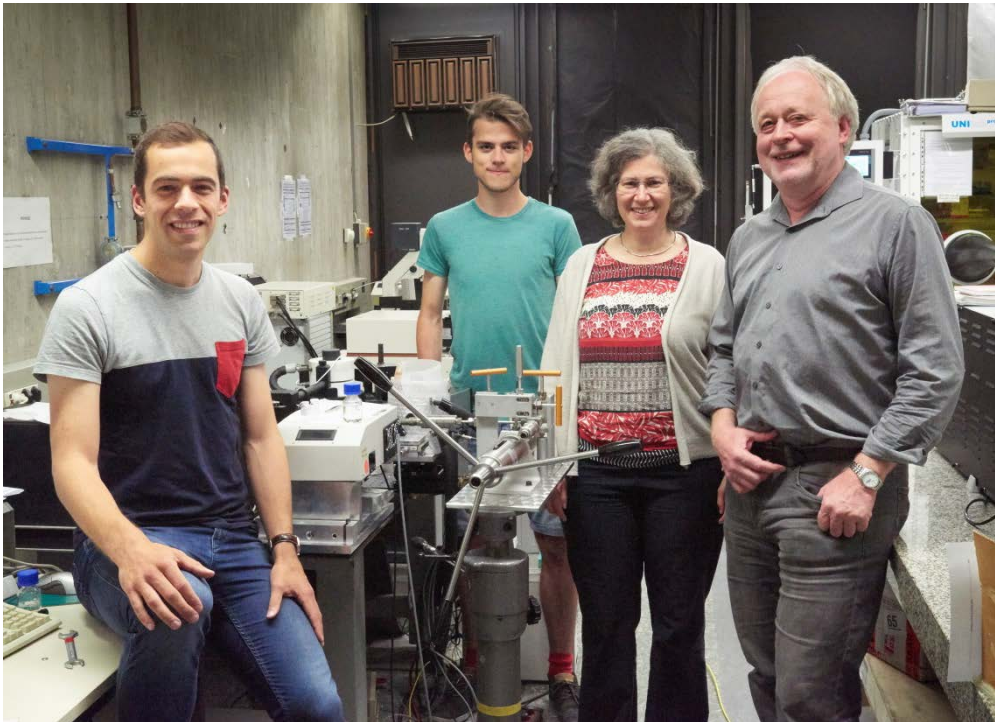


Visiting Professorship for international research collaboration on soft matter under high pressure



TUM August-Wilhelm Scheer Visiting Professors enrich the vibrant research culture at TUM with innovative approaches and explore new, cutting-edge research fields. Named after Prof. August-Wilhelm Scheer, a renowned pioneer in the field of Computer Science and TUM Distinguished Affiliated Professor, this Visiting Professorship is awarded to scientists with an outstanding international reputation who wish to engage in an intensive collaboration with TUM researchers. The appointment also includes a membership in the prestigious TUM Institute for Advanced Study. Within this framework, we have attracted Prof. Alfons Schulte of the [University of Central Florida \(UCF\), Orlando, U.S.A.](#), as a guest to the Physics department. UCF is thriving preeminent research university located in metropolitan Orlando and one of the largest Universities in the United States. U.S. News & World Report has named UCF as ‘one of the nation’s most innovative colleges’.

At the Physics Department, Prof. Schulte and his host Prof. Christine M. Papadakis and her team investigate the phase behavior as well as the dynamics of responsive polymers in aqueous solution under high pressure. “Pressure as a fundamental thermodynamic variable enables controlled changes in the hydration of responsive polymers and to elucidate its influence on their dynamics“ notes Alfons Schulte. A focus is on the collective dynamics which is measured by dynamic light scattering in dependence on pressure and temperature. These experiments are complemented by micro-Raman spectroscopy and optical imaging at high pressure in the laboratory of Prof. Schulte at UCF. A further important topic during the visit are the results of

quasi-elastic neutron scattering under high pressure which were just conducted at the TOF-TOF instrument at FRM II.

The existing collaboration is significantly enhanced by this year's visit (may to July 2018), as Prof. Schulte has extensive expertise in the design of high pressure cells and sample environments and a strong background in the dynamics of disordered systems and proteins. Prof. Papadakis is delighted that her co-workers and student can benefit directly from Prof. Schulte's experience.

B. J. Niebuur, K.-L. Claude, S. Pinzek, C. Cariker, K. N. Raftopoulos, V. Pipich, M.-S. Appavou, A. Schulte, C. M. Papadakis: **Pressure-dependence of poly(N-isopropylacrylamide) mesoglobule formation in aqueous solution.** *ACS Macro Lett.* **6**, 1180-1185 (2017).