MAR14-2013-020025

Abstract for an Invited Paper for the MAR14 Meeting of the American Physical Society

Pressure tuned novel states of new quantum materials¹ CHANGQING JIN, Institute of Physics, Chinese Academy of Sciences

High Pressure plays significant role in shaping quantum materials states. Pressure can effectively modify spin, charge or orbital features that in turn change physical properties of quantum matters. We will introduce our recent works [1-8] along the direction in this presentation based on wide international collaborations. We thank our collaborators for their significant contributions.

- [1] C. Q. Jin *et al*; **Proc. Natl. Acad. Sci. USA**, **105**, 7115 (2008).
- [2] X. C. Wang et al, Solid State Communications 148, 538 (2008).
- [3] D. Haskel et al., Phys. Rev. Letts. 109, 027204 (2012).
- [4] J.G. Zhao et al, J. Am. Chem. Soc.130, 13828 (2008).
- [5] J. L. Zhang et al., Proc. Natl Acad. Sci. 108, 24 (2011).
- [6] Z. Deng et al Nature Communications 2, 422 (2011).
- [7] J. G. Cheng et al., Phys. Rev. Letts. 108, 236403 (2012).
- [8] K. Zhao et al. Nature Communications 4: 1442 (2013).

 $^1\mathrm{The}$ works presented are supported by NSF & MOST of China through research projects.