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Education:

1983-1988: B. Sc., Dept. of Chemistry & Chemical Engineering, Tsinghua University, Beijing
1988-1990: M. Sc., Dept. of Materials Science & Engineering, Tsinghua University, Beijing
1991-1994: Ph. D, Institute of Physics, Chinese Academy of Sciences, Beijing

Professional Employment:

2004 – present:	Professor, National Lab for Superconductivity, Institute of Physics, Chinese Academy of Sciences, Beijing 100190, China.
1997 – 2006:	Physicist & Beamline Scientist, Dept. of Applied Physics and Stanford Synchrotron Radiation Laboratory, Stanford University, Stanford, CA94305 & Advanced Light Source, Lawrence Berkeley National Lab, Berkeley, CA94720.
1995 – 1997:	Humboldt Research Fellow, Max-Planck-Institute for Solid State Research, Heisenbergstrasse 1, D-70569, Stuttgart, Germany

Research interests:

Electronic structure of unconventional superconductors and other quantum materials: high-temperature cuprate superconductors, iron-based superconductors, low-dimensional and nanoscale materials, topological insulators and topological superconductors.

Selected Publications:

1. *Orbital Origin of Extremely Anisotropic Superconducting Gap in Nematic Phase of FeSe Superconductor*
   Defa Liu, Cong Li, Jianwei Huang, X. J. Zhou et al.,
   Physical Review X **8**, 031033(2018).

2. *Electronic Evidence of Temperature-Induced Lifshitz Transition and Topological Nature in $ZrTe_5$*
   Yan Zhang, Chenlu Wang, Guodong Liu, X. J. Zhou et al.,
   Nature Communications **8**, 15512 (2017)

3. *Quantitative Determination of the Pairing Interactions for High Temperature Superconductivity in Cuprates*
   Jin Mo Bok, Han-Yong Choi, Chandra M. Varma, X. J. Zhou et al.,

Science Advances **2**, e1501329 (2016)

4. *Common Electronic Origin of Superconductivity in (Li,Fe)OHFeSe Bulk Superconductor and Single-Layer FeSe/$SrTiO_3$ Films*
   Lin Zhao, Aiji Liang, Dongna Yuan, X. J. Zhou et al.,
   Nature Communications **7**, 10608 (2016)

5. *Direct Evidence of Interaction-Induced Dirac Cones in Monolayer Silicene/Ag(111) System*
   Ya Feng, Defa Liu, Baojie Feng, X. J. Zhou et al.,
   PNAS **133**, 14656(2016)

Laser ARPES on High Temperature Superconductors and Topological Materials

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Abstract. We have studied electronic structure of high temperature superconductors and other quantum materials by high resolution laser-based angle-resolved photoemission spectroscopy (ARPES). In this talk, I will first introduce our latest progress in developing vacuum ultra-violet laser-based angle-resolved photoemission systems [1]. Then I will report our recent results on studying high temperature superconductors and topological materials including: (1). Distinct electronic structure and superconducting gap in single-layer FeSe/$SrTiO_3$ films [2,3], (Li,Fe)OHFeSe [4] and bulk FeSe superconductors [5]; (2). Quantitative determination of pairing interactions in high-Tc cuprate superconductors [6]; and (3). Electronic structure of topological materials including Bi_2Se_3 [7], silicence [8], WTe_2 [9] and $ZrTe_5$ [10].

1. X. J. Zhou et al., Reports on Progress in Physics 81, 062101 (2018);
2. Defa Liu et al., Nature Communications 3, 931 (2012);
3. Shaolong He et al., Nature Materials 12, 605 (2013);
4. Lin Zhao et al., Nature Communications 7, 10608 (2016);
5. Defa Liu et al., Physical Review X 8, 031033 (2018);
6. Jinmo Bok et al., Science Advances 2, e1501329 (2016);
7. Zhuojin Xie et al., Nature Communications 5, 3382 (2014);
8. Ya Feng et al., PNAS 133, 14656(2016)
9. Chenlu Wang et al., Phys. Rev. B 94, 241119(R) (2016)
10. Yan Zhang et al., Nature Communications 8, 15512 (2017).