



Post-Doctoral Position Opening (MPQ Paris and Synchrotron Soleil)

The Materials and Quantum Phenomena (MPQ) Laboratory at University Paris Diderot (France), in conjunction with the Synchrotron SOLEIL, invites applications for a Post-doctoral position in experimental Condensed Matter Physics.

The research project will be focused on the study by spectroscopic techniques of exotic electronic phases which emerge from strong spin-orbit coupling in iridate materials. The appointee will be in charge of Raman scattering (MPQ) and Resonant Inelastic X-ray Scattering (RIXS, Soleil) measurements at ambient and under hydrostatic pressure. A particular focus of the project will be on the nature of the correlated metallic phases which emerges when iridate materials are doped or upon applied pressure.

The Raman team at MPQ and the RIXS team at Soleil have a strong expertise in the study of correlated electron materials such as transition metal oxides (high $-T_c$ cuprates), iron-based superconductors and heavy-Fermion systems where they made significant contributions in the recent years [1,2]. The work will be performed under the supervision of Prof. Yann Gallais (MPQ) and Dr. Jean Pascal Rueff (GALAXIES beamline, Soleil). The appointee will be embedded in a recently funded multi-laboratory research project focused on the physics of iridate materials. He / She will benefit from the close interaction with other Paris-based groups involved in the project (CEA Saclay, LPS Orsay and Ecole Polytechnique) and where single-crystals growth, ARPES, NMR, transport measurements will be performed.

Candidates should hold a PhD in experimental Condensed Matter Physics. Past expertise in high pressure techniques will be a distinct advantage. The position will be awarded for a minimum of one year with the possibility of renewal for at least another year. The position is available as early as January 2016.

Applications should include a CV, 2 references letters and a brief description of research interests. They should be sent to :

Yann Gallais, MPQ (yann.gallais@univ-paris-diderot)

Jean-Pascal Rueff, SOLEIL (jean-pascal.rueff@synchrotron-soleil.fr)

[1] Y. Gallais et al. *Phys. Rev. Lett* 111, 267001 (2013), J. Buhot et al. *Phys. Rev. Lett.* 113, 266405 (2014), S. Benhabib et al. *Phys. Rev. Lett.* 114, 147001 (2015)

[2] V. Balédent et al. *Phys. Rev. Lett.* 114, 177001 (2015)