PhD POSITION (ALL GENDERS)

“Bond Cleavage in High Molar Mass Nucleic Acids Probed by Nuclear Magnetic Resonance Spectroscopy”

Location	Start
Wiegand Lab Institut für Technische und Makromolekulare Chemie (ITMC) RWTH Aachen University	October 2026 (flexible) Application deadline: 31 August 2026

Shape the future of polymer mechanochemistry.

Join an interdisciplinary research team within the DFG-funded Collaborative Research Centre 'Polymer Mechanochemistry' and contribute to pioneering research combining nucleic acid chemistry, polymer mechanochemistry and solid-state NMR spectroscopy. Establish a fundamental framework for understanding and controlling how nucleic acids respond to ultrasound and open an entirely new field for biomolecular NMR spectroscopy.

YOUR RESEARCH

- Investigate covalent and non-covalent bond scission events in high molar mass nucleic acids in respond to ultrasound.
- Apply advanced NMR spectroscopy particularly in the solid state under magic-angle spinning (MAS) conditions.
- Characterize polynucleic-acid containing hybrid materials structurally.
- Correlate molecular-scale observations with scattering and microscopy.
- Develop new analytical approaches for polymer mechanochemistry.

WHAT WE OFFER

- Excellent supervision in a unique research environment.
- Highly interdisciplinary doctoral project with communication across disciplines.
- Access to state-of-the-art NMR infrastructure.
- International collaborative team.
- Professional development and transferable-skills training.
- A certified family-friendly environment at RWTH University. We support our employees in maintaining a good work-life balance with a wide range of health, advising, and prevention services, for example university sports.

YOUR PROFILE

- Master's degree in chemistry, physics or related discipline.
- Strong interest in spectroscopic techniques applied to biomolecules.
- Independent, motivated, passionate and collaborative mindset.
- Very good English communication skills.

CURIOUS? SO, WE ARE! APPLY NOW

Your complete application (1 file) should contain a curriculum vitae (CV) and the names of two professional references whom we may contact. The application should be sent to **wiegand@itmc.rwth-aachen.de**

EQUAL OPPORTUNITIES

RWTH is an equal opportunities employer. We therefore welcome and encourage applications from all suitably qualified candidates, particularly from groups that are underrepresented at the University. All qualified applicants will receive consideration for employment and will not be discriminated against on the basis of national or ethnic origin, sex, sexual orientation, gender identity, religion, disability or age. RWTH is strongly committed to encouraging women in their careers. Female applicants are given preference if they are equally suitable, competent, and professionally qualified, unless a fellow candidate is favoured for a specific reason.

CONTACT

For further information regarding the available positions, please contact Prof. Dr. Wiegand directly by e-mail.

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