

The research training group RTG 2376 “Confinement-Controlled Chemistry“ combines cutting-edge research with a structured curriculum of lectures, colloquia, and workshops in the fields of supramolecular chemistry, electrochemistry, synchrotron-based X-ray scattering and spectroscopy, linear and nonlinear vibrational spectroscopy, single-molecule imaging, and free energy simulations. The scientific approach is addressed by researchers from Ruhr-Universität Bochum and TU Dortmund University.

Five Pre-Graduate Research Students with Bachelor Degree

We are looking for research students interested in exploring the influence of geometrical confinement on chemical reactions. They assist the RTG PhD students in one of the following tasks, amongst others:

- 1) multistep organic synthesis involving self-assembled nanocages
([Guido Clever group, TU Dortmund University](#))
- 2) preparation of proton samples for optical pump THz probe measurements on a two-dimensional jet
([Martina Havenith group, Ruhr-Universität Bochum](#))
- 3) synthesis of fluorescent dialdehydes (e.g. based on pyrene) and their incorporation as sidearms into chiral azacryptands
([Christan Merten group, Ruhr-Universität Bochum](#))
- 4) setting up molecule units with nitrenes to investigate their reactivity on surfaces
([Karina Morgenstern group, Ruhr-Universität Bochum](#))
- 5) build nanoparticles grown into swellable coatings to quantify changes in plasmon resonance with UV-VIS spectroscopy and locally-resolved dark-field microscopy
([Axel Rosenhahn group, Ruhr-Universität Bochum](#) in collaboration with Kristina Tschulik group)
- 6) synthesis of precursor-filled reverse micelles
([Kristina Tschulik group, Ruhr-Universität Bochum](#))
- 7) supporting the development of receptors for zwitterionic guests
([David Van Craen group, TU Dortmund University](#))

The candidates will thus get in touch with international research at an early career stage and are welcome to attend RTG events.

Five positions for pre-graduate research students with Bachelor degree are available at the earliest possible date for six months and 5 hours per week (14 € per hour). We wish to promote the careers of women in areas in which they have been underrepresented, and we would therefore like to encourage exclusively female candidates to send us their applications.

The candidates must have a Bachelor degree and be enrolled at the corresponding university (Ruhr-Universität Bochum or TU Dortmund University) in a Master´s program in chemistry, physics, mathematics, biochemistry, or a related engineering field.

Applications should include a Bachelor´s certificate, a curriculum vitae and a short motivation letter (max. 200 words) in English. The candidates should specify which projects mentioned above (1-7) gather their largest interest.

Qualified candidates are asked to submit their application electronically (as a single pdf file) via email to sandra.metych@rub.de.