

## Most significant publications (1991-2020):

### [Neutron-scattering study of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> System](#)

J. Rossat-Mignod, L.P. Regnault, C. Vettier, Ph. Bourges, P. Burlet, J. Bossy, J.Y. Henry, G. Lapertot, 185, 86 (1991).

### [Incommensurate intermodulation of an organic intergrowth compound observed by neutron scattering](#)

R. Lefort, J. Etrillard, B. Toudic, F. Guillaume, T. Brezewski, Ph. Bourges, **Phys. Rev. Lett.**, 77, 4027-4030 (1996).

### [Inelastic-neutron-scattering study of antiferromagnetic fluctuations in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6.97</sub>](#)

Ph. Bourges, L.P. Regnault, Y. Sidis and C. Vettier, **Phys. Rev. B**, 53, 876-885 (1996).

### [Superexchange coupling and spin susceptibility spectral weight in undoped monolayer cuprates](#)

Ph. Bourges, H. Casalta, A.S. Ivanov and D. Petitgrand, **Phys. Rev. Lett.**, 79, 4906-4909, (1997).

### [Linear dependence of peak width in \$\chi\(q,\omega\)\$ vs Tc for YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> superconductors](#)

A.S. Balatsky and Ph. Bourges, **Phys. Rev. Lett.**, 82, 5337-5340 (1999).

### [The spin excitation spectrum in superconducting in Bi<sub>2</sub>Sr<sub>2</sub>CaCu<sub>2</sub>O<sub>8+d</sub>](#)

H.F. Fong, Ph. Bourges, Y. Sidis, L.P. Regnault, A.S. Ivanov, G.D. Gu, N. Koshizuka, B. Keimer, **Nature**, 398, 588 (1999).

### [Evidence for incommensurate spin fluctuations in Sr<sub>2</sub>RuO<sub>4</sub>](#)

Y. Sidis, M. Braden, Ph. Bourges, B. Hennion., S. NishiZaki, Y. Maeno, Y. Mori, **Phys. Rev. Lett.**, 83, 3320 (1999).

### [The spin excitation spectrum in superconducting in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6.85</sub>](#)

Ph. Bourges, Y. Sidis, H.F. Fong, L.P. Regnault, J. Bossy, A.S. Ivanov, B. Keimer, **Science**, 288 1234 (2000).

### [Magnetic resonant mode in the single-layer high-temperature superconductor Tl<sub>2</sub>Ba<sub>2</sub>CuO<sub>6+δ</sub>](#)

H.F. He, Ph. Bourges, Y. Sidis, C. Ulrich, L.P. Regnault, S. Pailhès., N.S. Berzigiarova, N.N. Kolesnikov, B. Keimer, **Science**, 295, 1045 (2002).

### [First One-Dimensional Stress-Strain Experiments inside an Aperiodic Inclusion Compound](#)

L. Bourgeois, C. Ecolivet, B. Toudic, Ph. Bourges, T. Brezewski, **Phys. Rev. Lett.**, 91, 025504 (2003).

### [High-Energy Spin dynamics in La<sub>1.69</sub>Sr<sub>0.31</sub>NiO<sub>4</sub>](#)

Ph. Bourges, Y. Sidis, M. Braden, K. Nakajima, J.M. Tranquada, **Phys. Rev. Lett.**, 90, 147202 (2003).

[Two-Dimensional Geometry of Spin Excitations in the High Temperature Superconductor in  \$YBa\_2Cu\_3O\_{6+x}\$](#)

V. Hinkov, S. Pailhès, Ph. Bourges, Y. Sidis, A.S. Ivanov, A. Kulakov, C.T. Lin, D.P. Chen, C. Bernhard, B. Keimer, *Nature*, 430, 650 (2004).

[Magnetic Ordering and Spin Waves in  \$Na\_{0.82}CoO\_2\$](#)

S. P. Bayrakci, I. Mirebeau, Ph. Bourges, Y. Sidis, M. Enderle, J. Mesot, D.P. Chen, C.T. Lin, B. Keimer, *Phys. Rev. Lett.* 94, 157205 (2005).

[Magnetic Order in the Pseudogap Phase of High-TC Superconductors](#)

B. Fauqué, Y. Sidis, V. Hinkov, S. Pailhès, C. T. Lin, X. Chaud, Ph. Bourges, *Phys. Rev. Lett.* 96, 197001 (2006).

[Spin dynamics in the pseudogap state of a high-temperature superconductor](#)

V. Hinkov, Ph. Bourges, S. Pailhès, Y. Sidis, A.S. Ivanov, C.D. Frost, T.G. Perring, C.T. Lin, D.P. Chen, B. Keimer, *Nature Physics*, 3 780 (2007).

[Hidden degrees of freedom in aperiodic materials](#)

B. Toudic, P. Garcia, C. Odin, P. Rabiller, C. Ecolivet, E. Collet, Ph. Bourges, G.J. McIntyre, M.D. Hollingsworth, T. Breczewski, *Science*, 319, 69 (2008).

[Electronic liquid crystal state in the high-temperature superconductor  \$YBa\_2Cu\_3O\_{6.45}\$](#)

V. Hinkov, D. Haug, B. Fauqué, Ph. Bourges, Y. Sidis, A.S. Ivanov, C. Bernhard, C.T. Lin, B. Keimer, *Science*, 319, 597 (2008).

[Unusual magnetic order in the pseudogap region of the superconductor  \$HgBa\_2CuO\_{4+d}\$](#)

Y. Li, V. Balédent, N. Barisic, Y. Cho, B. Fauqué, Y. Sidis, G. Yu, X. Zhao, Ph. Bourges, M. Greven *Nature*, 455, 372 (2008).

[Normal-state spin dynamics and temperature-dependent spin-resonance energy in optimally doped  \$BaFe\_{1.85}Co\_{0.15}As\_2\$](#)

D. S. Inosov, J. T. Park, Ph. Bourges, D. L. Sun, Y. Sidis, A. Schneidewind, K. Hradil, D. Haug, C. T. Lin, B. Keimer, and V. Hinkov, *Nature Physics*, 6, 178 (2010).

[Hidden magnetic excitation in the pseudogap phase of a high-Tc superconductor](#)

Y. Li, V. Balédent, G. Yu, N. Bari i , K. Hradil, R.A. Mole, Y. Sidis, P. Steffens, X. Zhao, Ph. Bourges, M. Greven, *Nature*, 468, 283 (2010).

[Two Ising-like magnetic excitations in a single-layer cuprate superconductor](#)

Y. Li, G. Yu, M. K. Chan, V. Balédent, Yangmu Li, N. Barisic, X. Zhao, K. Hradil, R. A. Mole, Y. Sidis, P. Steffens, Ph. Bourges, and M. Greven, *Nature Physics*, 8, 404 (2012).

[Characterization of the intra-unit-cell magnetic order in  \$\text{Bi}\_2\text{Sr}\_2\text{CaCu}\_2\text{O}\_{8+d}\$](#)

L. Mangin-Thro, Y. Sidis, Ph. Bourges, S. De Almeida-Didry, F. Giovannelli, and I. Laffez-Monot,

**Phys. Rev. B**, 89 094523, (2014).

[Temperature-Dependent Interplay of Dzyaloshinskii-Moriya Interaction and Single-Ion Anisotropy in Multiferroic  \$\text{BiFeO}\_3\$](#)

Jaehong Jeong, Manh Duc Le, Ph. Bourges, S. Petit, S. Furukawa, Shin-Ae Kim, Seongu Lee, S-W. Cheong, Je-Geun Park,

**Phys. Rev. Lett.**, 113, 107202 (2014).

[Intra-unit-cell magnetic correlations near optimal in  \$\text{YBa}\_2\text{Cu}\_3\text{O}\_{6.85}\$](#)

L. Mangin-Thro, Y. Sidis, A. Wildes, and Ph. Bourges,

**Nature Communications**, 6, 7705, (2015).

[Strong interplay between stripe spin fluctuations, nematicity and superconductivity in  \$\text{FeSe}\$](#)

Qisi Wang, Yao Shen, Bingying Pan, Yiqing Hao, Mingwei Ma, Fang Zhou, P. Steffens, K. Schmalzl, T. R. Forrest, M. Abdel-Hafez, Xiaojia Chen, D. A. Chareev, A. N. Vasiliev, Ph. Bourges, Y. Sidis, Huibo Cao and Jun Zhao,

**Nature Materials** 15 159-163 4492 (2016).

[Commensurate antiferromagnetic excitations as a signature of the pseudogap in the tetragonal high- \$T\_c\$  cuprate  \$\text{HgBa}\_2\text{CuO}\_{4+d}\$](#)

M.K. Chan, C.J. Dorow, L. Mangin-Thro, Y. Tang, Y. Ge, M.J. Veit, G. Yu, X. Zhao, A.D. Christianson, J.T. Park, Y. Sidis, P. Steens, D.L. Abernathy, Ph. Bourges, and M. Greven,

**Nature Communications**, 7 10819 (2016).

[\$a\$ - \$b\$  anisotropy of the intra-unit-cell magnetic order in  \$\text{YBa}\_2\text{Cu}\_3\text{O}\_{6.6}\$](#)

L. Mangin-Thro, Y. Li, Y. Sidis and P. Bourges,

**Phys. Rev. Lett.** 118, 097003 (2017).

[Time-reversal symmetry breaking hidden order in  \$\text{Sr}\_2\(\text{Ir,Rh}\)\text{O}\_4\$](#)

J. Jeong, Y. Sidis, A. Louat, V. Brouet & Ph. Bourges,

**Nature Communications**, 8 15119 (2017).

[Prominent Role of Spin-Orbit Coupling in  \$\text{FeSe}\$  Revealed by Inelastic Neutron Scattering](#)

Mingwei Ma, Ph. Bourges, Y. Sidis, Yang Xu, Shiyang Li, Biaoyan Hu, Jiari Li, Fa Wang, and Yuan Li,

**Phys. Rev. X** 7, 021025 (2017).

[Comment on "No evidence for orbital loop currents in charge-ordered  \$\text{YBa}\_2\text{Cu}\_3\text{O}\_{6+x}\$  from polarized neutron diffraction"](#)

P. Bourges, Y. Sidis, L. Mangin-Thro,

**Phys. Rev. B** 98 016501 (2018).

[Elastic Softness of Hybrid Lead Halide Perovskites](#)

A.C. Ferreira, A. Létoublon, S. Paofai, S. Raymond, C. Ecolivet, B. Rufflé, S. Cordier, C. Katan, M.I. Saidaminov, A.A. Zhumekenov, O.M. Bakr, J. Even, and P. Bourges,

**Phys. Rev. Lett.** 121, 085502 (2018).

[Magnetization Density Distribution of Sr<sub>2</sub>IrO<sub>4</sub>: Deviation from a Local  \$j\(\text{eff}\)=1/2\$  Picture.](#)

Jaehong Jeong, Benjamin Lenz, Arsen Gukasov, Xavier Fabreges, Andrew Sazonov, Vladimir Hutanu, Alex Louat, Dalila Bounoua, Cyril Martins, Silke Biermann, Véronique Brouet, Yvan Sidis and Philippe Bourges,  
**Phys. Rev. Lett.**, 125 097202 (2020).

[Direct evidence of weakly dispersed and strongly anharmonic optical phonons in hybrid perovskites.](#)

A.C. Ferreira, S. Paofai, A. Létoublon, J. Ollivier, S. Raymond, B. Hehlen, B. Ruffé, S. Cordier, C. Katan, J. Even and P. Bourges, **Communications Physics** 3, 48 (2020).

[Loop currents in two-leg ladder cuprates.](#)

Dalila Bounoua, Lucile Mangin-Thro, Jaehong Jeong, Romuald Saint-Martin, Loreynne Pinsard-Gaudart, Yvan Sidis and Philippe Bourges,  
**Communications Physics** 3, 123 (2020).