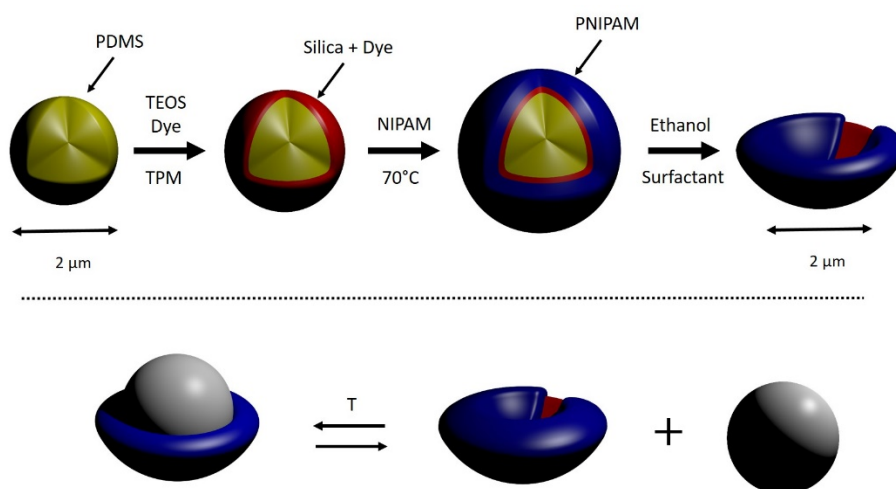


## Synthesis of bowl shaped Poly-N-isopropylacrylamide (pNIPAM) Microgels and their Assembly.

**Who:** At the Institute for Physical Chemistry II of RWTH Aachen, we are looking for a motivated Bachelor Student (Chemistry) that will work on the synthesis of large pNIPAM microgels with a cavity.

**Topic:** The project will start with the functionalisation of spherical elastic shells with a layer of pNIPAM (temperature sensitive). Once these particles are prepared, we will transform their shape into a bowl and study their assembly into colloidal molecules. Once mixed with oppositely charged spheres, the spheres will enter the cavity as depicted in the Figure below. As the temperature is changed the colloidal molecules will fall apart.



**Required:** The student should have an interest in Colloid Chemistry and a basic knowledge in Physical Chemistry. Furthermore, the student must be willing to learn new experimental techniques to analyse colloidal systems. Finally, you must be able to work neatly and accurately.

### New knowledge:

- Synthesis of colloidal particles
- (Confocal) microscopy, Flow Particle Image analyzer

Start: 01-04-2019

Length: 3 months

Workload: Fulltime

Professor: Prof. Dr. Walter Richtering

Interested? If you are interested, send a mail to Fabian Hagemans containing your Curriculum Vitae, motivation, and if applicable a short description of your previous research activities.

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