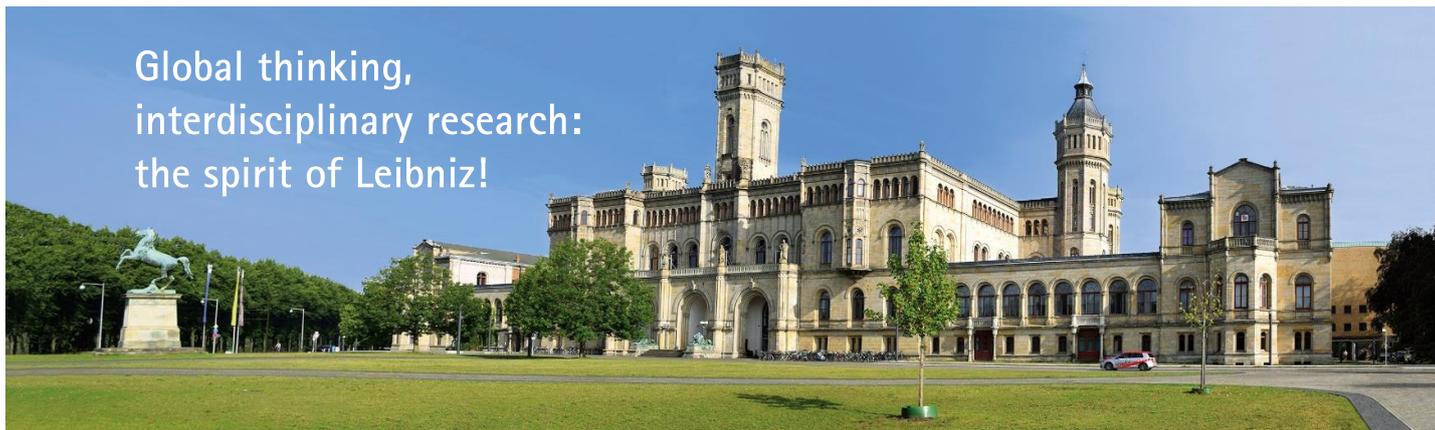


Global thinking,  
interdisciplinary research:  
the spirit of Leibniz!



Nestled in a modern city surrounded by nature and with an exceptional standard of living, Leibniz University Hannover offers excellent working conditions in a vibrant scientific community.

The Institute of Inorganic Chemistry welcomes applications for the following position starting as of 1 June 2026:

## Research Staff in the field of "Magneto-optical investigation of the soft assembly of active and surfactant-analogue nanoparticles" (salary scale 13 TV-L, 67 %)

The fixed-term position is for a duration of 36 months

### Your role

- This position is part of a newly funded DFG project: "Soft assembly of active and surfactant-analogue nanoparticles at the mesoscale." This interdisciplinary project sits at the cutting edge of soft matter physics and active colloids. While traditional self-assembly relies on passive Brownian motion, this project breaks new ground by investigating active Janus amphiphilic magnetic nanoparticles.
- We will explore how these active building blocks respond to varying external magnetic stimuli to create complex, tunable and smart superstructures. While our project partners will provide high-quality model building blocks, the offered position is focused on the physical characterization and manipulation of these systems.
- Overall you will lead the physical investigation of particle magnetization dynamics and non-equilibrium assembly.
- Key components of the role include the dynamic magnetic manipulation, frequency-dependent analysis, and constructing and utilizing a specialized magneto-optical setup based on the Cotton-Mouton effect, combined with light-scattering detectors and different magnetic field applicators to monitor the nanoparticles' real-time orientation and aggregation.

Additional information:

- The project will be carried out in the Magnetic Functional Materials Group, a dynamic junior research team dedicated to the fundamental and applied research on magnetic nanomaterials.
- In particular, we focus on the transition from individual magnetic nanoparticle dynamics to the collective behavior of functional assemblies, all the way from the material design and synthesis to their characterization and applications.
- We emphasize on the personal and professional development of the candidate. As part of our group, you will receive close mentorship and the opportunity to develop both technical expertise and soft skills in a supportive, collaborative environment, while benefitting from an interdisciplinary environment in close cooperation with experts in chemical synthesis.

## Who are we looking for?

The successful candidate must hold a university science degree with bachelor's and master's degrees in physics, chemistry, materials science or related fields, ideally with a specialisation in magnetism and nanoscience.

In addition, we are looking for a candidate with the following:

- We are seeking a motivated and enthusiastic person with a strong background in Physics, Materials Science, or Physical Chemistry, specifically those with an interest in magnetism and magnetization dynamics, light scattering and optical anisotropy and the thermodynamics of self-assembly and non-equilibrium nanoparticle-based systems.
- A strong interest in optics, magnetism, and nanoscience.
- A "Hands-on" mindset: Creativity and willingness to engage in the technical construction and fine-tuning of experimental setups and magnetic field applicators.
- Good communication skills, and enthusiasm to work in a collaborative and international research environment.
- Good level of English is required.
- Experience with SQUID magnetometry or magneto-optical schemes would be an advantage.

Equal opportunities and diversity are core values at Leibniz University Hannover. Our goal is to tap into individual potential and open up possibilities. We therefore welcome applications from anyone interested in the position, irrespective of gender, nationality, ethnic origin, religion or ideology, disability, age, sexual orientation and identity.

We strive towards a balanced and diverse workforce and a reduction in under-representation in accordance with the Lower Saxony Equal Rights Act (*Niedersächsisches Gleichberechtigungsgesetz – NGG*). We therefore also welcome applications from women for the above-mentioned position. Preference will be given to equally-qualified candidates with disabilities.

## Additional information

For further information, please contact Dr. Irene Morales Casero (Tel.: +49 (0)511 762-2441, email: [irene.morales@aca.uni-hannover.de](mailto:irene.morales@aca.uni-hannover.de)).

Please submit your application and supporting documents (Cover letter, Curriculum vitae, Copies of B.Sc. and M.Sc. certificates, Contact addresses of 2-3 possible referees) by 31 March 2026 electronically to

Email: [personal@aci.uni-hannover.de](mailto:personal@aci.uni-hannover.de) and [irene.morales@aca.uni-hannover.de](mailto:irene.morales@aca.uni-hannover.de)

or alternatively by post to:

**Gottfried Wilhelm Leibniz Universität Hannover**

Institut für Anorganische Chemie

Gruppe Magnetische Funktionsmaterialien

Frau Dr. Irene Morales Casero

Callinstr. 9, 30167 Hannover

<http://www.uni-hannover.de/en/jobs>

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<https://www.uni-hannover.de/en/datenschutzhinweis-bewerbungen/>