



# The Society of Rheology 78<sup>th</sup> Annual Meeting

## Portland, Maine

### Meeting Schedule

#### Monday, October 9, 2006

|       |                   |      |      |      |
|-------|-------------------|------|------|------|
| 8:30  | P. Janmey (PL1)   |      |      |      |
| 9:20  | Coffee            |      |      |      |
| 9:45  | SC1               | EP1  | BS1  | FM1  |
| 10:10 | SC2               | EP2  | BS2  | FM2  |
| 10:35 | SC3               | EP3  | BS3  | FM3  |
| 11:00 | SC4               | EP4  | BS4  | FM4  |
| 11:25 | SC5               | EP5  | BS5  | FM5  |
| 11:50 | Society Luncheon  |      |      |      |
| 1:55  | SC6               | EP6  | BS6  | FM6  |
| 2:20  | SC7               | EP7  | BS7  | FM7  |
| 2:45  | SC8               | EP8  | BS8  | FM8  |
| 3:10  | SC9               | EP9  | BS9  | FM9  |
| 3:35  | SC10              | EP10 | BS10 | FM10 |
| 4:00  | Coffee            |      |      |      |
| 4:25  | SC11              | EP11 | BS11 | FM11 |
| 4:50  | SC12              | EP12 | BS12 | FM12 |
| 5:15  | SC13              | EP13 | BS13 | FM13 |
| 5:40  | SC14              | EP14 | BS14 | FM14 |
| 6:05  | SC15              | EP15 | BS15 | FM15 |
| 6:30  | End               |      |      |      |
| 7:00  | Society Reception |      |      |      |

#### Tuesday, October 10, 2006

|       |                       |      |      |      |      |
|-------|-----------------------|------|------|------|------|
| 8:30  | R. C. Armstrong (PL2) |      |      |      |      |
| 9:20  | Coffee                |      |      |      |      |
| 9:45  | SC16                  | EP16 | MR1  | FM16 | PP1  |
| 10:10 | SC17                  | EP17 | MR2  | FM17 | PP2  |
| 10:35 | SC18                  | EP18 | MR3  | FM18 | PP3  |
| 11:00 | SC19                  | EP19 | MR4  | FM19 | PP4  |
| 11:25 | SC20                  | EP20 | MR5  | FM20 | PP5  |
| 11:50 | Lunch                 |      |      |      |      |
| 1:30  | SC21                  | EP21 | MR6  | FM21 | PP6  |
| 1:55  | SC22                  | EP22 | MR7  | FM22 | PP7  |
| 2:20  | SC23                  | EP23 | MR8  | FM23 | PP8  |
| 2:45  | SC24                  | EP24 | MR9  | FM24 | PP9  |
| 3:10  | SC25                  | EP25 | MR10 | FM25 | PP10 |
| 3:35  | Coffee                |      |      |      |      |
| 4:00  | SC26                  | EP26 | MF1  | VS1  | PP11 |
| 4:25  | SC27                  | EP27 | MF2  | VS2  | PP12 |
| 4:50  | SC28                  | EP28 | MF3  | VS3  | PP13 |
| 5:15  | SC29                  | EP29 | MF4  | VS4  | PP14 |
| 5:40  | SC30                  | EP30 | MF5  | VS5  | PP15 |
| 6:05  | End                   |      |      |      |      |
| 6:10  | Business Meeting      |      |      |      |      |
| 7:00  | Awards Reception      |      |      |      |      |
| 8:00  | Awards Banquet        |      |      |      |      |

#### Wednesday, October 11, 2006

|       |                            |      |      |      |
|-------|----------------------------|------|------|------|
| 8:30  | H. C. Öttinger (PL3)       |      |      |      |
| 9:20  | Coffee                     |      |      |      |
| 9:45  | BE1                        | PS1  | MF6  | VS6  |
| 10:10 | BE2                        | PS1  | MF7  | VS7  |
| 10:35 | BE3                        | PS2  | MF8  | VS8  |
| 11:00 | BE4                        | PS3  | MF9  | VS9  |
| 11:25 | BE5                        | PS4  | MF10 | VS10 |
| 11:50 | Lunch                      |      |      |      |
| 1:30  | BE6                        | PS5  | MF11 | GP1  |
| 1:55  | BE7                        | PS6  | MF12 | GP2  |
| 2:20  | BE8                        | PS7  | MF13 | GP3  |
| 2:45  | BE9                        | PS8  | MF14 | GP4  |
| 3:10  | BE10                       | PS9  | MF15 | GP5  |
| 3:35  | Coffee                     |      |      |      |
| 4:00  | BE11                       | PS10 | MF16 | GP6  |
| 4:25  | BE12                       | PS11 | MF17 | GP7  |
| 4:50  | BE13                       | PS12 | MF18 | GP8  |
| 5:15  | BE14                       | PS13 | MF19 | GP9  |
| 5:40  | BE15                       | PS14 | MF20 | GP10 |
| 6:05  | End                        |      |      |      |
| 6:10  | Poster Session & Reception |      |      |      |

#### Thursday, October 12, 2006

|       |        |      |      |      |
|-------|--------|------|------|------|
| 8:05  | BE16   | PS15 | MF21 | GP11 |
| 8:30  | BE17   |      | MF22 | GP12 |
| 8:55  | BE18   | PS17 | MF23 | GP13 |
| 9:20  | BE19   | PS18 | MF24 | GP14 |
| 9:45  | BE20   | PS19 | MF25 | GP15 |
| 10:10 | Coffee |      |      |      |
| 10:35 | BE21   | PS20 | MF26 | GP16 |
| 11:00 | BE22   | PS21 | MF27 | GP17 |
| 11:25 | BE23   | PS22 | MF28 | GP18 |
| 11:50 | BE24   | PS23 | MF29 | GP19 |
| 12:15 | BE25   | PS24 | MF30 | GP20 |
| 12:40 | End    |      |      |      |

### Session Codes

BE = Blends, Emulsions and Multiphase Flows  
 BS = Biomaterials, Biological Systems and Self-assembly  
 EP = Rheology and Structure of Entangled Polymer Systems  
 FM = Non-Newtonian Fluid Mechanics, Instabilities and Turbulence

GP = General Papers  
 MF = Microfluidics, Confined Systems and Thin Films  
 MR = Microrheology  
 PL = Plenary Lectures  
 PP = Paper, Pulp and Industrial Processes

PS = Polymer Solution Rheology: Molecular-scale Modeling and Experiments  
 SC = Suspensions, Colloids and Granular Materials  
 VS = Viscoelasticity of Solids, Thixotropy and Glasses

# Monday, October 9

## Morning

|       |  |   |   |   |  |
|-------|--|---|---|---|--|
| 8:30  |  | PL1. Rheology of biopolymer networks. <i>P. Janmey</i> Vermont  |   |   |  |
| 9:20  |  | COFFEE  |   |   |  |
|       | <b>Vermont</b>   | <b>Massachusetts</b>  | <b>Connecticut</b>  | <b>Rhode Island</b>   |  |
|       | <b>Suspensions, Colloids &amp; Granular Matls.</b>   | <b>Rheo. and Struct. of Entang. Polym. Sys.</b>   | <b>Biomaterials, Biol. Sys. &amp; Self-assembly</b>   | <b>Non-Newt. Fluid Mech., Instab. &amp; Turb.</b>   |  |
| 9:45  | <b>SC1.</b> Rheological behavior of binary blends of micro- and nanoscale colloidal dispersions. <i>D. A. Shcherbakov and W. B. Russel</i>   | <b>EP1.</b> Direct rheological observation of monomer density reequilibration for entangled polymer melts. <i>C.-Y. Liu, R. Keunings and C. Bailly</i>    | <b>BS1.</b> Macromolecular assembly based on inclusion associations between beta-cyclodextrin and adamantyl grafts. <i>X. Guo, L. Li, L. Fu, R. Prud'homme, B. May and S. Lincoln</i> | <b>FM1.</b> A study on the rheology effects in viscoelastic turbulent channel flows based on DNS. <i>K. D. Housiadas and A. N. Beris</i>  |  |
| 10:10 | <b>SC2.</b> Nanoparticles diffuse faster than predicted by the Stokes-Einstein relation in polymer melts. <i>A. . Tuteja, M. E. Mackay, S. Narayanan, S. Asokan and M. S. Wong</i> | <b>EP2.</b> Viscoelastic relaxation in cyclic polymers and cyclic-linear polymer blends. <i>D. Vlassopoulos, M. Kapnistos, J. Roovers and T. Chang</i>    | <b>BS2.</b> Shear orientation of nanoparticle arrays templated by soft-crystals. <i>D. C. Pozzo and L. M. Walker</i>  | <b>FM2.</b> A RANS model for turbulent drag reduction by polymer injection and comparison to DNS. <i>E. S. Shaqfeh, G. Iaccarino and M. Shin</i>                                    |  |
| 10:35 | <b>SC3.</b> Graphene-rubber nanocomposites. <i>B. Ozbas, M. J. McAllister, D. H. Adamson, R. A. Register, I. A. Aksay and R. Prud'homme</i>  | <b>EP3.</b> Constraint release in star/star blends and partial-DTD in monodisperse star systems. <i>H. Watanabe</i>                                       | <b>BS3.</b> Contrasting effects of temperature on the rheology of normal and reverse wormlike micelles. <i>S.-H. Tung, Y.-E. Huang and S. Raghavan</i>                                | <b>FM3.</b> Dynamic K-L analysis of coherent structures based on DNS of turbulent viscoelastic flows. <i>G. Samanta, G. Oxberry, R. A. Handler, A. N. Beris and K. D. Housiadas</i> |  |
| 11:00 | <b>SC4.</b> Rheological properties of different nanocomposites based on polyamide-6. <i>M. Sepehr, L. A. Utracki and P. Sammut</i>   | <b>EP4.</b> A general methodology to predict the linear rheology of branched polymers. <i>E. van Ruymbeke, C. Bailly, R. Keunings and D. Vlassopoulos</i> | <b>BS4.</b> Effect of pressure and shear on the phase diagram of PLGA-dioxane-water solutions. <i>S. A. Lim and J. J. Cooper-White</i>  | <b>FM4.</b> Rheological analysis of exact coherent structures in viscoelastic shear flows. <i>A. Roy, A. Morozov, W. van Saarloos and R. G. Larson</i>                              |  |
| 11:25 | <b>SC5.</b> Effect of flow history on structure build-up and breakdown of polymer/clay nanocomposite model systems. <i>C. Mobuchon, P. J. Carreau and M.-C. Heuzey</i>             | <b>EP5.</b> Hierarchical relaxation Of asymmetric star polymer melts. <i>Q. Zhou and R. G. Larson</i>   | <b>BS5.</b> Effect of solvents on the dynamics of collagen solutions and gels. <i>E. Pashkovski, L. Cipelletti and A. Lips</i>  | <b>FM5.</b> Viscoelastic nonlinear traveling waves and drag reduction in plane Poiseuille flow. <i>W. Li and M. D. Graham</i>   |  |
| 11:50 |  | SOCIETY LUNCHEON Casco Bay Exhibit Hall   |   |   |  |

## Afternoon

|      |  |   |   |   |  |
|------|--|---|---|---|--|
|      | <b>Vermont</b>   | <b>Massachusetts</b>  | <b>Connecticut</b>  | <b>Rhode Island</b>   |  |
|      | <b>Suspensions, Colloids &amp; Granular Matls.</b>   | <b>Rheo. and Struct. of Entang. Polym. Sys.</b>   | <b>Biomaterials, Biol. Sys. &amp; Self-assembly</b>   | <b>Non-Newt. Fluid Mech., Instab. &amp; Turb.</b>   |  |
| 1:55 | <b>SC6.</b> Simulations of particle suspensions in viscoelastic fluids. <i>A. Malidi and O. G. Harlen</i>                    | <b>EP6.</b> Primitive-path-length distribution predictions by the CUBS slip-link model. <i>J. D. Schieber and R. Khaliullin</i> | <b>BS6.</b> Sequence-dependent kinetics of $\beta$ -hairpin oligopeptide hydrogels. <i>T. H. Larsen and E. M. Furst</i>   | <b>FM6.</b> The axisymmetric instabilities of electrically-driven viscoelastic jets. <i>C. P. Carroll and Y. L. Joo</i>   |  |
| 2:20 | <b>SC7.</b> Motion of a bead through a yield stress and/or thixotropic fluid. <i>H. Tabuteau, P. Coussot and J. de Bruyn</i> | <b>EP7.</b> Tubes versus slip-springs: A detailed comparison. <i>J. Ramirez and A. E. Likhtman</i>                              | <b>BS7.</b> Correlation between gel structural properties and macromolecule diffusion in self assembling peptide hydrogels. <i>M. C. Branco, N. J. Wagner, D. J. Pochan and J. P. Schneider</i> | <b>FM7.</b> Pattern formation in viscoelastic Taylor-Couette flow: Ribbons, oscillatory strips, disordered states and diwhirls. <i>D. Thomas, B. Khomami and R. Sureshkumar</i> |  |
| 2:45 | <b>SC8.</b> Sedimentation of two vertical spheres in a xanthan solution. <i>R. J. Phillips, L. Talimi and E. Verneuil</i>    | <b>EP8.</b> Identifying topological constraints using the bond-fluctuation model. <i>S. Shanbhag and R. G. Larson</i>           | <b>BS8.</b> Basement membrane protein gels: Architecture and gelation kinetics. <i>H. I. Hadisaputra, Y. Park, A. J. O'Connor and J. J. Cooper-White</i>  | <b>FM8.</b> 3-D instabilities, rheology effects and the influence of the surrounding air on the film blowing process. <i>K. D. Housiadas and J. A. Tsamopoulos</i>              |  |

|      |  |   |   |  |
|------|--|---|---|--|
| 3:10 | <b>SC9.</b> Rheology of a dilute suspension of spheres in a viscoelastic liquid. <i>P. L. Maffettone, G. D'Avino and F. Greco</i>  | <b>EP9.</b> Probe rheology: A simple method to separate the contributions of constraint release and contour length fluctuations to non-reptation scalings. <i>C.-Y. Liu, R. Keunings and C. Bailly</i>                      | <b>BS9.</b> Rheological fingerprinting of pedal mucus from terrestrial gastropods (snails and slugs) using large amplitude oscillatory shear (LAOS) experiments. <i>R. Ewoldt, A. E. Hosoi and G. H. McKinley</i> | <b>FM9.</b> Low Reynolds number unstable flows of complex fluids with pH dependent rheology: Experimental evidence, stability analysis, applications. <i>T. I. Burghelca, I. A. Frigaard, J. J. Feng and M. . Martinez</i> |
| 3:35 | <b>SC10.</b> A fundamental study on the structure of laponite-PEO dispersions using rheology, birefringence and SAXS. <i>H. A. Baghdadi and S. R. Bhatia</i>                   | <b>EP10.</b> Origins of stress in polymer melts and the implications for single-chain models. <i>A. E. Likhtman and S. K. Sukumaran</i>   | <b>BS10.</b> Forisome: A smart plant protein inside a phloem system. <i>S. Warmann, A. Shen and W. Pickard</i>  | <b>FM10.</b> Viscoelastic fluid flows simulations with a generalized log-conformation formulation: A simple and effective approach. <i>O. M. Coronado, D. Arora, M. Behr and M. Pasquali</i>                               |
| 4:00 |  |   | COFFEE  |  |
| 4:25 | <b>SC11.</b> The bulk viscosity of suspensions. <i>J. F. Brady and M. Swaroop</i>  | <b>EP11.</b> Onset of chain stretch in a highly entangled polyisoprene melt observed using shear measurements and several extensional techniques. <i>J. K. Nielsen, O. Hassager and G. H. McKinley</i>                      | <b>BS11.</b> Nanoparticle reinforced associative network hydrogels of PLA-PEO-PLA triblock copolymers. <i>S. K. Agrawal, N. Sanabria-DeLong, G. N. Tew and S. R. Bhatia</i>                                       | <b>FM11.</b> Discontinuous Galerkin methods for simulating viscoelastic flow. <i>S. Sun</i>  |
| 4:50 | <b>SC12.</b> Multiscale modeling of electro- and magnetorheological suspensions. <i>D. Kittipoomwong, D. Klingenberg, Y. Yurkovetsky and J. Morris</i>                         | <b>EP12.</b> Shear and elongational behavior in fast flows of monodisperse polymer melts with a wide range of molecular weights. <i>D. Auhl, J. Ramirez, A. E. Likhtman, T. C. McLeish, P. Chambon and C. M. Fernyhough</i> | <b>BS12.</b> Modeling and structure-property relations in tissue engineered collagen scaffolds. <i>J. Ma, J. Laraque and J. W. Bender</i>   | <b>FM12.</b> Rheology and fracture (breakup) of liquids. <i>V. M. Entov and A. N. Rozhkov</i>  |
| 5:15 | <b>SC13.</b> The dynamics of rodlike particles under sedimentation and induced-charge electrophoresis. <i>D. Saintillan, E. S. Shaqfeh and E. Darve</i>                        | <b>EP13.</b> Rheological behavior of polymer melts in equibiaxial elongational flow using a modified lubricated squeezing flow technique. <i>D. C. Venerus, T. Medina-Guadarrama and T.-Y. Shiu</i>                         | <b>BS13.</b> Viscoelastic properties of a biodegradable, acellular xenogenic scaffold for the bioengineering of vocal fold tissues. <i>R. W. Chan and M. Rodriguez</i>  | <b>FM13.</b> Numerical simulation of non-dilute suspensions in viscoelastic fluids in an elongational flow. <i>G. D'Avino, P. L. Maffettone, M. A. Hulsen and G. W. Peters</i>   |
| 5:40 | <b>SC14.</b> Oscillatory shear of suspensions of noncolloidal particles. <i>J. M. Bricker and J. E. Butler</i>   | <b>EP14.</b> Comparison of the elongational behavior of various polyolefins in uniaxial and biaxial flows. <i>F. J. Stadler, A. Nishioka, J. Stange and H. Münstedt</i>   | <b>BS14.</b> The mechanical behaviour of brain tissue: Large strain response and constitutive modeling. <i>G. W. Peters, M. Hrapko, H. A. van Dommelen and J. S. Wismans</i>                                      | <b>FM14.</b> Linear stability analysis of viscoelastic Couette flow using finite element method. <i>J. V. Valerio and M. S. Carvalho</i>   |
| 6:05 | <b>SC15.</b> PME Stokesian dynamics simulations of dense colloidal suspensions with attractive forces: Microstructure of liquids and gels. <i>M. D. Bybee and J. L. Higdon</i> | <b>EP15.</b> Elongational viscosity of multiarm (Pom-Pom) polystyrene. <i>J. K. Nielsen, H. K. Rasmussen, K. Almdal and O. Hassager</i>   | <b>BS15.</b> Swarming of bacteria: Socio-microbiology or surface rheology? <i>J. Vermant, S. Reynaert, R. Daniels, J. Michiels and J. Fransaer</i>  | <b>FM15.</b> Viscoelastic stagnation point flow in a wake. <i>M. Renardy</i>   |
| 6:30 |  |   | END   |  |
| 7:00 |  | SOCIETY RECEPTION   | Portland Museum of Art  |  |

## Tuesday, October 10

### Morning

|       |  |  |   |  |  |
|-------|--|--|---|--|--|
| 8:30  | PL2. Rheology and energy. <i>R. C. Armstrong</i> Vermont   |  |   |  |  |
| 9:20  | COFFEE   |  |   |  |  |
|       | <i>Vermont</i>   | <i>Massachusetts</i>   | <i>Connecticut</i>  | <i>Rhode Island</i>  | <i>Cumberland/Kennebec</i>   |
|       | <b>Suspensions, Colloids &amp; Granular Matls.</b>   | <b>Rheo. and Struct. of Entang. Polym. Sys.</b>  | <b>Microrheology</b>  | <b>Non-Newt. Fluid Mech., Instab. &amp; Turb.</b>  | <b>Paper, Pulp &amp; Industrial Processes</b>  |
| 9:45  | <b>SC16.</b> Jamming of dense suspensions of uniform non-spherical colloids. <i>R. J. Larsen, J.-W. Kim and D. Weitz</i>   | <b>EP16.</b> Thermodynamics of non-isothermal polymer flows: Experiment, theory, and simulation. <i>T. C. Ionescu, B. J. Edwards, D. J. Keffer and V. Mavrantzas</i>                     | <b>MR1.</b> Active and nonlinear microrheology in the large-probe limit: Direct vs. bulk effects. <i>T. M. Squires</i>  | <b>FM16.</b> Film drainage between micron size droplet and a solid substrate. <i>B. Steinhaus, P. Spicer and A. Shen</i>   | <b>PP1.</b> Effect of strongly repulsive particle interactions on the rheology of concentrated silica suspensions. <i>S. Savarmand, P. J. Carreau, F. Bertrand and D.-E. Vidal</i> |
| 10:10 | <b>SC17.</b> Rheology and microstructure of shear thickening colloidal dispersions by flow-USANS. <i>D. Kalman, C. Nam and N. J. Wagner</i>                      | <b>EP17.</b> Large strain requirements for strain induced crystallization. <i>D. Arora and H. H. Winter</i>  | <b>MR2.</b> Experimental two-particle microrheology of quasi 2-D viscous systems and thin films. <i>V. Prasad, S. A. Koehler and E. R. Weeks</i>              | <b>FM17.</b> Compliance effects in torsional flow of viscoelastic fluids. <i>C. S. Dutcher and D. C. Venerus</i>   | <b>PP2.</b> Rheological aspects of paper coatings. <i>J. Husband and R. Iyer</i>   |
| 10:35 | <b>SC18.</b> A micromechanical approach to the rheological behavior of a suspension of particles in a Herschel-Bulkley fluid. <i>X. Chateau and K. Luu Trung</i> | <b>EP18.</b> Flow-induced crystallization of polybutene-1: From the low shear rate region up to processing rates. <i>J. Baert, P. Van Puyvelde and F. Langouche</i>                      | <b>MR3.</b> Laser tweezer microrheology of colloidal dispersions and gels. <i>E. M. Furst, M. H. Lee and A. Meyer</i>   | <b>FM18.</b> Nonlinear dynamics and stability of film blowing process accompanied by flow-induced crystallization. <i>D. M. Shin, J. S. Lee, H. W. Jung and J. C. . Hyun</i> | <b>PP3.</b> Simulating and improving the application behavior of paper coatings by rheological test methods. <i>J. Laeuger and S. Hietala</i>                                      |
| 11:00 | <b>SC19.</b> Flows of concentrated suspensions in symmetric and asymmetric bifurcations. <i>C. Xi and N. C. Shapley</i>  | <b>EP19.</b> A study of the flow induced crystallization behavior of polyethylene in simple shear and high-rate uniaxial extension. <i>M. Sentmanat, D. Omar and S. G. Hatzikiriakos</i> | <b>MR4.</b> Non-Brownian microrheology of a fluid-gel interface. <i>E. K. Hobbie, S. Lin-Gibson and S. Kumar</i>  | <b>FM19.</b> Rheological characterization and flow simulations of PTFE paste extrusion. <i>P. D. Patil, I. Ochoa, S. G. Hatzikiriakos and J. J. Feng</i>                     | <b>PP4.</b> The influence of dispersant chemistry on calcium carbonate suspension rheology. <i>G. Gagnon, D. J. Neivandt and D. W. Bousfield</i>                                   |
| 11:25 | <b>SC20.</b> Local measurements of the constitutive law of a concentrated noncolloidal suspension through MRI. <i>G. . Ovarlez, F. Bertrand and S. Rodts</i>     | <b>EP20.</b> A new equation to describe melt shear-thinning behavior. <i>J. P. Ibar</i>  | <b>MR5.</b> In-situ monitoring of mechanical properties during photopolymerization with particle tracking microrheology. <i>R. P. Slopek and V. Breedveld</i> | <b>FM20.</b> A molecular approach to fully eradicate sharkskin extrudate distortions in entangled polyethylene. <i>J. F. Vega, M. T. Expósito and J. . Martinez-Salazar</i>  | <b>PP5.</b> Effects of fiber shape on fiber settling dynamics. <i>E. Tozzi, D. Klingenberg, T. Scott and D. Lahey</i>  |
| 11:50 | LUNCH  |  |   |  |  |

### Afternoon

|      |   |   |  |   |  |
|------|---|---|--|---|--|
|      | <i>Vermont</i>  | <i>Massachusetts</i>  | <i>Connecticut</i>   | <i>Rhode Island</i>   | <i>Cumberland/Kennebec</i>   |
|      | <b>Suspensions, Colloids &amp; Granular Matls.</b>  | <b>Rheo. and Struct. of Entang. Polym. Sys.</b>   | <b>Microrheology</b>   | <b>Non-Newt. Fluid Mech., Instab. &amp; Turb.</b>           | <b>Paper, Pulp &amp; Industrial Processes</b>  |
| 1:30 | <b>SC21.</b> A thermodynamically consistent model for the thixotropic rheological behavior of concentrated colloidal star polymer solutions. <i>A. N. Beris and D. Vlassopoulos</i> | <b>EP21.</b> Flow instabilities and constitutive relation in entangled polymer solutions studied by particle tracking velocity. <i>Y. T. Hu and A. Lips</i> | <b>MR6.</b> Rheology and microrheology of microstructured gellan gum systems. <i>M. Caggioni, P. Spicer and D. Weitz</i> | <b>FM21.</b> Rupture of molten polymers. <i>J. M. Dealy</i> | <b>PP6.</b> Rheological tests and process model for frothed carpet compounds. <i>N. Triantafillopoulos, B. Schreiner and D. W. Bousfield</i> |

|      |   |   |   |   |  |
|------|---|---|---|---|--|
| 1:55 | <b>SC22.</b> Yielding, strain softening and shear thinning in dense colloidal suspensions, gels and glasses. <i>V. Kobleev and K. S. Schweizer</i>      | <b>EP22.</b> A first determination of velocity profile of entangled polymer solutions in sliding plate rheometer. <i>P. E. Boukany and S.-Q. Wang</i>   | <b>MR7.</b> Dynamics of individual single-walled carbon nanotubes in water by real-time visualization. <i>N. Fakhri, D. A. Tsyboulski, R. Duggal, R. B. Weisman and M. Pasquali</i>           | <b>FM22.</b> The effect of pre-shear on the extensional rheology of wormlike micelle solutions. <i>A. G. Bhardwaj, D. Richter and J. P. Rothstein</i>             | <b>PP7.</b> Rheological behavior of microbubble suspension in food application. <i>Y. Shen, M. L. Longo and R. L. Powell</i>   |
| 2:20 | <b>SC23.</b> Rheology of soft particle pastes: Macroscopic behavior and microscopic origins. <i>R. T. Bonnecaze and J. R. Seth</i>                      | <b>EP23.</b> Simulation of apparent wall slip in entangled polymer melts using a full-chain stochastic tube model. <i>F. Xu, M. M. Denn and J. D. Schieber</i>  | <b>MR8.</b> Continuum-microscopic computation of constitutive laws for viscoelastic flow. <i>S. M. Mitran</i>   | <b>FM23.</b> Effects of boundary conditions on shear banding in different flow geometries. <i>J. M. Adams, S. M. Fielding and P. D. Olmsted</i>                   | <b>PP8.</b> Connecting linear to non-linear rheology of wheat flour doughs. <i>T. S. Ng and G. H. McKinley</i>   |
| 2:45 | <b>SC24.</b> Soft polymer particle suspensions with controlled particle surface morphology. <i>G. H. Ling and M. T. Shaw</i>                            | <b>EP24.</b> Nonlinear behavior in large amplitude oscillatory shear of entangled polymers. <i>S. S. Ravindranath and S.-Q. Wang</i>  | <b>MR9.</b> Autoregressive (direct) and maximum likelihood (inverse) methods for microrheology simulations and experiments. <i>L. Yao, M. G. Forest, T. Elston and J. Fricks</i>              | <b>FM24.</b> Transient evolution of the shear-banded flow of wormlike micelles. <i>E. Miller and J. P. Rothstein</i>  | <b>PP9.</b> Rheology of mozzarella cheese: Comparison of results from four different rheometers. <i>E. B. Muliawan and S. G. Hatzikiriakos</i>                       |
| 3:10 | <b>SC25.</b> Anomalous temperature behavior of colloidal silica gels in low-MW polyethers. <i>A. M. Sanchez and S. A. Khan</i>                          | <b>EP25.</b> Secondary stress overshoot of polymer solution with bimodal molecular weight distribution in strong shear flows. <i>H. Qi, M. Islam and L. Archer</i>  | <b>MR10.</b> One- and two-particle microrheology of yield-stress fluids. <i>F. K. Oppong and J. de Bruyn</i>  | <b>FM25.</b> A numerical study of dilute wormlike micellar solutions in Taylor-Couette flow. <i>L. F. Rossi</i>   | <b>PP10.</b> The use of intrinsic viscosity measurements to investigate molecular volume and surfactant interactions in heavy oils. <i>G. Robinson</i>               |
| 3:35 |   |   | COFFEE  |   |  |
|      |   |   | <b>Microfluidics, Confined Systems &amp; Films</b>  | <b>Viscoelas. of Solids, Thixotr. &amp; Glasses</b>   |  |
| 4:00 | <b>SC26.</b> Transitions in a vibrated/stirred granular flow. <i>J. F. Gilchrist, K. J. Ford and H. S. Caram</i>  | <b>EP26.</b> Fast shear of binary blends of polymer melts: New constitutive models and experimental results.. <i>K. Jagannathan, D. Auhl, D. J. Read, A. E. Likhman, R. S. Graham, J. Ramirez and T. C. McLeish</i> | <b>MF1.</b> Microscale flows of wormlike micellar solutions in shear and elongation. <i>N. J. Kim, C. J. Pipe, K. H. Ahn and G. H. McKinley</i>   | <b>VS1.</b> Microscopic theory of the nonlinear dynamical properties of polymer glasses. <i>K. Chen and K. Schweizer</i>  | <b>PP11.</b> On tensile testing of concentrated suspensions. <i>A. N. Alexandrou, A. V. Bazilevsky, V. M. Entov, K. Isaev and A. N. Rozhkov</i>                      |
| 4:25 | <b>SC27.</b> Cage dynamics and dynamical heterogeneity in uniformly heated granular media. <i>R. A. Ingale, P. M. Reis, G. Marty and M. D. Shattuck</i> | <b>EP27.</b> Rheology and mesoscale network structure of entangled polystyrene-organoclay solutions. <i>J. Li, J. M. Fitz-Gerald and J. P. Oberhauser</i>   | <b>MF2.</b> Effect of focal conic defects in flow of smectic-A liquid crystals in a microchannel. <i>S. Shojaei-Zadeh and S. L. Anna</i>  | <b>VS2.</b> Ubiquity of soft glassy dynamics in polypropylene-clay nanocomposites. <i>M. A. Treece and J. P. Oberhauser</i>                                       | <b>PP12.</b> Effects of process conditions on dynamics and stability in 2-D film casting process. <i>H. W. Jung, D. M. Shin, J. H. Yun, J. S. Lee and J. C. Hyun</i> |
| 4:50 | <b>SC28.</b> Mean-field theory of glass transitions. <i>M. Tokuyama</i>   | <b>EP28.</b> Rheology of randomly branched poly-vinylidene fluoride. <i>N. Mekhilef and L. Hedhli</i>   | <b>MF3.</b> The transient flow behaviour of worm-like surfactant solutions undergoing a planar extension in micro-fabricated contraction geometries. <i>L. E. Rodd and J. J. Cooper-White</i> | <b>VS3.</b> Aging and solid or liquid behavior in pastes. <i>P. Coussot, G. Ovarlez and X. Chateau</i>  | <b>PP13.</b> Bi-modal and broad molecular weight distribution polypropylene and its effect on rheology and physical properties. <i>S. P. Westphal</i>                |
| 5:15 | <b>SC29.</b> Thixotropy and yield stress behavior of drilling fluids. <i>J. Maxey</i>   | <b>EP29.</b> Viscoelastic behavior of low molecular weight sulfonated polystyrene ionomers. <i>H. Zhao and R. A. Weiss</i>  | <b>MF4.</b> Rheological properties of polymer melts in confined shear flow from dynamic Monte Carlo simulations. <i>J. R. Dorgan</i>  | <b>VS4.</b> Nonlinear rheology and ageing of soft colloidal glasses. <i>G. Petekidis and D. Vlassopoulos</i>  | <b>PP14.</b> Solid state viscometers for industrial process control and asset management.. <i>J. C. Andle</i>  |
| 5:40 | <b>SC30.</b> A model for ageing dynamics in laponite suspensions. <i>Y. M. Joshi</i>  | <b>EP30.</b> Dynamics of flexible ring polymers in obstacle environment. <i>B. Iyer, V. Juvekar and A. Lele</i>   | <b>MF5.</b> Viscoelastic effects in a three-dimensional curved micro channel flow. <i>P. D. Anderson</i>  | <b>VS5.</b> Linear viscoelasticity and non-linear transitions in a soft colloidal glass of star polymers. <i>M. E. Helgeson, N. J. Wagner and D. Vlassopoulos</i> | <b>PP15.</b> Case studies in practical, applied rheometry. <i>D. J. Mooney</i>   |
| 6:05 |   |   | END   |   |  |
| 6:10 |   |   | BUSINESS MEETING Massachusetts  |   |  |
| 7:00 |   |   | AWARDS RECEPTION Casco Bay Exhibit Hall   |   |  |
| 8:00 |   |   | AWARDS BANQUET Vermont  |   |  |

# Wednesday, October 11

## Morning

|       |  |  |  |   |
|-------|--|--|--|---|
| 8:30  | PL3. Do you speak thermodynamics? <u>H. C. Öttinger</u> Vermont  |  |  |   |
| 9:20  | COFFEE   |  |  |   |
|       | <b>Vermont</b>   | <b>Massachusetts</b>   | <b>Connecticut</b>   | <b>Rhode Island</b>   |
|       | <b>Blends, Emulsions and Multiphase Flows</b>  | <b>Polym. Sol. Rheology: Modeling &amp; Expts.</b>   | <b>Microfluidics, Confined Systems &amp; Films</b>   | <b>Viscoelas. of Solids, Thixotr. &amp; Glasses</b>   |
| 9:45  | <b>BE1.</b> Large scale simulations of concentrated suspensions of elastic spheres: Ordering, shear thickening and jamming. <u>K. F. Higa and J. L. Higdon</u>                                       | <b>PS1.</b> Experimental assessment of the Zimm model for dilute polymer solutions. <u>T. P. Lodge</u>   | <b>MF6.</b> Orientational dynamics of polydiacetylene monolayers. <u>A. Y. Wong, J. S. Samuel, A. J. Goffin, S. Swanson, J. C. Scott, B. Miller and G. G. Fuller</u>                     | <b>VS6.</b> The affect of applied strain during weathering exposure on the rheological properties of elastomers. <u>C. C. White, K. T. Tan, D. Benatti and D. Hunston</u>   |
| 10:10 | <b>BE2.</b> Optimization of polypropylene/polystyrene/clay blend nanocomposites: An on-line morphological and rheological study. <u>J. M. Maia, S. Cho, K. H. Han, A. V. Machado and J. A. Covas</u> | <b>PS1 continues</b>   | <b>MF7.</b> Effects of temperature and chemical modification on polymer Langmuir films. <u>G. T. Gavranovic, M. M. Smith, A. Y. Wong and G. G. Fuller</u>                                | <b>VS7.</b> A high strain rate tensile test instrument for rubber: Development and performance. <u>P. H. Mott, H. Schrader, J. A. Pathak, D. F. Roland and C. M. Roland</u> |
| 10:35 | <b>BE3.</b> Negative normal stresses in polymer nanocomposites. <u>B. H. Cipriano, G. T. Cheng, T. Kashiwagi, J. F. Douglas and S. Raghavan</u>  | <b>PS2.</b> Linear viscoelasticity of semidilute polymer solutions. <u>R. H. Colby</u>   | <b>MF8.</b> Thermoviscoelastic response of ultrathin polymer films: A nanobubble inflation method of determining the absolute creep compliance. <u>G. B. McKenna and P. A. O'Connell</u> | <b>VS8.</b> Microstructure, rheological behavior and yield stress measurement of concentrated surfactants. <u>M. Y. Castro, C. W. Macosko, D. W. Giles and T. Moaddel</u>   |
| 11:00 | <b>BE4.</b> Deformation, orientation, and alignment during shear and elongation of a polycarbonate/carbon nanotubes composite in the melt. <u>U. A. Handge and P. Pötschke</u>                       | <b>PS3.</b> Testing universcal scaling of rheological properties in semi-dilute polymer solutions. <u>Y. Heo and R. G. Larson</u>                | <b>MF9.</b> Evaporation induced self assembly and rheology change during sol-gel coating. <u>C. Lee and A. Shen</u>  | <b>VS9.</b> Instrument compliance problems in linear viscoelasticity measurements. <u>C.-Y. Liu, R. Keunings, C. Bailly, M. L. Yao and A. J. Franck</u>                     |
| 11:25 | <b>BE5.</b> Rheological properties of short fiber filled polypropylene in extensional flow. <u>J. Férec, J. R. R. Siffert, M.-C. Heuzey, P. J. Carreau and G. Ausias</u>                             | <b>PS4.</b> Ergodicity-breaking and glassy dynamics in the mixed flows of single polymer molecules. <u>E. S. Shaqfeh, V. Beck and B. Hoffman</u> | <b>MF10.</b> Conformational anisotropy and glassy dynamics in polymer thin films. <u>F. T. Oyerokun, K. Schweizer, A. Cavallo and M. Mueller</u>   | <b>VS10.</b> Shear waves generated by the motion of a sphere in a viscoelastic fluid. <u>H. Tabuteau, D. Sikorski and J. de Bruyn</u>                                       |
| 11:50 | LUNCH  |  |  |   |

## Afternoon

|      |  |  |   |  |
|------|--|--|---|--|
|      | <b>Vermont</b>   | <b>Massachusetts</b>   | <b>Connecticut</b>  | <b>Rhode Island</b>  |
|      | <b>Blends, Emulsions and Multiphase Flows</b>  | <b>Polym. Sol. Rheology: Modeling &amp; Expts.</b>   | <b>Microfluidics, Confined Systems &amp; Films</b>  | <b>General Papers</b>  |
| 1:30 | <b>BE6.</b> Generating monodisperse droplets in water/oil/surfactant systems using micro- to macro-scale co-flow cells. <u>M. R. Duxenneuner, J. J. Cooper-White, P. Fischer and E. J. Windhab</u> | <b>PS5.</b> Transient behavior of a tethered chain in uniform solvent flow. <u>A. Mohan and P. S. Doyle</u>  | <b>MF11.</b> Single drop dynamics in confined geometries. <u>A. Vananroye, P. Van Puyvelde and P. Moldenaers</u>  | <b>GP1.</b> Rigid random coils of carbon nanotubes. <u>H. S. Lee, C. H. Yun, H. M. Kim, M. Park and H. Lee</u>   |
| 1:55 | <b>BE7.</b> Dynamics of colloidal consolidation process inside an emulsion droplet. <u>D. Wang, P. Spicer and A. Shen</u>  | <b>PS6.</b> Molecular simulation investigation of cross-stream migration of chain molecules in nanofluidic channels. <u>R. Khare</u>   | <b>MF12.</b> Brownian dynamics simulations of the effect of polymer branching on electrophoresis through narrow constrictions. <u>Y. M. Lee and Y. L. Joo</u> | <b>GP2.</b> Understanding polymer nanofiber electrospinning: Kinematic measurements and dimensional analysis. <u>M. E. Helgeson, K. N. Grammatikos, N. J. Wagner and J. M. Deitzel</u> |
| 2:20 | <b>BE8.</b> Influence of interfacial tension on the morphology of polymer blends. <u>C. Tufano, G. W. Peters, P. Van Puyvelde and H. E. Meijer</u>   | <b>PS7.</b> Migration, excluded volume and apparent slip in confined flowing polymer solutions: Concentration effects. <u>J. P. Hernandez-Ortiz, J. J. de Pablo and M. D. Graham</u> | <b>MF13.</b> Single molecule visualization of polymers in flow through porous media. <u>C. D. DeLong and D. A. Hoagland</u>                                   | <b>GP3.</b> Modeling polymer melts containing short and long glass fibers: Part I Transient rheology. <u>A. P. Eberle, G. M. Velez, D. G. Baird and P. Wapperom</u>                    |

- 2:45 **BE9.** Effects of compatibilizer on immiscible polymer blends near phase inversion. *J. D. Martin and S. S. Velankar*
- 3:10 **BE10.** Coalescence suppression and interfacial tension in reactively compatibilized polymer blends. *Y. Huo, G. Groeninckx and P. Moldenaers*
- 3:35
- 4:00 **BE11.** Equilibrium dynamics of a polymer bicontinuous microemulsion. *K. L. Brinker, W. R. Burghardt and S. Mochrie*
- 4:25 **BE12.** Component terminal dynamics in PEO / PMMA blends. *I. Zeroni, S. Ozair and T. P. Lodge*
- 4:50 **BE13.** Rheology and processing of LLDPE/LDPE blends: Long chain branching effects. *D. Omar, S. G. Hatzikiriakos, J. J. Feng and M. Sentmanat*
- 5:15 **BE14.** Crystallization of shape memory binary blends containing one crystallizable component. *C. J. Campo and P. T. Mather*
- 5:40 **BE15.** Prediction of crystalline structure formation in flowing polymer melts. *R. J. Steenbakkers, G. W. Peters and H. E. Meijer*
- 6:05
- 6:10
- PS8.** Wormlike micellar solutions: A model and comparison with experiment. *P. A. Vasquez, P. Cook and G. H. McKinley*
- PS9.** A Computational investigation into the effect of inhomogeneities in various models of wormlike micelles. *L. Zhou, P. Cook and P. A. Vasquez*
- PS10.** Structure and rheology of shear-banding wormlike micellar solutions. *N. J. Wagner, F. Nettesheim and E. Kaler*
- PS11.** Rheo-optics of equilibrium polymer solutions: Wormlike micelles in planar elongational flow generated in a microfluidic cross-slot. *J. A. Pathak and S. D. Hudson*
- PS12.** Persistence of rheochaos with hydrodynamic feedback and spatial coherence in confined plate-driven shear of nematic polymers. *R. Zhou, M. G. Forest and Q. Wang*
- PS13.** Rheology of nematic liquid crystal polymers in small amplitude oscillatory shear flow. *E. P. Choate and M. G. Forest*
- PS14.** On solutions of Smoluchowski equation for solutions of rigid nematic polymers. *Q. Wang, M. G. Forest and R. Zhou*
- MF14.** Drop deformation in shear flow between parallel plates. *P. A. Janssen, P. D. Anderson and H. E. Meijer*
- MF15.** Simulations of DNA electrophoretic stretching in microfluidic contractions. *J. M. Kim and P. S. Doyle*
- MF16.** Effect of flexibility on the shear-induced migration of short polymers in parabolic channel flow. *D. Saintillan, E. S. Shaqfeh and E. Darve*
- MF17.** Retention of polymer molecules in a cavity: A Lattice Boltzmann study. *H. Ma, J. J. de Pablo and M. D. Graham*
- MF18.** Confined diffusion of ds-DNA in slit-like nano-channels. *A. G. Balducci, P. Mao, J. Han and P. S. Doyle*
- MF19.** Structure and dynamics of multiphase flows in microchannels. *S. M. Hashmi, M. Lowenberg and E. Dufresne*
- MF20.** Particle migration in 1D, 2D, and 3D microchannel flows. *J. F. Gilchrist and C. Gao*
- GP4.** In situ synchrotron studies of structure development during injection molding of a liquid crystalline polymer. *W. R. Burghardt and S. Rendon*
- GP5.** Some considerations on aspects of yield stress based on computational modeling. *N. S. Martys*
- GP6.** Shear and effective elongational rheology and polymer molecular characteristics. *X. Wei, J. R. Collier and S. Petrovan*
- GP7.** Investigating the steady and transient non-linear rheology of wormlike micellar solutions. *C. J. Pipe, N. J. Kim and G. H. McKinley*
- GP8.** Shear induced long-range alignment of BCC ordered block-copolymers. *P. Mandare and H. H. Winter*
- GP9.** Mechanical hole burning spectroscopy in block copolymers: Hole burning through the order-disorder transition. *G. B. McKenna, Q. Qin and X. Shi*
- GP10.** On-line characterisation of small-scale polymer processing. *J. M. Maia, P. Teixeira, J. A. Covas and O. S. Carneiro*
- COFFEE
- END
- POSTER SESSION & RECEPTION Casco Bay Exhibit Hall

# Thursday, October 12

## Morning

|       | <i>Vermont</i>  | <i>Massachusetts</i>   | <i>Connecticut</i>  | <i>Rhode Island</i>   |
|-------|---|--|---|---|
|       | <b>Blends, Emulsions and Multiphase Flows</b>   | <b>Polym. Sol. Rheology: Modeling &amp; Expts.</b>   | <b>Microfluidics, Confined Systems &amp; Films</b>  | <b>General Papers</b>   |
| 8:05  | <b>BE16.</b> Shear-thickening of an emulsion stabilized with hydrophilic silica particles. <i>B. Wolf, W. J. Frith and M. Kirkland</i>  | <b>PS15.</b> Probing the origin of nonlinear velocity profiles in shear flow of entangled polymers. <i>S. S. Ravindranath and S.-Q. Wang</i>                           | <b>MF21.</b> Flow instabilities of two-phase immiscible fluids in microfluidic devices. <i>J. S. Lee, R. Dylla-Spears and S. J. Muller</i>  | <b>GP11.</b> Rheology of polymer/clay nanocomposites. <i>M. K. Dolgovskij, C. W. Macosko and J. Vermant</i>   |
| 8:30  | <b>BE17.</b> Stability and rheology of particle stabilised emulsions produced using hydrophilic silica particles in the presence of multivalent cations. <i>W. J. Frith, R. Pichot, M. Kirkland and B. Wolf</i> |  | <b>MF22.</b> Effects of geometry and fluid elasticity during polymeric droplet pinch-off in microfluidic environments. <i>A. Shen, R. Sureshkumar and B. Steinhaus</i>                            | <b>GP12.</b> Quiescent and flow-induced crystallization of polypropylene-clay nanocomposites. <i>M. A. Treece and J. P. Oberhauser</i>  |
| 8:55  | <b>BE18.</b> Pressure drops for two phase droplet flow in microfluidic channels. <i>B. J. Adzima and S. S. Velankar</i>   | <b>PS17.</b> Opening the black box of large step strain experiments. <i>S.-Q. Wang and S. S. Ravindranath</i>  | <b>MF23.</b> Stable jets of viscoelastic fluids and self-assembled cylindrical capsules by hydrodynamic focusing in microfluidic devices. <i>K. V. Edmond, A. D. Dinsmore and J. P. Rothstein</i> | <b>GP13.</b> Dynamic rheology of thermoplastic elastomer gels derived from poly[styrene- <i>b</i> -(ethylene- <i>co</i> -butylene)- <i>b</i> -styrene] triblock copolymers and aliphatic oils. <i>R. Shankar, S. A. Khan, R. R. Bukovnik, T. K. Ghosh and R. J. Spontak</i> |
| 9:20  | <b>BE19.</b> Simulation of pulsating blood flow in a stenosed artery. <i>D. Lacasse and R. G. Owens</i>   | <b>PS18.</b> Generalized Brownian configuration fields for Fokker-Planck equations including center-of-mass diffusion. <i>J. D. Schieber</i>                           | <b>MF24.</b> Physical properties of shear gel particles created using microfluidic channels. <i>G. Christopher and S. L. Anna</i>   | <b>GP14.</b> Solvent driven gelation and melting of poly(vinyl alcohol) hydrogels. <i>G. J. Braithwaite and N. Turner</i>   |
| 9:45  | <b>BE20.</b> A new microstructure-based constitutive model for human blood: Homogenous and non-homogenous flows. <i>M. A. Moyers-Gonzalez and R. G. Owens</i>   | <b>PS19.</b> Hi fidelity coarse grained models for dynamics of dilute polymeric solutions. <i>V. Venkataramani, R. Sureshkumar and B. Khomami</i>                      | <b>MF25.</b> Bubble trains in non-Newtonian fluids. <i>M. Sullivan, D. Angelescu and H. A. Stone</i>  | <b>GP15.</b> Viscoelastic properties of blood in evaluation of sub-lethal damage to RBCs in blood-contacting devices. <i>P. J. Marascalco, S. P. Ritchie, T. A. Snyder and M. V. Kameneva</i>   |
| 10:10 |   |  | COFFEE  |   |
| 10:35 | <b>BE21.</b> Long-range stress-relaxation by local bubble rearrangements in foam. <i>H. Bissig, D. Sessoms, A. Duri, L. . Cipelletti and V. Trappe</i>  | <b>PS20.</b> Schmidt number effects in DPD simulation of polymer solutions. <i>V. Symeonidis, B. Caswell and G. E. Karniadakis</i>                                     | <b>MF26.</b> Drag reduction and mixing enhancement of laminar flows in microchannels with micro-patterned ultrahydrophobic walls. <i>J. Ou, G. Moss and J. P. Rothstein</i>                       | <b>GP16.</b> Mechanical, optical and thermal conductivity measurements on a cross-linked polybutadiene in uniaxial elongation. <i>D. C. Venerus and D. N. Kolev</i>   |
| 11:00 | <b>BE22.</b> Simulation of bubble growth in polymer foaming. <i>P. Yue, J. J. Feng and C. A. Bertelo</i>  | <b>PS21.</b> Simulation of the rheology of concentrated polymer solutions by dissipative particle dynamics (DPD). <i>C. W. Manke, Z. Kas, I. Macioce and J. Potoff</i> | <b>MF27.</b> Effects of drag-reducing polymers on blood flow in bifurcated microchannels. <i>J. N. Marhefka, R. Zhao, S. S. Velankar, H.-H. Hu and M. V. Kameneva</i>                             | <b>GP17.</b> Stress birefringence patterns and microstructure in strong extensional flows: Multiscale modeling and flow visualizations of long-chain branched polyethylenes. <i>D. H. Klein, T. C. McLeish, O. G. Harlen, D. G. Hassell and M. R. Mackley</i>               |
| 11:25 | <b>BE23.</b> The shear modulus of particle-laden foam. <i>A. M. Kraynik, S. Cohen-Addad, R. Hohler and D. A. Reinelt</i>  | <b>PS22.</b> Transient conformational change of bead-spring ring chain during creep process. <i>H. Watanabe</i>  | <b>MF28.</b> Microfluidic device for measuring red blood cell (RBC) deformability under the extensional flow. <i>S. S. . Lee, Y. Yim, J. S. Hong, K. H. Ahn and S. J. Lee</i>                     | <b>GP18.</b> A molecular dynamics study of the stress-optical behavior of a linear short-chain polyethylene melt under shear. <i>C. Baig, B. J. Edwards and D. J. Keffer</i>  |
| 11:50 | <b>BE24.</b> The shape of bubbles and drops rising in a nematic liquid crystal. <i>C. Zhou, P. Yue, J. J. Feng, C. Liu and J. Shen</i>  | <b>PS23.</b> Crosslinking of water-soluble polymers. <i>P. E. Clark</i>  | <b>MF29.</b> Deformability-based analysis of red blood cells flowing in microchannels. <i>G. Tomaiuolo, M. Simeone and S. Guido</i>   | <b>GP19.</b> Modeling reactive displacements along plane channels. <i>K. Wielage, J. J. Feng and I. A. Frigaard</i>   |
| 12:15 | <b>BE25.</b> Dynamic interfacial tensiometry. <i>S. D. Hudson and J. A. Pathak</i>  | <b>PS24.</b> Disentanglement behavior of DNA solutions as probed with particle-tracking velocimetry. <i>P. E. Boukany and S.-Q. Wang</i>                               | <b>MF30.</b> Shear banding of polymer blends. <i>A. Ferrara, S. Caserta, M. Simeone and S. Guido</i>  | <b>GP20.</b> Thermoforming cones and cups. <i>M. A. Kershner and A. J. Giacomin</i>   |
| 12:40 |   |  | END   |   |



## Poster Session

Wednesday 6:10 PM Casco Bay Exhibit Hall

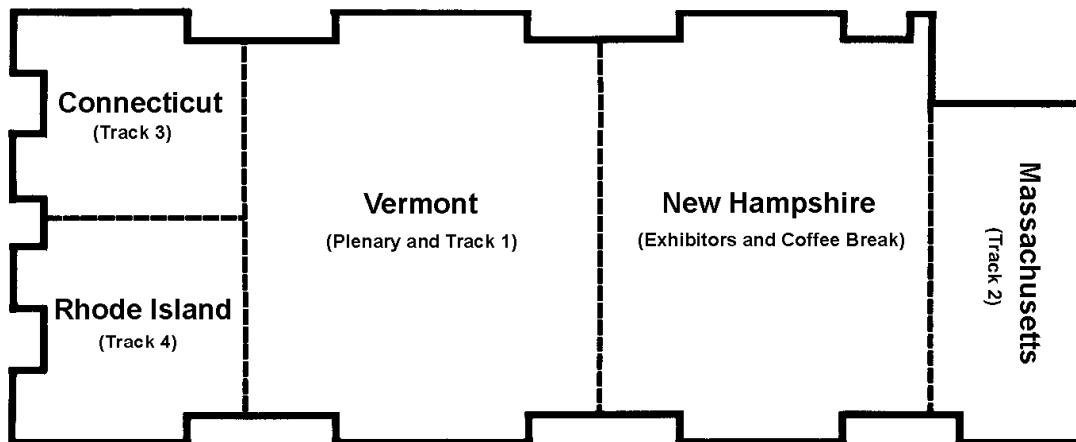
- PO1.** Non-contact measurement and control of the upper platen on a combined motor and transducer rheometer. A. Elmoumni and A. J. Franck
- PO2.** The AR-G2 magnetic bearing rheometer with a Du Noüy ring for interfacial rheological measurements. A. J. Franck and B. Costello
- PO3.** The specification of controlled torque rheometers. B. Costello, R. E. Smith, R. Ulbrich and A. J. Franck
- PO4.** A study of the rheological properties and droplet size distributions of some common nasal decongestant spray formulations. M. Bumiller and P. Rolfe
- PO6.** Rheology of heterogeneous polymer melts. C. L. Rohn, P. P. Rolfe and E. Bennett
- PO7.** Rheological measurements on fresh building materials. M. Haist, H. S. Müller, C. Küchenmeister and J. Nijman
- PO8.** Determination of the mechanical properties of a PVC coated wire with a new clamping fixture for rotational rheometers. J. Nijman and J. P. Plog
- PO9.** New and improved devices for measuring Electro- (ERF) and Magneto Rheological Fluids (MRF). J. Laeuger and P. Heyer
- PO10.** A comparison of extensional rheometers for polymer solutions. R. Clark, M. van der Wielen, N. Henderson and G. Thurston
- PO11.** An end users experience with the CaBER for water soluble polymers. M. van der Wielen
- PO12.** Experimental rheophysical investigation on concentrated noncolloidal particle suspensions in a wide-gap Couette cell. S. Wiederseiner and C. Ancey
- PO13.** Processing of polypropylene-clay nanocomposites: Single-screw extrusion with in-line supercritical carbon dioxide feed versus twin-screw extrusion. M. A. Treece and J. P. Oberhauser
- PO14.** Rheology and microstructure of organoclay dispersions. J. Li and J. P. Oberhauser
- PO15.** Soft glassy rheology of thermoreversible colloidal gels. G. Yin and M. J. Solomon
- PO16.** Fluorocarbon-based colloidal systems with triblock copolymers. X. Pan and S. R. Bhatia
- PO17.** Shear induced particle migration in binary colloidal suspensions. D. B. Semwogerere and E. R. Weeks
- PO18.** Aligning single-wall carbon nanotubes in soft media with external fields. J. A. Fagan, E. K. Hobbie and B. J. Bauer
- PO19.** Flow-SAXS studies of silica nanoparticles in polymer solutions. F. Snijkers and J. Vermant
- PO20.** Mason numbers for magnetorheology. D. Klingenberg, J. C. Ulicny and M. A. Golden
- PO21.** Reciprocity relations between Stokes flows of viscous and viscoelastic fluids. M. G. Forest, K. Xu and I. Klapper
- PO22.** Transient microrheology of heterogeneous gels. J. Sato and V. Breedveld
- PO23.** The characterization of droplet generation in branched microchannel. S. S. Lee, D. Choi, Y. Yim, K. H. Ahn and S. J. Lee
- PO24.** Colloidal particle suspension flow and transport behavior in small channels by Magnetic Resonance Microscopy. J. R. Brown, J. D. Seymour, S. L. Codd, G. R. Cokelet and M. Nydén
- PO25.** Biomechanics and micro-rheology in a primitive virtual cell. S. A. Sandersius and T. J. Newman
- PO26.** Effect of nanofluid on bubble behaviors and CO<sub>2</sub> absorption. W.-G. Kim, H. U. Kang and S. H. Kim
- PO27.** Rheology and phase behavior of nanostructured polyurethane/POSS hybrid dispersions prepared from homogeneous solution polymerization. S. A. Madbouly, J. U. Otaigbe, A. K. Nanda and D. A. Wicks
- PO28.** Rheology and crystallization behavior of nanostructured mPP/PC blend prepared via in situ polymerization and compatibilization. S. A. Madbouly and J. U. Otaigbe
- PO29.** Evaluation of viscous behavior for immiscible polymer blends. G. Sodeifian and M. Jamshidnejad
- PO30.** Varying phase continuity in polymer blends by sequence of mixing. J. D. Martin and S. S. Velankar
- PO31.** Elastic modulus and yield stress of suspensions of noncolloidal particles in yield stress fluids. G. Ovarlez, F. Mahaut, N. Roussel and P. Coussot
- PO32.** Dynamics in miscible blends of polystyrene and poly(vinyl methyl ether). W. Liu and R. H. Colby
- PO33.** Comparison of short and long chain polyethylene atomistic dynamics under shear and planar elongational flows. J. M. Kim, C. Baig, B. J. Edwards and D. J. Keffer
- PO34.** Three-dimensional simulations in contractions: Diverging flow, off-centre velocity maxima and “cat’s ears”. M. A. Alves and R. J. Poole

- PO35.** Prediction capability of a constitutive equation derived from reversible network with non-interacting dumbbell model. *A. Sunarso and T. Yamamoto*
- PO36.** Cavitation between a moving sphere and a plane in near contact hydrodynamic flow. *S. Feng, C. Heath, J. Day, A. Meilstrup, M. Salazar, P. Reardon, M. Ingber and A. Graham*
- PO37.** Simulation of Oldroyd-B and PTT fluids through abrupt contractions using an Arbitrary Lagrangian Eulerian (ALE) based finite element method. *V. Ganvir, B. P. Gautham, R. Thoakar and A. Lele*
- PO38.** Comprehensive modeling of nonisothermal polymer jets in melt electrospinning. *E. Zhmavev, H. Zhou and Y. L. Joo*
- PO39.** Visualization of the distribution of glass fibers in molten polypropylene through a circular die. *J. Pérez-González, E. Vázquez-Otero and L. de Vargas*
- PO40.** Enthalpic viscosity. *J. P. Ibar*
- PO41.** Time-dependent relaxation in cellulose based gels. *F. K. Oppong and J. de Bruyn*
- PO42.** Rheology of blood in men and pre-menopausal women: Potential risk factors for development of cardiovascular diseases. *M. V. Kameneva*
- PO43.** Gastric mucin exhibits pH dependent sol-gel transition. *J. P. Celli, B. S. Turner, N. H. Afdhal, R. Ewoldt, G. H. McKinley, R. Bansil and S. Erramilli*
- PO44.** Determining motor inertia of a stress-controlled rheometer for more accurate measures near speaking frequencies. *S. A. Klemuk and I. R. Titze*
- PO45.** Using rheological and tribological methods to better assess mouthfeel of food systems. *W. R. Aimutis, S. K. Baier, S. J. Debon, B. Guthrie, P. Heyer, J. Laeuger and J. Vanhemelrijck*
- PO46.** Gastropod locomotion: How tuned are the properties of the mucus? *E. Lauga and A. E. Hosoi*
- PO47.** Rheological properties of lysozyme in ethanol-water mixtures. *D. Sessoms, I. Bischofberger and V. Trappe*
- PO48.** Viscoelastic characterization for optimization of the soft-tissue seal around osseointegrated lower-limb prosthetics. *B. Holt, A. Tripathi, R. Clifton and J. Morgan*
- PO49.** Time dependent effect of D-penicillamine on the viscosity of hyaluronic acid solutions. *W. E. Krause and J. Liang*
- PO50.** Slip during viscometric flows of viscoplastic liquids. *P. R. de Souza Mendes, F. H. Marchesini and P. Mey*
- PO51.** Correlation length of salt-free polyelectrolyte solutions investigated by rheology and SAXS. *S. Dou and R. H. Colby*
- PO52.** Synthesis and rheology of hydrophobically modified poly(vinyl alcohol)[HMPVA] using gallic acid derivatives. *A. Shedge, A. Lele, P. Wadgaonkar and M. Badiger*
- PO53.** Torque and normal force responses of glassy polymers: Evidence of the influence of side group beta-relaxations. *G. B. McKenna and A. L. Flory*
- PO54.** Examination of the pom-pom constitutive equation for two polymers melts set. *G. Sodeifian*
- PO55.** MD simulation of polymer melt: Chain architecture, potential model and DPD thermostat. *Y. Wang, F. Y. Hansen, G. Peters and O. Hassager*
- PO56.** Rheological modeling of warpage in polymeric products by plug-assisted vacuum thermoforming. *H. Hosseini*
- PO57.** Rheological method for prediction of the quality of dispersion in composites. *H. Hosseini*
- PO58.** Dynamics, stability and sensitivity of slot-fed curtain coating flow. *S. I. Youn, D. M. Shin, J. S. Lee, H. W. Jung and J. C. Hyun*
- PO59.** Determination and analysis of the pressure dependence of the viscosity of molten polymers. *R. Cardinaels, P. Van Puyvelde and P. Moldenaers*
- PO60.** Microstructure and LCB differences in tubular and CSTR polyolefins and ethylene copolymers. *P. M. Cotts*
- PO61.** Viscous and elastic properties of linear and short-chain branched polyethylenes. *F. J. Stadler, J. Kaschta and H. Miinstedt*
- PO62.** Elastic breakup of entangled polymers in shear: What is chain disentanglement? *S.-Q. Wang, P. E. Boukany and S. S. Ravindranath*
- PO63.** New understanding on polymer wall slip. *Y. Wang, P. E. Boukany and S.-Q. Wang*
- PO64.** Distinguishing between shear banding and shear thinning behavior in entangled systems. *Y. T. Hu*
- PO65.** Cooperative networks: Viscoelastic control in solutions of wormlike micelles and polymers. *M. W. Liberatore, N. Wyatt and N. Work*
- PO66.** Sensitivity and stability analysis of fiber spinning process accompanied by flow-induced crystallization. *D. M. Shin, J. H. Yun, J. S. Lee, H. W. Jung and J. C. Hyun*
- PO67.** Electromechanical response of highly filled SEBS/carbon conductive composites. *R. Ibarra, O. E. Rodríguez, M. E. Mendoza and A. Márquez*

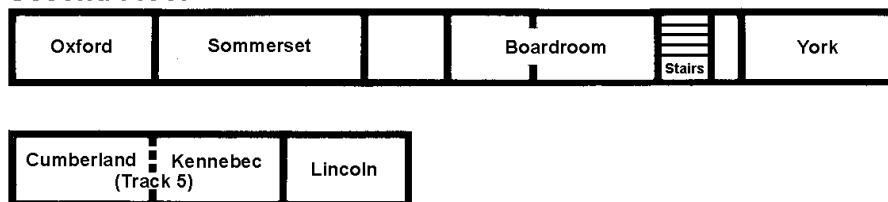
- PO68.** Analysis of the upstream plane Poiseuille flow of a shear banding micellar solution and its relation with flow instabilities. *J. Pérez-González, B. M. Marín-Santibáñez, L. de Vargas and G. Huelsz*
- PO69.** Effect of strain % on the viscosity-frequency curve of polymeric melt. *J. P. Ibar*
- PO70.** Rheo-SANS at NIST Center for Neutron Research. *L. Porcar, P. D. Butler and N. J. Wagner*
- PO71.** Active laser tweezer microrheology of colloidal suspensions. *I. Gopal and E. M. Furst*
- PO72.** Quantification of the effects of cellular microstructure on high density flexible foam mechanical properties. *T. Marks, S. Gleiman and F. Milstein*

## Floor Plan – Holiday Inn By The Bay

### Main Level (State of Maine Grand Ballroom)



### Second Floor



## Social Program

**Sunday, October 8**

**Welcoming Reception**

7:00 PM – 9:00 PM Vermont/Connecticut/Rhode Island  
*Sponsored by a generous contribution from TA Instruments*

**Monday, October 9**

**Society Luncheon**

11:50 AM – 1:50 PM Casco Bay Exhibit Hall

**Society Reception**

7:00 PM – 9:00 PM Portland Museum of Art  
*Sponsored in part by a generous contribution from Malvern Instruments*

**Tuesday, October 10**

**Society Business Meeting**

6:10 PM Massachusetts

**Awards Reception**

7:00 PM Casco Bay Exhibit Hall  
*Sponsored by a generous contribution from Xpansion Instruments*

**Awards Banquet**

8:00 PM Vermont

**Wednesday, October 11**

**Poster Session Reception**

6:10 PM – 8:10 PM Casco Bay Exhibit Hall  
*Sponsored by a generous contribution from Anton-Paar USA*

*The Society gratefully acknowledges the support by the Department of Chemical and Biological Engineering at the University of Maine in hosting the meeting. The Society also gratefully acknowledges the generous contributions of the event sponsors.*