

IKUR HIGH PERFORMANCE COMPUTING & ARTIFICIAL INTELLIGENCE

Ref. 2023/26 – PostDoc 6. HPC&IA – Electronic properties of flat band kagome lattices studied by ARPES

We are seeking a postdoc with experience with synchrotron radiation in general, and photoemission in particular, to study electronic properties of novel correlated quantum materials and flat bands by means of Angle Resolved Photoemission Spectroscopy (ARPES). The project involves the electronic characterization of the newly discovered correlated topological materials and kagome lattices, in collaboration with the groups of Prof. Claudia Felser (MPI Dresden) and Prof. A. Bernevig (Princeton/DIPC).

Essential Responsibilities:

- The candidate will be in charge of preparation and submission of research proposals to synchrotron facilities.
- Carry out in house photoemission experiments and in large scale facilities. The position will involve travel to synchrotron facilities and collaborating institutions.

Required Knowledge, Skills and Abilities:

- PhD in experimental condensed matter physics or related field.
- Previous experience with strongly correlated or topological materials is essential.
- Experience with ARPES and/or elastic/inelastic scattering.

Preferred Knowledge, Skills, and Abilities:

- Data analysis: Igor Pro, Matlab, Origin and/or Python.
- Good communication skills and leadership.
- Experience with vacuum systems and beamline operation.
- Enjoys teamwork and an interdisciplinary environment.

Interested candidates should submit an updated CV and a brief statement of interest to the application email listed above. At least 2 reference letters are welcome. The reference of the specific opening to which the candidate is applying should also be stated

in the subject line.

Contact:

- Santiago Blanco (sblanco@dipc.org)

Ref. 2023/27 – PostDoc 7. HPC&IA – Magnetic properties of flat band kagome lattices studied by Inelastic Neutron Scattering

We are seeking a postdoc with experience in elastic/inelastic neutron scattering to study magnetic properties and the low energy magnetic/lattice excitations of novel correlated quantum materials and flat bands. The project involves the structural and magnetic characterization of the newly discovered correlated topological materials and kagome lattices, in collaboration with the groups of Prof. Claudia Felser (MPI Dresden) and Prof. A. Bernevig (Princeton/DIPC).

Essential Responsibilities:

- The candidate will be in charge of preparation and submission of research proposals to neutron facilities.
- Carry out neutron scattering experiments, travel to neutron reactors and collaborating institutions. Required Knowledge, Skills and Abilities:
- PhD in experimental condensed matter physics or related field.
- Previous experience with strongly correlated or topological materials is essential.
- Experience with elastic/inelastic neutron scattering.

Preferred Knowledge, Skills, and Abilities:

- Data analysis: Igor Pro, Matlab, Origin and/or Python.
- Good communication skills and leadership.
- Experience with vacuum systems and beamline operation.
- Enjoys teamwork and an interdisciplinary environment.

Interested candidates should submit an updated CV and a brief statement of interest to the application email listed above. At least 2 reference letters are welcome. The reference of the specific opening to which the candidate is applying should also be stated in the subject line.

Contact:

- Santiago Blanco (sblanco@dipc.org)