

Chun-Chuen Yang

E-mail: chunchuenyang@cycu.edu.tw

Ph.D., Phys., National Central University

Assistant professor, Department of Physics

Nanomaterials, CMR, Superconductivity, Magnetism, Neutron scattering



◆ Research Interests

- ◆ Chun-Chuen Yang is an assistant professor in the experimental condensed matter physics of the Physics Department. Courses taught include Thermodynamics, General Physics. He has been working on neutron scattering experiments since 1998, focused mostly on using powder diffraction to determine the crystal and magnetic structures of various compounds, including colossal-magnetoresistance oxides, high- T_c superconductors, and lithium battery materials.
- ◆ Chun-Chuen Yang also specializes in the physical properties of ultra-small nanoparticles and related devices. In this area, his foci are on quantum-size phenomena resulting from interparticle interactions, including thermal contraction of nanoparticles, the interaction between the superconducting gap and Kubo atomic gap, and quantum confinement and small-size effects on superconducting parameters.

◆ Selected Publications

- ◆ C. C. Yang, C.-M. Wu, W.-H. Li, T. S. Chan, R. S. Liu, Y. Y. Chan, and M. Avdeev, *Effects of oxygen deficiency on the magnetic ordering of Mn in $Tb_{0.9}Na_{0.1}MnO_{2.9}$* , J. Phys.: Condens. Matter, **20** 104234 (2008).
- ◆ W.-H. Li, C.-W. Wang, C.-Y. Li, C. K. Hsu, C. C. Yang, and C.-M. Wu, *Coexistence of ferromagnetism and superconductivity in Sn nanoparticles*, Phys. Rev. B **77**, 094508 (2008)
- ◆ C. C. Hsieh, H. W. Chang, C. W. Chang, Z. H. Guo, C. C. Yang, and W. C. Chang, *Crystal structure and magnetic properties of melt spun $Sm_{1-x}(Co,V)_x$ ribbons*, J. Appl. Phys. **105**, 07A705 (2009).
- ◆ Jhong-Yi Ji, Po-Hsun Shih, Chun Chuen Yang, Ting Shan Chan, Yuan-Ron Ma and Sheng YunWu, *Spontaneous self-organization of Cu_2O/CuO core-shell nanowires from copper nanoparticles*, Nanotechnology **21** (2010) 045603.
- ◆ Chun-Chuen Yang, Wen-Hsien Li, Chun-Ming Wu, Carissa H. C. Li, Jirong Sun, and Jeffrey W. Lynn, *Interplay between the Crystalline and Magnetic Structures in Lightly Cr-Doped $Bi_{0.37}Ca_{0.63}Mn_{0.96}Cr_{0.04}O_{2.99}$* , Inorg. Chem. **49**, (2010) 3297–3304.
- ◆ Ting-Shan Chan,* Chung-Li Dong,* Yi-Hauan Chen, Ying-Rui Lu, Sheng-Yun Wu, Yuan-Ron Ma, Chun-Che Lin, Ru-Shi Liu, Jeng-Lung Chen, JingHua Guo, Jyh-Fu Lee, Hwo-Shuenn Sheu, Chun-Chuen Yang and Chi-Liang Chen, *Mechanism of light emission*

and electronic properties of a Eu³⁺-doped Bi₂SrTa₂O₉ system determined by coupled X-ray absorption and emission spectroscopy, Journal of Materials Chemistry, Issue 43, P.17119-P.17127, 2011.

- ◆ Shiow-Jing Tang, An-Tsai Wang, Su-Yin Lin, Kuan-Yeh Huang, **Chun-Chuen Yang**, Jui-Ming Yeh and Kuan-Cheng Chiu *Polymerization of aniline under various concentrations of APS and HCl* *Polymer Journal*, Vol 43, P.667-P.675, 2011.
- ◆ R. S. Liu, I. Baginskiy, H. T. Kuo, S. M. Filipek, R. Wierzbicki, R. Sato, A. V. Tsvyashchenko, L. Fomicheva, H. H. Wud, C. B. Tsai, **C. C. Yang**, Y. Y. Chen, *Calorimetric properties of C14 and C15 YMn₂ and YMn₂(H,D)₆*, international journal of hydrogen energy, vol 36, P.2285-P. 2290, 2011.
- ◆ Chi-Huang Lee, Chun-Ming Wu, Daniel Hsu, Chin-Wei Wang, Chih-Jen Wang, Wen-Hsien Li, **Chun-Chuen Yang**, Jirong Sun, Jeffrey W. Lynn, *Neutron Diffraction Study of the Mn Spin Correlation in Bi_{0.46}Ca_{0.54}Mn_{0.95}Cr_{0.05}O₃*, J. Phys. Soc. Jpn. Suppl., 80 (2011) SB013-1 - SB013-4, 2011,12.
- ◆ **Chun-Chuen Yang**, Wei-Luen Huang , Yi-Hsin Lin , Chang-Yu Weng , Zh-YuMo , and Yang-Yuan Chen, *Quantum Size Effects on Vanadium Nanoparticles*, IEEE Transactions on Magnetics, Vol. 47, P.3535-P.3537, 2011,10.

◆ **Recent Research Projects**

- ◆ Size effect and commensurate-incommensurate spin structure study in low dimensional multiferroic materials.