



UNIVERSITY
OF COLOGNE

Faculty of Mathematics and Natural Sciences

Postdoc Position (f/m/x) on Neutron and X-Ray Investigations of Quantum Materials

Institute of Physics II | Group Braden



Foto: Simon Wegener

We are one of the largest and oldest universities in Europe and one of the most important employers in our region. Our broad range of subjects, the dynamic development of our main research areas and our central location in Cologne make us attractive for students and researchers from around the world. We offer a wide range of career opportunities in science, technology, and administration.

Professor Markus Braden's group investigates quantum materials combining synthesis and characterization methods with X-Ray and neutron scattering experiments. Ruthenates, frustrated magnets and unconventional superconductors are in the focus of interest.

YOUR TASKS

- » Synthesis of selected quantum materials in poly- and single-crystalline forms and their characterization
- » Inelastic and elastic neutron scattering experiments with a focus on polarized techniques
- » Inelastic and elastic X-Ray scattering experiments
- » Analysis of the data by advanced modelling of crystal and magnetic structure as well of nuclear and magnetic excitations
- » Participation in teaching of exercises and practical courses

YOUR PROFILE

You must hold a doctoral degree in physics and must have hands-on experience in at least 3 of the following:

- » Synthesis and characterization of transition-metal oxides
- » Elastic and inelastic neutron scattering experiments including neutron-polarization techniques
- » X-Ray diffraction and scattering experiments
- » Modelling of quantum materials

WE OFFER

- » Participation in broad interdisciplinary research activities
- » A diverse working environment with equal opportunities
- » Support in balancing work and family life
- » Extensive advanced training opportunities
- » Occupational health management offers
- » Flexible working time models
- » Opportunity to work remotely

The University of Cologne promotes equal opportunities and diversity. Women will be considered preferentially in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz – LGG NRW). We also expressly welcome applications from all suitable candidates regardless of their gender, nationality, ethnic and social origin, religion, disability, age, sexual orientation and identity.

The position is available from 01.07.2025 on a full-time basis (39,83 hours per week). The position is to be filled for a fixed term until 30.09.2028. If the applicant meets the relevant wage requirements and personal qualifications, the salary will be based on remuneration group 13 TV-L of the pay scale for the German public sector.

Please apply online with proof of the required qualifications without a photo under: <https://jobportal.uni-koeln.de>. The reference number is Wiss2504-15. The application deadline is 18.05.2025.

For further inquiries, please contact Professor Dr Markus Braden (braden@ph2.uni-koeln.de) and take a look at our [FAQs](#).



HR EXCELLENCE IN RESEARCH