

## **W0040**

**Time-Resolved Small-Angle X-Ray Scattering: Applications to Systems of Biological Relevance.** M. Ballauff, E. Breininger, S. Rosenfeldt, A. Wittemann, N. Dingenouts, Physikalische Chemie I, Univ. Bayreuth, Universitaetsstrasse 30, D-95440 Bayreuth, Germany; T. Narayanan, ESRF, Grenoble, France.

Small-angle X-ray scattering (SAXS) is a highly versatile tool for the study of partially ordered mesoscopic systems in solution as e.g. colloids or proteins. SAXS using synchrotron radiation can lead to a number of new possibilities because of the high intensity of the primary beam. Recent progress in this field achieved at the ESRF in Grenoble has made possible time-resolved studies with SAXS (TR-SAXS). The time frame per measurement can be suppressed to become less than 100ms which opens new possibilities to study the built-up of mesoscopic structures in a time-resolved manner. In our lecture we shall discuss the application of TR-SAXS to two recent examples: i) the formation of calciumcarbonate particles or particles of hydroxylapatite in the field of biomineralization, and ii) the adsorption of proteins to colloidal latex particles. In both cases we shall demonstrate that TR-SAXS allows us to derive a detailed pictures of processes of biological relevance.

We thank the ESRF for allocation of beamtime and the Deutsche Forschungsgemeinschaft for financial support.