clay, W., Wang, H., **Kohli, P.** (2007). Synthesis and characterization of non-linear nanopores in alumina films. *Chemistry of Materials*, 19, 1954-1963.
29. **Zang, L.**, Moore, J.S., Yen, M., Balakrishnan, K., Huang, J., Datar, A., Yang, X., Naddo, T. (2007). Uniaxial optical and electronic properties of 1D nanomaterials fabricated from rigid, planar semiconductor molecules. *PMSE Preprints*, 96, 895.
30. Zhang, Z., **Ge, Q.**, Li, S.-C., Kay, B.D., White, J.M., Dohnálek, Z. (2007). Imaging Intrinsic Diffusion of Bridge-Bonded Oxygen Vacancies on TiO<sub>2</sub>(110). *Phys. Rev. Lett.* 99, 126105. [DOI:10.1103/PhysRevLett.99.126105](https://doi.org/10.1103/PhysRevLett.99.126105).