

MONONA TERRACE, MADISON, WI
OCTOBER 17-21, 1999

The 71st Annual Meeting of the Society of Rheology (SOR) was hosted by the Rheology Research Center in Madison, WI and held from October 17-21, 1999. The conference enjoyed fantastic fall weather and was held on the shores of Lake Monona in Madison at the new Monona Terrace. This conference center was designed by architect Frank Lloyd Wright and is located two short blocks from the Wisconsin Capital Building. This year's program committee co-chairs were Robert C. Armstrong of MIT and Daniel J. Klingenberg of U. of Wisconsin. Local arrangements were made by Jeffrey Giacomini of U. of Wisconsin. The local committee decided to hold all the conference events, the technical programs, the business meetings, and all social events at the Monona Terrace, and they actually reserved the building before construction had begun. The center was completed in 1997 and certainly seems to fulfill Wright's vision of being a place with 'a series of small rooms where great minds can gather to share ideas'.

The meeting had 337 registered attendees, setting a new record in SOR conference attendance. The conference was organized into eleven topical sessions with 192 papers and 50 posters being presented. Topics included industrial rheology, non-Newtonian rheology, solids rheology, interfacial rheology, and the rheology of polymer solutions and melts.

The conference was kicked-off on Sunday evening with a welcoming reception sponsored by TA Instruments. On Monday morning, after welcome speeches by the local organizers, the technical program opened with a plenary lecture presented by William H. Tuminello of DuPont entitled 'Determining Molecular Weight Distributions from the Rheological Properties of Polymeric Melts'. Dr. Tuminello compared various recent methods that have been used to calculate the molecular weight distribution, discussing their effectiveness, and comparing the usefulness of a commercial software package developed by Rheometrics Scientific Corp. Using these approaches, Dr. Tuminello summarized that reasonable approximations of molecular weight distributions can be attained, especially for the higher moments of distribution which have a stronger dependence on the high MW components, although melt rheology will likely not offer the resolution of SEC.

The Monday technical sessions included symposia on viscoelasticity of synthetic and biological polymeric systems, industrial rheology, non-Newtonian rheology, and liquid crystalline systems. The symposium entitled Viscoelasticity of Synthetic and Biological Polymer Solutions and Gels was dedicated to Professor John Ferry of U. of Wisconsin, one of the five founding fathers of the Rheology Research Center, for his distinguished contributions to the field of rheology.

Lunch Monday was a business meeting sponsored by the SOR at the Monona Terrace. As President of the Society, Ron Larson of U. of Michigan gave an overview of the history and development of the Society since 1929. In addition, Albert Co, the Society's webmaster presented on recent web-based developments including having journals and membership lists available online. That evening, a society reception was held at the Monona Terrace and was sponsored in part by Rheometrics Scientific Corp.

On Tuesday morning Bill Schowalter introduced Bill Russell of Princeton University to give the Bingham Award Lecture entitled 'Interpreting the Rheology of Dispersions in Terms of Time Scales and Forces'. Professor Russell summarized the advances in the field of colloidal science over the last 25 years and showed how relationships were developed between rheology of dispersions and their underlying structures and forces under flow. In the future, Professor Russell envisions direct force measurements of these systems and novel means of controlling colloidal forces.

Technical sessions continued on Tuesday with symposia on polymeric solutions and gels, solids rheology, non-Newtonian fluid mechanics, and polymer/particle mixed systems, and the polymer melts and solutions. The society business meeting was held in the evening in order to discuss amendments to the Society's constitution. A banquet reception was sponsored in part by Haake Instruments. The Bingham Award Banquet was held at which Bill Russell was presented the 1999 Bingham Award. Also at the banquet, Tom McLeish and Ron Larson received the Society's annual publication award for their publication in the Journal of Rheology on the model for branched polymers (McLeish, T. C. B.; Larson, R. G.: Molecular constitutive equations for a class of branched polymers: The pom-pom

polymer. *J. Rheol.* 42 (1998) 81-110). In addition the Society awarded Albert Co the Exceptional Service Award for his stewardship as the Society's webmaster. Finally, Ron Larson passed the gavel over to the Society's new President, Gerry Fuller of Stanford University.

Wednesday morning began with the meeting's final plenary lecture given by Jan Mewis of K. U. Leuven entitled 'Effect of Polymer Coats on the Rheology of Stable and Flocculated Colloidal Suspensions'. Professor Mewis described the rheological effect of polymer layers on the dispersed particles. He discussed the use of oscillatory measurements to separate viscous hydrodynamic forces from elastic Brownian and dispersion forces. Shear thickening can be seen for many stable dispersions. By shrinking the polymeric layer, one can change the hydrodynamic and interparticle interactions and induce significant changes in the system's rheology.

Wednesday's technical sessions continued with sessions on blends and block copolymers, heterogeneous systems, shear-free flows, and polymer melts and solutions, and a general rheo-

logy session. A poster session was held Wednesday afternoon sponsored by Paar Physica including about 50 poster presentations covering a wide range of topics ranging from the rheology of peanut butter to numerical simulations of complex viscoelastic flows. The meeting concluded Thursday morning with final symposia on blends and block copolymers, heterogeneous systems, and polymer melts and solutions, and a general rheology session.

This was the society's last meeting of the Millennium. The 72nd Annual meeting will be held in February of 2001 in Hilton Head, SC.

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