Flow properties of polymers in supercooled liquids

A 36 month PhD position, funded by the DFG is available at the department of Physical chemistry at RWTH Aachen university under the supervision of Prof. Walter Richtering and Dr. Carlos G. Lopez. The project involves the study of polyelectrolyte dynamics in supercooled liquids.

Polyelectrolytes are polymers bearing charged groups along their backbone, which include important molecules such as DNA and other naturally occurring polymers (xanthan gum, hyaluronic acid etc.). Your work will focus on studying their dynamics using rheological and scattering methods. The use of super-cooled solvents will allow you to slow down the dynamics of polyelectrolytes in solution, and therefore measure fast relaxation processes that are usually not accessible with conventional rheological techniques. Prior experience with either rheology and/or scattering methods is advantageous but not required.

Applicants should hold a Master’s degree in Physics, Chemistry, Engineering or a related discipline. The position is open to people of any nationality, knowledge of German is not required. Candidates should have good skills in spoken and written English, and are expected to contribute towards teaching throughout their degree. More information about the group’s research activities can be found through the following link: https://www.ipc.rwth-aachen.de/cms/IPC/Forschung/~kwhn/Prof-Walter-Richtering-Lehrstuhl-II/

To apply please send a copy of your CV and cover letter along with the contact information of at least one referee to lopez@pc.rwth-aachen.de. Applications will be considered until the position is filled.