



German Society of Rheology

(DRG)

■ Rheology of Colloidal Systems – Rheologentagung 2010 and 17th Ostwald-Kolloquium Karlsruhe, Germany, March 10 – 12, 2010

This year's annual meeting of the German Rheological Society (DRG) was jointly organized together with the German Colloid Society and took place at the Akademie-Hotel in Karlsruhe. The conference was organized by Prof. Norbert Willenbacher (Karlsruhe Institute of Technology and president of the DRG) and Prof. Heinz Rehage (Universität Dortmund and treasurer of the Colloid Society). Colloidal systems comprise a large variety of different materials including dispersions, emulsions, foams or self-assembled structures in solution either synthetic or biological in origin. Their flow behavior is a complex and still fascinating field of research where chemistry, biology, physics and engineering science meet. Accordingly, the objective of the conference was to bring together scientists working in these different fields of rheology and colloid science in order to exchange and to discuss new results and ideas. In particular, young scientists were encouraged to present the status of their ongoing research projects. More than 60 participants from academia and industry attended this stimulating meeting with many lively discussions. All lectures were presented in front of the plenum, complemented by a small poster exhibition. In addition to this conference a joint symposium was held in the morning of March 10 organized together with the ProcessNet subject divisions Interfacially dominated Systems and Processes, Mechanical Liquid Separation, Particle Measurement, Plant based Extracts, and Rheology, which met in the same location on March 9 and 10. More than 150 participants from these closely related research and technology areas attended this symposium. The following topics were covered in this session:

- In-situ optical characterization of technical particle systems using second harmonic generation (B. Schürer, Universität Erlangen-Nürnberg)
- Particles in non-aqueous systems (U.A. Peuker, TU Bergakademie Freiberg)
- Scientifically based design of phytoextraction and routes to realization (tandem presentation by A. Pfennig, RWTH Aachen and J. Leistner, Evonik Degussa GmbH)
- Manufacturing of core-shell nanoparticles using high pressure homogenization and subsequent miniemulsion polymerization (L. Hecht, Karlsruhe Institute of Technology)
- Non-linear rheology of dense colloidal dispersions – theory and experiment (tandem presentation by M. Siebenbürger, Helmholtz Zentrum Berlin and Matthias Krüger, Universität Konstanz)

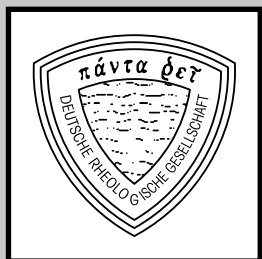
The twenty five contributions to the regular sessions covered a broad spectrum of colloidal systems including suspensions of spherical as well as cylindrical particles (fd-virus and carbon nanotubes), suspensions in viscoelastic matrices, micro- or hydrogel systems as well as cosmetic emulsions. A diversity of experimental techniques were addressed including DWS microrheology, FT-rheology, but also interfacial and cell monolayer rheology, as well as new aspects of centrifugation and consolidation. New simulation tools and models for bulk flow of suspensions and surface rheology were presented. Last but not least, various strategies for controlling particle interactions including polyelectrolyte multilayers, polymeric depletion agents or capillary forces induced by addition of a second immiscible liquid to the continuous phase and their impact on the flow behaviour of the respective colloidal systems were discussed. In conclusion, the participants experienced a very lively and scientifically stimulating conference with a workshop flair in Karlsruhe. The next annual conference of the German Rheological Society will be held in March 2011 in Berlin and is intended to provide an overview over all areas of rheology active in Germany.

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Participants at the 2010 annual meeting of the German Rheological Society (DRG).

This is an extract of the complete reprint-pdf, available at the Applied Rheology website
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