

Research Interest

Neutron scattering, *Using neutron scattering technique to study the physics in strongly correlated electronic systems.*

Transport measurement, *Design and carry out transport experiments to control and probe the properties of quantum materials.*

Synthesis and characterization of novel materials.

Education

09/2010–07/2016 **PhD - Institute of Physics, Chinese Academy of Science.**
Advisor: Pengcheng Dai

09/2005–07/2009 **Bachelor of Science - NanKai University.**

Research Experience

09/2016–present **Postdoctoral Scholar**, *Rice University, Houston, American.*
also supported by Beijing Normal University

09/2010–present **Regular user of neutron scattering research facilities.**

Honors

2015 **National Scholarship for Graduate Students.**

Talks

March 15, 2016 **The Magnetic Excitations in Optimal Doped $\text{BaFe}_2(\text{As}_{0.7}\text{P}_{0.3})_2$.**
2016 APS March Meeting

May 23, 2015 **Research the Phase Diagram in $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$ system.**
Forum of Reactor Application Technology, Mianyan, China

March 2, 2015 **Phase Diagram of $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$.**
2015 APS March Meeting

Publications

Structural and Magnetic Phase Transitions near Optimal Superconductivity in $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$, *Phys. Rev. Lett.* **119**, 157002 (2015).

Ding Hu, Xingye Lu, Wenliang Zhang, Huiqian Luo, Shiliang Li, Peipei Wang, Genfu Chen, Fei Han, Shree R. Banjara, A. Sapkota, A. Kreyssig, A. I. Goldman, Z. Yamani, Christof Niedermayer, Markos Skoulatos, Robert Georgii, T. Keller, Pengshuai Wang, Weiqiang Yu, and Pengcheng Dai

Spin excitation anisotropy in the optimally isovalent-doped superconductor $\text{BaFe}_2(\text{As}_{0.7}\text{P}_{0.3})_2$, *Phys. Rev. B* **96**, 180503(R) (2017).

Ding Hu, Wenliang Zhang, YuanWei, Bertrand Roessli, Markos Skoulatos, Louis Pierre Regnault, Genfu Chen, Yu Song, Huiqian Luo, Shiliang Li, and Pengcheng Dai

Spin excitations in optimally P-doped $\text{BaFe}_2(\text{As}_{0.7}\text{P}_{0.3})_2$ superconductor, *Phys. Rev. B* **94**, 094504 (2016).

Ding Hu, Zhiping Yin, Wenliang Zhang, R. A. Ewings, Kazuhiko Ikeuchi, Mitsutaka Nakamura, Bertrand Roessli, YuanWei, Lingxiao Zhao, Genfu Chen, Shiliang Li, Huiqian Luo, Kristjan Haule, Gabriel Kotliar, and Pengcheng Dai

Effect of residual stress on nematic domains in $\text{BaFe}_{2-x}\text{Ni}_x\text{As}_2$ studied by angular magnetoresistance, *Chin. Phys. B* **25**, 057402 (2016).

Ding Hu, Wenliang Zhang, YuanWei, Xiaotian Zhang, Cong Ren, Lei Shan, Yi-feng Yang, Huiqian Luo, and Shiliang Li

Unified Phase Diagram for Iron-Based Superconductors, *Phys. Rev. Lett.* **119**, 157001 (2017).

Yanhong Gu, Zhaoyu Liu, Tao Xie, Wenliang Zhang, Dongliang Gong, **Ding Hu**, Xiaoyan Ma, Chunhong Li, Lingxiao Zhao, Lifang Lin, Zhuang Xu, Guotai Tan, Genfu Chen, Zi Yang Meng, Yi-feng Yang, Huiqian Luo, and Shiliang Li

Local breaking of fourfold rotational symmetry by short-range magnetic order in heavily overdoped $\text{Ba}(\text{Fe}_{1-x}\text{Cu}_x)_2\text{As}_2$, *Phys. Rev. B* **96**, 161106(R) (2017).

WeiyiWang, Yu Song, **Ding Hu**, Yu Li, Rui Zhang, L.W. Harriger, Wei Tian, Huibo Cao, and Pengcheng Dai

Impact of uniaxial pressure on structural and magnetic phase transitions in electron-doped iron pnictides, *Phys. Rev. B* **93**, 134519 (2016).

Xingye Lu, Kuo-Feng Tseng, T. Keller, Wenliang Zhang, **Ding Hu**, Yu Song, Haoran Man, J. T. Park, Huiqian Luo, Shiliang Li, Andriy H. Nevidomskyy, and Pengcheng Dai

Observation of an anomalous peak in isofield $M(T)$ curves in $\text{BaFe}_2(\text{As}_{0.68}\text{P}_{0.32})_2$ suggesting a phase transition in the irreversible regime, *Supercond. Sci. Technol.* **28** (2015) 055017.

S Salem-Sugui Jr, J Mosqueira, A D Alvarenga, D S  nora, E P Herculano1, **Ding Hu**, Genfu Chen and Huiqian Luo

Superconducting fluctuations in isovalently substituted $\text{BaFe}_2(\text{As}_{1-x}\text{P}_x)_2$: Possible observation of multiband effects, *Phys. Rev. B* **92**, 094508 (2015).

A. Ramos-  lvarez, J. Mosqueira, F. Vidal, **Ding Hu**, Genfu Chen, Huiqian Luo, and Shiliang Li

Phase separation, competition, and volume-fraction control in $\text{NaFe}_{1-x}\text{Co}_x\text{As}$, *Phys. Rev. B* **90**, 144502 (2014).

Long Ma, J. Dai, P. S.Wang, X. R. Lu, Yu Song, Chenglin Zhang, G. T. Tan, Pengcheng Dai, **D. Hu**, S. L. Li, B. Normand, and Weiqiang Yu

Effects of Co Substitution on the Magnetic Excitation in Heavy Fermion Compound $\text{PrFe}_4\text{P}_{12}$, *JPS Conf. Proc.* **3**, 011088 (2014).

Lijie HAO, Kazuaki IWASA, Hiroki KOBAYASHI, Kenji NAKAJIMA, Seiko Ohira-KAWAMURA, Tatsuya KIKUCHI, Dongfeng CHEN, Yuntao LIU, Zhongxiao LIU, Shiliang LI, **Ding HU**

Growth of Single Crystal and Effects of Electron Doping in Filled Skutterudite Compound $\text{PrFe}_4\text{P}_{12}$, *Advanced Materials Research Vols. 807-809* (2013) pp 2793-2796.

Lijie Hao, Kazuaki Iwasa, Rongdeng Liu, Xiaobai Ma, Zhongxiao Liu, Shiliang Li, **Ding Hu**, Yuntao Liu, Dongfeng Chen