CURRICULUM VITAE

Name: Bin-Bin Chen
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Research Interest

1. Spin-orbital-charge correlations and related phenomena in complex oxides
2. Structure-property relationship in oxide films and heterostructures
3. Creation and manipulation of the emergent states at oxide interfaces

Education

Ph.D., Materials Physics and Chemistry, 2011
Hefei National Laboratory for Physical Sciences at Microscale, University of Science and Technology of China
Dissertation: "Interface effects in $La_{2/3}Ca_{1/3}MnO_3/CaRu_{1-x}Ti_xO_3$ multilayers and the discovery of layer-resolved antiferromagnetic interlayer coupling".
Advisor: Prof. Wenbin Wu (wuwb@ustc.edu.cn).

B.S., Materials Science and Engineering, 2007
School of Material Science and Engineering, South China University of Technology
Dissertation: "Hydrothermal synthesis of optical functional nanoparticles".
Advisor: Prof. Jianrong Qiu (qjr@scut.edu.cn).

Publications

1. **B. B. Chen**, H. R. Xu, C. Ma, *et al.*, "All-oxide-based synthetic antiferromagnets exhibiting layer-resolved magnetization reversal", Accepted by *Science*.
2. **B. B. Chen**, P. F. Chen, H. R. Xu, *et al.*, "Contrasting size-scaling behavior of ferromagnetism in $La_{0.67}Ca_{0.33}MnO_3$ films and $La_{0.67}Ca_{0.33}MnO_3/CaRuO_3$ multilayers", *Applied Physics Letters* **104**, 242416 (2014).
3. **B. B. Chen**, P. F. Chen, H. R. Xu, *et al.*, "Interfacial control of ferromagnetism in ultrathin $La_{0.67}Ca_{0.33}MnO_3$ sandwiched between $CaRu_{1-x}Ti_xO_3$ (x=0-0.8) epilayers", *ACS Applied Materials & Interfaces* **8**, 34924-34932 (2016).
4. P. F. Chen, **B. B. Chen**, X. L. Tan *et al.*, "High-T_C ferromagnetic order in $CaRuO_3/La_{2/3}Ca_{1/3}MnO_3$ superlattices", *Applied Physics Letters* **103**, 262402 (2013).
5. H. R. Xu, S. Y. Wan, **B. B. Chen** et al., "Antiferromagnetic interlayer exchange coupling in all-perovskite $La_{0.7}Sr_{0.3}MnO_3/SrRu_{1-x}Ti_xO_3$ superlattices", *Applied Physics Letters* **110**, 082402 (2017).
6. P. F. Chen, Z. Huang, X. L. Tan, **B. B. Chen** *et al.*, "Controlling the sharpness of metal-insulator transition in epitaxial $(La_{1-x}Pr_x)_{0.67}Ca_{0.33}MnO_3$ ($0 \leq x \leq 0.35$) films", *Journal of Applied Physics* **116**, 144502 (2014).
7. F. Jin, Q. Y. Feng, Z. Guo, D. Lan, **B. B. Chen** *et al*., "Multilevel control of the metastable states in a manganite film", *Journal of Applied Physics* **121**, 245304 (2017).
8. L. F. Wang, X. L. Tan, P. F. Chen, B. W. Zhi, **B. B. Chen** *et al.*, "Annealing assisted substrate coherency and high-temperature antiferromagnetic insulating transition in

epitaxial $La_{0.67}Ca_{0.33}MnO_3$/$NdGaO_3$(001) films", *AIP Advances* **3**, 052106 (2013).

9. X. L. Tan, F. Chen, P. F. Chen, H. R. Xu, **B. B. Chen** *et al.*, "Anisotropic strain relaxation induced crosshatch morphology in epitaxial $SrTiO_3$/$NdGaO_3$ thin films", *AIP Advances* **4**, 107109 (2014).
10. G. P. Dong*, **B. B. Chen**, X. D. Xiao *et al*., "Morphology and phase control of fluorides nanocrystals activated by lanthanides with two-model luminescence properties", *Nanoscale* **4**, 4658 (2012).