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Two Ph.D. Positions in Materials Chemistry  
**Materials That Differentiate and Communicate Autonomously**

### **QUICK FACTS**

Two 4-year fully funded Ph.D. positions (AIO, full time)

Embedded in the Lerch Research Group

Stratingh Institute for Chemistry, Faculty of Science and Engineering, University of Groningen

Application deadline: Oct. 1st, 2021

Ideal starting date: Nov. 2021

### **POSITION**

During biological development, an organism develops from a single, uniform cell to a complex, highly ordered, multicellular body with segregated functions (tissues, organs, extremities), with astonishing autonomy and reliability. The Lerch Research Group ([www.lerchlab.com](http://www.lerchlab.com)) aims to implement the underlying design rules of these biological processes into synthetic materials based on chemical reactions. In particular, we are interested in chemical communication between different parts of a material that could enable developmental processes such as differentiation (specialization) and morphogenesis (coordinated change of shape). In the two Ph.D. projects, we aim to design reaction cascades for communication between different parts of a material such as a gel, with the goal of creating materials that can autonomously self-organize and coordinate tasks across different locations.

The prospective Ph.D. student will work in an international and interdisciplinary team in a fast-paced, creative, and collaborative research environment, based at the renowned Stratingh Institute. The University of Groningen and the Lerch Research Group strive to create an equitable, inclusive, and respectful environment, where researchers of different backgrounds and disciplines can work at the forefront of science.

### **CANDIDATE PROFILE**

We are looking for an excellent, creative, and highly motivated colleague with:

- an M.Sc. degree in chemistry, physics, materials sciences, biochemistry, or equivalent.
- demonstrable research experience in organic synthesis, hydrogels & elastomers, and/or biochemistry, as the applicant will design and study chemical reaction systems that organize physical functionalities in soft materials.
- excellent command of written and spoken English.
- willingness to acquire a variety of additional skills ranging from basic programming and 3D modelling, to device prototyping.
- well-developed communication and collaboration skills.

Ph.D. students are expected to develop scientific independence and complete research projects successfully. Successful Ph.D. students stay abreast of developments in the field, proactively communicate research results, supervise B.Sc. and M.Sc. students, and work effectively in a team and collaborate across disciplines. We are looking forward for you to joining our team to create new types of materials, coatings, and devices that can coordinate their actions and exhibit unprecedented functionalities.

### **APPLICATION**

Please get in contact with Dr. Michael Lerch (*m.m.lerch@rug.nl*). The application should include a **curriculum vitae**, a **cover letter**, and **contact details of two references** for a letter of recommendation. Applications received **before Oct. 1st, 2021**, will be considered for this position. Preferred starting date is negotiable but would ideally be in November 2021.

Applications by female scientists and candidates from underrepresented minorities are especially encouraged.