

Symposium 12

Title: **Rheology and Dynamics of Complex Fluids**
Symposium Chair/Co-Chair: Eric Furst and Srinivasa Raghavan
Chair Assistant: Udaya Patri
Location: 129 Snell

Monday June 13, 2005

Presiding: Srinivasa Raghavan, L. Dai

Paper	Time	Title and Authors
12-01**	11:00 - 11:40 AM	The rheology of anisometric particle dispersions and "liquid armor" NORMAN J. WAGNER
12-02	11:40 - 12:20 PM	Rheological behavior of bauxite residue and bauxite residue derivatives E. M. HUMISTON, G. Ahmadi, G. Campbell
12-03**	1:30 - 2:10 PM	Active and Non-Linear Microrheology JOHN F. BRADY
12-04	2:10 - 2:30 PM	Microrheology of a Colloidal Suspension Using Laser Tweezers A. MEYER, M. H. Lee, E. M. Furst
12-05	2:30 - 2:50 PM	Rheological Behavior of Nano-Dendrimers / Silica Suspensions GANG LI, Stanley Hirschi, Leela Rakesh and James Falender
12-06**	3:20 - 4:00 PM	Melting in Temperature-Sensitive Colloidal Suspensions ARJUN G. YODH
12-07	4:20 - 4:20 PM	The Effect of Nanoparticles on the Structure and Rheology of Clay Suspensions J. BAIRD and J. Y. Walz
12-08	4:20 - 4:40 PM	Evaporation-Induced Particle Microseparations inside Freely Floating Droplets SUK TAI CHANG and Orlin D. Velev

12-09 4:40 - 5:20 PM Mobility and In-situ Aggregation of Charged
Microparticles at Oil-Water Interfaces
Sowmitri Tarimala, Chihyuan Wu, and LENORE L.
DAI

Tuesday June 14, 2005

Presiding: Furst, Srinivasa Raghavan

12-10** 10:30 - 11:10 AM Crystalline Junctions in Associative Gels: PLA-
PEO-PLA Triblocks with Tunable Rheology
S. K. Agrawal, N. Sanabria-DeLong, G. N. Tew,
S. R. BHATIA

12-11 11:10 - 11:30 AM Microstructural and Microrheological Properties of
Novel Self-assembled Hydrogels
CECILE VEERMAN, Karthikan Rajagopal, Joel
P. Schneider, and Eric M. Furst

12-12 11:30 - 11:50 AM The Role of Bile Salt in Inducing Threadlike
Reverse Micelles of Lecithin in Organic Solvents
Shih-Huang Tung, Yi-En Huang, and SRINIVASA
R. RAGHAVAN

12-13 11:50 - 12:30 PM Dynamics of Brownian particles in Concentrated
Wormlike Micelle Solutions
FLORIAN NETTESHEIM, Matthew
Liberatore, Eric W. Kaler, Norman J. Wagner

12-14** 1:30 – 2:10 PM Interfacial Rheology of Globular and Flexible
Proteins at the Hexadecane/Water Interface:
Comparison of Shear and Dilatation Deformation
E. M. Freer, K.S. Yim, G.G. Fuller, and C.J.
RADKE

12-15 2:10 – 2:30 PM Influence of Non-Newtonian Behavior on the
Dynamic Interface Shapes of Polymer Melts,
Solutions and Boger Fluids
GITA SEEVARATNAM, Stephen Garoff
and Lynn M. Walker

- 12-16 2:30 – 2:50 PM The Effect of Nonadsorbing Macromolecules on the Particle Dynamics Near an Interface
R. J. OETAMA and J.Y. Walz
- 12-17 3:20 – 3:40 PM Dramatic Increase in Viscosity with Temperature as a Result of a Thermoreversible Vesicle-to-Micelle Transition
Tanner S. Davies and SRINIVASA R. RAGHAVAN
- 12-18 3:40 – 4:00 PM Structure and mechanical properties of nanocomposites: Proteins and nanoparticles templated in self-assembled PEO-PPO-PEO mesophases
DANILO C. POZZO and Lynn M. Walker
- 12-19 4:00 – 4:20 PM Physical Gelation and Rheological Properties of Cationic Telechelic Polyelectrolytes
D G. Gotzamanis, F. Bossard, R. Lupytsky, T. Aubry, S. Minko and C. TSITSILIANIS
- 12-20 4:20 – 4:40 PM Numerical Simulation of Methane Hydrate in Sandstone Cores
KAMBIZ NAZRIDOUST and Goodarz Ahmadi
- 12-21 4:40 – 5:00 PM A Study of three-phase liquid-gas-solid flows in microgravity
XINYU ZHANG and Goodarz Ahmadi
- 12-22 5:00 – 5:20 PM A New Friction Factor Correlation for Laminar and Single-Phase Fluid Flow through Fractured Rocks
KAMBIZ NAZRIDOUST, Goodarz Ahmadi and Duane H. Smith