

Curriculum Vitae

Name: Wei ZHONG (钟伟)

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Professional Appointments:

1989 – 1999 Assistant Professor, Department of Physics, Nanjing University.

1999 – 2005 Associate Professor, Department of Physics, Nanjing University.

2005 – Professor, Nanjing National Laboratory of Microstructures, Department of Physics,
Nanjing University.

1999. 1 - 1999.12 Visiting Scholar in the Department of Chemistry, Hong Kong Baptist University,
Hong Kong

2005.5 - 2005.8 Visiting Scholar in the Department of Chemistry, Hong Kong Baptist University,
Hong Kong

2008.7 - 2008.8 Visiting Scholar in the Department of Chemistry, Hong Kong Baptist University,
Hong Kong

2009.7 - 2009.9 Visiting Scholar in the Department of Chemistry, Hong Kong Baptist University,
Hong Kong

Awards:

1. The Second Award for Nature Science sponsored by the State Council of China, 2004
2. The First Award for Advanced Development of Science and Technology sponsored by Jiangsu Province, China, 2000
3. The Second Award for Advanced Development of Science and Technology sponsored by the State Education Commission of China, 1999

Research interest:

1. Perpendicular magnetic recording materials.
2. Magnetocaloric effect of perovskite oxide nanomaterials.
3. Magnetoresistance effect of perovskite oxide nanomaterials
4. Core/shell nanocomposite materials
5. Helical carbon nanotubes, nanobelts and nanocoils

Recent representative publications: (from 2004)

1. X.S. Qi, W. Zhong*, Y. Deng, C.T. Au, Y.W. Du, "Synthesis of helical carbon nanotubes, worm-like carbon nanotubes and nanocoils at 450 °C and their magnetic properties", *Carbon* 2010, **48**, 365
2. X.J. Ye, C.S. Liu, W. Zhong* , H.A. Song, C.T. Au, Y.W. Du, "Experimental and theoretical studies on the magnetic property of carbon-doped ZnO", *Phys. Lett. A*, 2010, **374**, 496–500
3. Z. X. Yang, W. Zhong* C. T. Au, X. Du, H. A. Song, X. S. Qi, X. J. Ye, M. H. Xu, and Y. W. Du, "Novel Photoluminescence Properties of Magnetic Fe/ZnO Composites: Self-Assembled ZnO Nanospikes on Fe Nanoparticles Fabricated by Hydrothermal Method", *J. Phys. Chem. C* 2009, **113**, 21269-21273
4. X.S. Qi, M.H. Xu, W. Zhong*, X.J. Ye, Y. Deng, C.T. Au, C.Q. Jin, Y.W. Du, "Magnetic properties and large-scale synthesis of novel carbon nanocomposites via benzene decomposition over Ni nanoparticles", *J. Phys. Chem. C*, 2009, **113**, 2267
5. X.S. Qi, W. Zhong* Y. Deng, C.T. Au, Y.W. Du, "Characterization and Magnetic Properties of Helical Carbon Nanotubes and Carbon Nanobelts Synthesized in Acetylene Decomposition over Fe-Cu Nanoparticles at 450 °C", *J. Phys. Chem. C* 2009, **113**, 15934
6. X.S. Qi, Y. Yang, W. Zhong*, Y. Deng, C.T. Au, Y.W. Du, "Large-scale synthesis, characterization and microwave absorption properties of carbon nanotubes of different helicities", *J. Solid State Chem.* 2009, **182**, 2691
7. X.J. Ye, W. Zhong*, M.H. Xu, X.S. Qi, C.T. Au, Y.W. Du, "The magnetic property of carbon-doped TiO₂", *Phys. Lett. A*, 2009, **373**, 3684
8. C.Q. Jin, Y.C. Cheng, X. Zhang, W. Zhong* Y. Deng, C.T. Au, X.L. Wu, Y.W. Du, "Catalytic growth of clusters of wurtzite ZnS nanorods through co-deposition of ZnS and Zn on Au film", *CrystEngComm.* 2009, **11**, 2260
9. C.Q. Jin, W. Zhong* X. Zhang, Y. Deng, C.T. Au, Y.W. Du, "Synthesis and Wavelength-Tunable Luminescence Property of Wurtzite Zn_xCd_{1-x}S Nanostructures", *Crystal Growth & Design* 2009, **9**, 4602
10. S. Wang, F. J. Yue, D. Wu, F. M. Zhang, W. Zhong, Y.W. Du, "Enhanced magnetoresistance in self-assembled monolayer of oleic acid molecules on Fe₃O₄ nanoparticles", *Appl. Phys. Lett.*, 2009, **94**, 012507
11. X.J. Ye, D.L. Hou, W. Zhong*, C.T. Au, Y.W. Du, "The magnetic mechanism of Zn_{0.93}Co_{0.07}O thin films", *Sci. in China Ser. G* 2009, **52**, 21
12. N.J. Tang, L.Y. Lu, W. Zhong, C. T. Au and Y.W. Du, "Synthesis and magnetic properties of carbon-coated Ni/SiO₂ core/shell nanocomposites", *Sci. in China Ser. G* 2009, **52**, 31
13. M.H. Xu, X.S. Qi, W. Zhong*, X.J. Ye, Y. Deng, C.T. Au, C.Q. Jin, Z.X. Yang, Y.W. Du, "Synthesis and Properties of Magnetic Composites of Carbon Nanotubes/Fe Nanoparticle", *Chin. Phys. Lett.* 2009, **26**, 116103
14. W. Zhong*, N. J. Tang, C. T. Au, Y. W. Du, "Bulrush-Like Double Perovskite: Synthesis, Tunneling Magnetoresistance, and Magnetocaloric Effects", *Journal of Nanoscience and Nanotechnology*, 2008, **8**, 2793 (review)
15. W. Liu, W. Zhong*, Y. W. Du, "Magnetic Nanoparticles with Core/Shell Structures", *Journal of*

Nanoscience and Nanotechnology, 2008, **8**, 2781 (review)

16. C. Q. Jin, W. Zhong*, X. S. Qi, H. A. Song, C. T. Au, S. L. Tang, Y. W. Du, "Synthesis and abnormal photoluminescence of core/shell structured Fe/ZnO nanoparticles" *J. Appl. Phys.* 2008, **103**, 07D520
17. X.J. Ye, H.A. Song, W. Zhong*, M.H. Xu, X.S. Qi, C.Q. Jin, C.T. Au, Y.W. Du, "The effect of nitrogen incorporation on the magnetic properties of carbon-doped ZnO", *J Phys. D*, 2008, **41**, 155005
18. N.J. Tang, Y. Yang, K.J. Lin, W. Zhong*, C.T. Au, Y.W. Du, "Synthesis of plait-like carbon nanocoils in ultrahigh yield, and their microwave absorption properties", *J. Phys. Chem. C*, 2008, **112**, 10061
19. N.J. Tang, W. Zhong, C.T. Au, Y. Yang, M.G. Han, K.J. Lin, Y.W. Du, "Synthesis, Microwave Electromagnetic, and Microwave Absorption Properties of Twin Carbon Nanocoils", *J. Phys. Chem. C*, 2008, **112**, 19316
20. T. Wei, C. Q. Jin, W. Zhong, and J.-M. Liu, "High permittivity polymer embedded with Co/ZnO core/shell nanoparticles modified by organophosphorus acid", *Appl. Phys. Lett.*, 2007, **91**, 222907
21. N. J. Tang,* W. Zhong*, Chaktong Au, Aharon Gedanken, Y. Yang, Y.W. Du, "Large-Scale Synthesis, Annealing, Purification, and Magnetic Properties of Crystalline Helical Carbon Nanotubes with Symmetrical Structures", *Adv. Funct. Mater.* 2007, **17**, 1542–1550
22. W. Zhong*, N. J. Tang, C. T. Au, Y. W. Du, "Large Room-Temperature Tunneling Magnetoresistance of "Bulrush-Like" Double Perovskite Ba_2FeMoO_6 ", *IEEE Transactions on Magnetics*, 2007, **43**, 3079-3081
23. W Zhong, W Liu , C T Au, Y W Du, "Tunnelling magnetoresistance of double perovskite Sr_2FeMoO_6 enhanced by grain boundary adjustment", *Nanotechnology*, 2006, **17**, 250
24. N.J. Tang, W. Zhong*, Aharon Gedanken, Y.W. Du, "High magnetization helical carbon nanofibers produced by nanoparticle catalysis", *J. Phys. Chem. B*, 2006, **110**, 11772
25. N.J. Tang, W. Chen, W. Zhong*, H.Y. Jiang, S.L. Huang, Y.W. Du, "Highly stable carbon-coated Fe/SiO₂ composites: synthesis, structure and magnetic properties", *Carbon*, 2006, **44**, 423
26. W. Liu, W. Zhong*, H.Y. Jiang, N.J. Tang, X.L. Wu, Y.W. Du, "Highly stable alumina-coated iron nanocomposites synthesized by wet chemistry method", *Surface and Coatings Technology*, 2006, **200**, 5170
27. W. Zhong*, W. Liu, C.T. Au, L.Y. Lü, Y. W. Du, "Large room-temperature tunneling magnetoresistance effect in $Ba_2Fe_{1.1}Mo_{0.9}O_6$ ", *J. Magn. Magn. Mater.* 2006, **303**, e212
28. W. Liu, W. Zhong*, L.J. Qiu, L.Y. Lu, Y.W. Du, "Fabrication and magnetic behaviour of 2D ordered Fe/SiO₂ nanodots array", *The European Physical Journal B*, 2006, **51**, 501
29. N.J. Tang, H.Y. Jiang, W. Zhong*, X.L. Wu, W.Q. Zou, Y.W. Du, "Synthesis and magnetic properties of Fe/SiO₂ nanocomposites prepared by a sol-gel method combined with hydrogen reduction", *J. Alloys Compounds*, 2006, **419**, 145
30. X.L. Wu, W. Zhong*, S.Y. Gao, X.H. Qi, N.J. Tang, H.Y. Jiang, Y.W. Du, "Long magnetic nanochains assembled by magnetotactic bacteria in a directional field", *Materials Science Forum*, 2005, **475-479**, 2411
31. N.J. Tang, W. Zhong*, X.L. Wu, H.Y. Jiang, W. Liu, Y.W. Du, "Synthesis and complex permeability of Co/SiO₂ nanocomposites", *Mater. Lett.* 2005, **59**, 1723
32. W. Liu, W. Zhong*, H.Y. Jiang, N.J. Tang, X.L. Wu, Y.W. Du, "Synthesis and magnetic properties of $FeNi_3/Al_2O_3$ core-shell nanocomposite", *The European Physical Journal B*, 2005, **46**, 471

33. W. Liu, W. Zhong*, X.L. Wu, N.J. Tang, Y.W. Du, "Hydrothermal microemulsion synthesis of Cobalt nanorods and self-assembly into square-shaped nanostructures", *Journal of Crystal Growth*, 2005, 284, 446
34. H.Y. Jiang, W. Zhong*, N.J. Tang, X.L. Wu, W. Liu, Y.W. Du, "Complex permeability of SiO₂-coated Fe-Ni particles reduced at different temperatures", *International Journal of Modern Physics B*, 2005, **19**, 4371
35. W. Zhong*, X.S. Liu, H.Y. Jiang, L.J. Zhao, Y. W. Du, N. Zhang, "Synthesis and magnetoresistance effect of layered-perovskite La_{2.5-x}K_{0.5+x}Mn₂O_{7+δ} (0<x<0.5) polycrystal", *Applied Physics A*, 2004, **78**, 575
36. W. Zhong*, N. J. Tang, X. L. Wu, W. Liu, W. Chen, H.Y. jiang, Y. W. Du, "Magnetocaloric effect above room temperature in the ordered double-perovskite Ba₂Fe_{1+x}Mo_{1-x}O₆", *J. Magn. Magn. Mater.* 2004, **282**, 151
37. W. Zhong*, W. Liu, X.L. Wu, N.J. Tang, W. Chen, C.T. Au, Y.W. Du, "Magnetocaloric effect in the ordered double perovskite Sr₂FeMo_{1-x}W_xO₆", *Solid State Commun.*, 2004, **132**, 157
38. W. Zhong*, X. L. Wu, N. J. Tang, W. Liu, W. Chen, C.T. Au, Y. W. Du, "Magnetocaloric effect in ordered double-perovskite Ba₂FeMoO₆ synthesized using wet chemistry", *The European Physical Journal B*, 2004, **41**, 213
39. N. J. Tang, W. Zhong*, W. Liu, H. Y. Jiang, X. L. Wu and Y. W. Du, "Synthesis and complex permeability of Ni/SiO₂ nanocomposite", *Nanotechnology*, 2004, **15**, 1756
40. X. L. Wu, W. Zhong*, H. Y. Jiang, N. J. Tang, W.Q. Zou, Y.W. Du, "Magnetic properties and thermal stability of γ'-Fe₄N nanoparticles prepared by a combined method of reduction and nitriding", *J. Magn. Magn. Mater.* 2004, **281**, 77
41. X. L. Wu, W. Zhong*, N. J. Tang, H. Y. Jiang, W. Liu, Y.W. Du, "Magnetic properties and thermal stability of nanocrystalline ε-Fe₃N prepared by gas reduction–nitriding method", *J. Alloys Compounds*, 2004, **385**, 294
42. N. J. Tang, W. Zhong*, X.L. Wu, H.Y. Jiang, W. Liu, Y.W. Du, "Nanostructured magnetite (Fe₃O₄) thin films prepared by sol-gel method", *J. Magn. Magn. Mater.* 2004, **282**, 92
43. H.Y. Jiang, W. Zhong*, X.L. Wu, N.J. Tang, W. Liu, Y.W. Du, "Direct and Alternating Current Magnetic Properties of FeNi Particles Coated with SiO₂", *J. Alloys Compounds*, 2004, **384**, 264
44. N. J. Tang, W. Zhong, H.Y. Jiang, Z.D. Han, W.Q. Zou, Y.W. Du, "Complex permeability of FeNi₃/SiO₂ core-shell nanoparticles", *Solid State Commun*, 2004, **132**, 71