Biography

BAO Wei obtained his B.S. in Astrophysics from Peking University in 1983, his M.S. from Institute of Theoretical Physics - Chinese Academy of Sciences in 1986, and his Ph.D. in Physics from The Johns Hopkins University in 1995. He worked as a consultant in AT&T Bell Laboratories - Murray Hill in 1994 and performed his postdoctoral research in Brookhaven National Laboratory from 1995 to 1998 before joining the Technical Staff of Los Alamos National Laboratory. He was a Distinguished University Professor at Renmin University of China in Beijing from 2009 to 2019. Prof. BAO was nominated a Fellow of American Physical Society in 2012 by Division of Condensed Matter Physics “for neutron scattering studies of the magnetic structure and spin dynamics of highly correlated electron systems”. He was nominated a Fellow of the Physical Society of Hong Kong in 2022 “for his seminal works on correlated electron systems and disordered quantum systems subjected to the extreme conditions using neutron scattering techniques”.

Research outputs

FeGe$_{1-x}$Sbx: A series of kagome metals with noncollinear antiferromagnetism

Quasi-one-dimensional Ising-like antiferromagnetism in the rare-earth perovskite oxide TbScO$_3$

Antiferromagnetic structure and magnetic properties of Dy$_2$O$_2$Te: An isostructural analog of the rare-earth superconductors R$_2$O$_2$Bi

Extreme Suppression of Antiferromagnetic Order and Critical Scaling in a Two-Dimensional Random Quantum Magnet

Evolution of superconductivity and antiferromagnetic order in Ba(Fe$_{0.92-x}$Co$_x$)$_2$As$_2$

Frustrated Magnetism in Mott Insulating (V$_{1-y}$Cr$_y$)$_2$O$_4$

A Triplet Resonance in Superconducting Fe$_{1.03}$Se$_{0.4}$Te$_{0.6}$

A single-crystal neutron diffraction study on magnetic structure of CsCo$_2$Se$_5$
Neutron diffraction study on magnetic structures and transitions in Sr$_2$Cr$_3$As$_2$O$_2$
Liu, J., Wang, J., Sheng, J., Ye, F., Taddei, K. M., Fernandez-Baca, J. A.*, Lu, W., & 5 others

Effects of vanadium doping on BaFe$_2$As$_2$
Li, X., Sheng, J., Tian, C., Wang, Y., Xia, T., Wang, L., Ye, F., & 6 others

The influence of the structural transition on magnetic fluctuations in NaFeAs

Design of the cold neutron triple-axis spectrometer at the China Advanced Research Reactor
Cheng, P., Zhang, H., Bao, W., Schneidewind, A., Link, P., Grünwald, A., Georgii, R., & 2 others

Simultaneous occurrence of multiferroism and short-range magnetic order in DyFeO$_3$
Wang, J., Liu, J., Sheng, J., Luo, W., Ye, F., Zhao, Z., Sun, X., & 3 others

A Single-Crystal Neutron Diffraction Study on Magnetic Structure of the Quasi-One-Dimensional Antiferromagnet SrCo$_2$V$_2$O$_8$

冷中子非弹性散射谱仪能量分辨率的模拟研究
程鹏, 张红霞, 鲍威, 郝丽杰, 魏国海, 刘蔷韬 & 陈东风, 20 Aug 2015, In: 原子能科学技术. 49, 8, p. 1483-1487

Coexistence of superconductivity and antiferromagnetism in (Li$_{0.8}$Fe$_{0.2}$) OHFeSe

Structure, magnetic order and excitations in the 245 family of Fe-based superconductors

Inelastic neutron scattering studies on the crystal field excitations in superconducting NdFeAsO$_{0.85}$F$_{0.15}$
Cheng, P., Bao, W., Danilkin, S., Zhao, T., Sheng, J., Liu, J., Luo, W., & 1 others

High-Pressure Single-Crystal Neutron Scattering Study of Magnetic and Fe Vacancy Orders in (Tl,Rb)$_2$Fe$_4$Se$_5$
Superconductor
YE Feng (叶峰), BAO Wei (鲍威), CHL Song-Xue (池松雪), Santos, A. M. d., Molaison, J. J., FANG Ming-Hu (方明虎), WANG Hang-Dong (王杭栋), & 4 others
MAO Qian-Hui (毛乾辉), WANG Jin-Chen (汪晋辰), LIU Juan-Juan (刘娟娟) & SHENG Jie-Ming (盛洁明), Dec 2014, In: Chinese Physics Letters. 31, 12, 127401. Scopus citations: 12

Modified magnetism within the coherence volume of superconducting Fe$_{1+\delta}$Se$_x$Te$_{1-x}$

Physics picture from neutron scattering study on Fe-based superconductors
Bao Wei (鲍威), Aug 2013, In: Chinese Physics B. 22, 8, 087405. Scopus citations: 17
Neutron scattering study of spin dynamics in superconducting (Tl,Rb)$_2$Fe$_4$Se$_5$
Chi, S., Ye, F., Bao, W., Fang, M., Wang, H. D., Dong, C. H., Savici, A. T., & 3 others

Superconductivity tuned by the iron vacancy order in K$_x$Fe$_{2-y}$Se$_2$
BAO Wei (鲍威), LI Guan-Nan (李冠男), HUANG Qing-Zhen (黄清镇), CHEN Gen-Fu (陈根富), HE Jun-Bao (何俊宝), WANG Du-Ming (王笃明), Green, M. A., & 3 others

Anisotropy of the $(\pi, \pi)$ dynamic susceptibility in magnetically ordered $(x=0.05)$ and superconducting $(x=0.40)$ Fe$_{1.02}$Te$_{1-x}$Se$_x$

Friedel-like oscillations from interstitial Iron in superconducting Fe$_{1+y}$Te$_{0.62}$Se$_{0.38}$

Common crystalline and magnetic structure of superconducting A$_2$Fe$_4$Se$_5$ $(A=K,Rb,Cs,Tl)$ single crystals measured using neutron diffraction

A novel large moment antiferromagnetic order in K$_0.8$Fe$_{1.6}$Se$_2$ superconductor
BAO Wei (鲍威), HUANG Qing-Zhen (黄清镇), CHEN Gen-Fu (陈根富), M. A. Green, WANG Du-Ming (王笃明), HE Jun-Bao (何俊宝) & QIU Yi-Ming (邱义铭), Aug 2011, In: Chinese Physics Letters. 28, 8, 086104.Scopus citations: 363

$^{77}$Se NMR study of the pairing symmetry and the spin dynamics in K$_x$Fe$_{2-y}$Se$_2$

Superconducting and normal-state properties of single-crystalline Ti$_{0.47}$Rb$_{0.34}$Fe$_{1.63}$Se$_2$ as seen via $^{77}$Se and $^{87}$Rb NMR

Study on the crystal structure of the rare earth oxyborate Yb$_{26}$B$_{12}$O$_{57}$ from powder X-ray and neutron diffraction
Yang, M., Li, K., Su, J., Huang, Q., Bao, W., You, L., Li, Z., & 4 others

Structure of vacancy-ordered single-crystalline superconducting potassium iron selenide

From $\pi$ magnetic order to superconductivity with $(\pi,\pi)$ magnetic resonance in Fe$_{1.02}$Te$_{1-x}$Se$_x$
Liu, T. J., Hu, J., Qian, B., Fobes, D., Mao, Z. Q., Bao, W., Reehuis, M., & 13 others

Incommensurate itinerant antiferromagnetic excitations and spin resonance in the Fe$_{1.02}$Se$_{0.6}$ superconductor
Spin Gap and Resonance at the Nesting Wave Vector in Superconducting FeSe$_{0.4}$Te$_{0.6}$

Tunable $(\delta \pi, \delta \pi)$-Type Antiferromagnetic Order in $\alpha$-Fe(Se,Te) superconductors

Neutron scattering investigation of the magnetic order in single crystalline BaFe$_{2}$As$_{2}$

Commensurate magnetic structure of CeRhIn$_{4.85}$Hg$_{0.15}$

Coexistence of the spin-density wave and superconductivity in Ba$_{1-x}$K$_{x}$Fe$_{2}$As$_{2}$

Crystal Structure and Antiferromagnetic Order in NdFeAsO$_{1-x}$F$_{x}$ ($x=0.0$ and 0.2) Superconducting Compounds from Neutron Diffraction Measurements

Neutron-Diffraction Measurements of Magnetic Order and a Structural Transition in the Parent BaFe$_{2}$As$_{2}$ Compound of FeAs-Based High-Temperature Superconductors

Unusual heavy-mass nearly ferromagnetic state with a surprisingly large Wilson ratio in the double layered ruthenates (Sr$_{1-x}$Ca$_{x}$)$_{3}$Ru$_{2}$O$_{7}$

Neutron-scattering study of the oxypnictide superconductor LaFeAsO$_{0.87}$F$_{0.13}$

Spin Valve Effect and Magnetoresistivity in Single Crystalline Ca$_{2}$Ru$_{2}$O$_{7}$

Phonon softening and forbidden mode in Na$_{0.5}$CoO$_{2}$ observed by Raman scattering

Fincher-Burke spin excitations and $\omega/T$ scaling in insulating La$_{1.95}$Sr$_{0.05}$CuO$_{4}$
A Novel Helical Double-Layered Cobalt(II)-Organic Framework with Tetranuclear $[\text{Co}_4(\mu_3-\text{OH})_2]_2$ Clusters Linked by an Unsymmetrical Pyridylbenzoate Ligand

Publisher's Note: Novel Coexistence of Superconductivity with Two Distinct Magnetic Orders [Phys. Rev. Lett. 95, 217002 (2005)]

Evolution of low-energy spin dynamics in the electron-doped high-transition-temperature superconductor Pr$_{0.88}$LaCe$_{0.12}$CuO$_{4-\delta}$

Novel Coexistence of Superconductivity with Two Distinct Magnetic Orders

Slow spin-glass and fast spin-liquid components in quasi-two-dimensional La$_2$(Cu,Li)O$_4$

Crystal Field Effects in CeIrIn$_5$

Crystalline electric field excitations in the heavy fermion superconductor CeCoIn$_5$

Interplay between magnetism and superconductivity in CeMn$_7$ heavy fermion

Magnetic structure of CeRhIn$_5$ as a function of pressure and temperature

Novel Dynamic Scaling Regime in Hole-Doped La$_2$CuO$_4$

Magnetism and unconventional superconductivity in CeM$_n$In$_{2n+2}$ heavy-fermion crystals

Effect of pressure on magnetic structure in heavy-fermion CeRhIn$_5$

Observation of linear spin wave dispersion in the reentrant spin glass Fe$_{0.7}$Al$_{0.3}$

Magnetic structure of antiferromagnetic NdRhIn$_5$

MAGNETIC PROPERTIES OF HEAVY FERMION SUPERCONDUCTORS CeRhIn$_5$ AND Ce$_2$RhIn$_5$

Anisotropic three-dimensional magnetic fluctuations in heavy fermion CeRhIn$_5$

Effect of La doping on magnetic structure in heavy fermion CeRhIn$_5$

Magnetic structure of heavy-fermion Ce$_2$RhIn$_8$


Phase transitions in a magnetic field in V$_2$O$_3$ ($y=0$ and 0.04)

Incommensurate magnetic structure of CeRhIn$_5$

Commensurate Dynamic Magnetic Correlations in La$_2$Cu$_{0.8}$Li$_{0.2}$O$_4$

Unconventional Ferromagnetic and Spin-Glass States of the Reentrant Spin Glass Fe$_{0.7}$Al$_{0.3}$

Magnetic correlations and quantum criticality in the insulating antiferromagnetic, insulating spin liquid, renormalized Fermi liquid, and metallic antiferromagnetic phases of the Mott system V$_2$O$_3$
Magnetic correlations in a classic Mott system  

From double exchange to superexchange in charge-ordering perovskite manganites  

Spin dynamics of the re-entrant spin glass Fe$_{0.7}$Al$_{0.3}$  
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Dramatic Switching of Magnetic Exchange in a Classic Transition Metal Oxide: Evidence for orbital ordering  

Impact of Charge Ordering on Magnetic Correlations in Perovskite (Bi, Ca)MnO$_3$  

Itinerant antiferromagnetism in the Mott compound V$_{1.973}$O$_3$  

Electronic aspects of the ferromagnetic transition in manganese perovskites  

Thermodynamic and electron diffraction signatures of charge and spin ordering in La$_{1-x}$Ca$_x$MnO$_3$  

Electron spectroscopic studies of colossal magnetoresistance material La$_{1.2}$Ca$_{0.8}$MnO$_3$  

Strong magnetic fluctuations in transition metal oxides (invited)  

Electronic phase separation and charge ordering in (Sr,La)$_2$MnO$_4$: Indication of triplet bipolarons  

Low temperature magnetoresistance and the magnetic phase diagram of La$_{1.2}$Ca$_{0.8}$MnO$_3$  

Simple high-pressure cell for neutron scattering  
Incommensurate spin density wave in metallic $V_{2-y}O_3$