THE SOCIETY OF RHEOLOGY

72ND ANNUAL MEETING
PROGRAM

Westin Resort
Hilton Head Island, South Carolina
February 11-15, 2001

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3M Company

Local Arrangements:
Donald G. Baird, Virginia Tech.

Abstract Book Editor and Webmaster:
Albert Co, University of Maine
<table>
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<th>Session</th>
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<td>17:30</td>
<td>Business Meeting</td>
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<td>18:00</td>
<td>Awards Banquet</td>
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**Session Codes**

AS = Associating Polymers and Surfactant Systems  
BC = Blends and Co-polymers  
CG = Rheology in Confined Geometries and Microfluidic Applications  
EA = Elastomers, Adhesives & Soft Solids  
EF = Extensional Flow & Extensional Rheometry  
FB = Food and Biopolymers  
FD = Non-Newtonian Fluid Dynamics & Flow Stability  
LC = Liquid Crystalline Systems  
MR = Microscopic Rheology & Single Chain Dynamics: Experiments & Analysis  
MS = Polymer Melts and Solutions  
PF = Rheology in Processing Flows  
PL = Plenary Lectures  
RT = Rheology & Topology  
SC = Suspensions and Colloidal Systems
# Contents

Plenary Lectures ................................................................. 2

Social Program..................................................................... 2

Updates of Abstract Book................................................... 3

Technical Program............................................................. 4

  Monday ........................................................................... 4

  Tuesday ......................................................................... 6

  Wednesday ...................................................................... 8

  Thursday ....................................................................... 10

Poster Session .................................................................... 12

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Plenary Lectures

8:30 AM Barnwell

Monday, February 12 Yield, slip & aging: The fate of soft dispersions
Ludwik Leibler
CNRS/ATOFINA Joint Research Center

Tuesday, February 13 Bingham Lecture
The microdynamics of drop breakup and coalescence in flow
L. Gary Leal
Chemical Engineering, University of California, Santa Barbara

Wednesday, February 14 Structure and dynamics of surfactant mesophases
Robert K. Prud'homme
Chemical Engineering, Princeton University

Social Program

Sunday, February 11 Welcoming Reception
6:30 PM - 9:00 PM Archer/Barnwell
Sponsored partly by TA Instruments

Monday, February 12 Poster Session Refreshments
5:30 PM – 8:00 PM Savannah Foyer North

Society Reception
7:00 PM - 9:00 PM Pool Terrace
Sponsored partly by Rheometric Scientific, Inc.

Tuesday, February 13 Business Meeting
5:30 PM Lady Davis/Sampson

Awards Reception
7:00 PM Savannah Foyer North
Sponsored partly by Paar Physica

Awards Banquet
8:00 PM Calibogue
Updates of Abstract Book

- The Plenary Lectures will be held in Barnwell.

- The Poster Session and Student Poster Competition will be held on February 12 (Monday) from 5:30 PM to 8:00 PM at Savannah Foyer North.
# Monday, February 12

## Morning

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>8:30</td>
<td>PL1.</td>
<td>Yield, slip &amp; aging: The fate of soft dispersions.</td>
<td>L. Leibler</td>
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<td>9:45</td>
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<td>COFFEE</td>
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<tr>
<td>10:00</td>
<td>Drayton&lt;br&gt;Rheology &amp; Topology</td>
<td>RT1. Influence of long-chain branching on linear viscoelastic properties of polyethylene melts. C. Gabriel and H. Münstedt</td>
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<tr>
<td>10:10</td>
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<td>PF2. Shear induced PE alignment in the TLCP/PE blend system.</td>
<td>C.-K. Chan and P. Gao</td>
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<td>11:00</td>
<td>Elliott&lt;br&gt;Confined Geometries</td>
<td>CG1. Lateral dispersion of particles and mammalian cells in microchannels. B. Wang, A. W. Chow and M. Spaid</td>
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<td>11:50</td>
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<td>LUNCH</td>
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## Afternoon

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<th>Time</th>
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<tr>
<td>1:30</td>
<td>Lady Davis/Sampson&lt;br&gt;Rheology in Processing Flows</td>
<td>EF1. Transient extensional rheology and elongational flow instabilities of polymer solutions: Role of polymer concentration and molecular weight. O. F. Brauner and G. H. McKinley</td>
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<tr>
<td></td>
<td>Elliott&lt;br&gt;Confined Geometries</td>
<td>CG6. 2D electrophoresis and flow of DNA chains. G. G. Fuller, D. J. Olson and E. Stancik</td>
<td></td>
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</tbody>
</table>
1:55 **EF2.** A technique for characterizing complex polymer solutions in extensional flows. G. Braithwaite and S. H. Spiegelberg

2:20 **EF3.** Elongational relaxation times of elastic fluids measured by micro-filament rheometry and axisymmetric contraction flows. G. M. Wise and G. W. Reynolds

2:45 **EF4.** Spray drop breakup and elongational viscosity measurements of dilute polymer solutions. R. K. Prud’homme, V. Smith-Romanogli and R. Dexter

**RT7.** Dynamics of topological mixtures. E. Stiakakis, D. Vlassopoulos, G. Fytas and J. Roovers

**RT8.** Linear and nonlinear relaxation dynamics of entangled multiarm polymers. J. Juliani, M. T. Islam and L. A. Archer

**CG7.** Magneto-sensitive self-organizing arrays for DNA separations. P. S. Doyle, J. Bibette, D. Deminiere and J.-L. Viovy

**CG8.** Brownian dynamics simulations of polymer molecules in shear flow confined between parallel adsorbing walls. M. Chopra and R. G. Larson

**CG9.** The conformations of a DNA molecule near a glass surface. L. Li, H. Hu and R. G. Larson

**BC7.** Polymer surface functionalization by field-induced migration of copolymer additives. H.-J. Lee and L. A. Archer


**BC9.** Double reptation predictions of the linear viscoelasticity of miscible polymer blends. I. A. Pathak, S. K. Kumar and R. H. Colby

3:10 COFFEE

3:35 **EF5.** Steady uniaxial elongational flows: The roles of intramolecular potentials. A. S. Bhandar and J. M. Wiest

4:00 **EF6.** Polymer dynamics in semi-dilute DNA solutions in a planar extensional flow. C. M. Schroeder, H. Babcock, J. S. Hur, S. Chu and E. G. Shaqfeh


4:50 **EF8.** Synergistic effect of strain hardening in HDPE/PS blends. K. H. Ahn, J. S. Hong, S. J. Baik and S. J. Lee

**RT10.** Detecting long-chain branching using linear viscoelasticity. R. G. Larson and C. Pattamaprom

**RT11.** Characterization of long-chain branching effects in linear rheology. W. B. Thimm, C. Friedrich, T. Roth, S. Trinkle and J. Honerkamp

**RT12.** The rheology of branched polyisobutylene and 1,4-polyisoprene. P. G. Santangelo, C. G. Robertson, C. M. Roland and J. E. Puskas

**RT13.** Entangled solution rheology detection of LCB. T. McLeish, B. J. Crosby, R. Daniels, M. Mangnus and S. de Vries

**CG10.** "Superstrings" in sheared polymer blends: The influence of coalescence, breakup and finite size. K. B. Migler

**CG11.** Dispersion visualization under high shear rate in a transparent couette flow cell. F. Mighri and M. A. Huneault

**CG12.** Virtual gap rheometry: Determining the relaxation spectrum from wave dispersion data. R. Davies, D. Morgan and R. Williams

**CG13.** Nano-scale and macro-scale studies of the dynamic tensile strength of complex fluids. R. Williams, N. Hilal and R. Bowen

**SC1.** The role of repulsive interparticle forces on suspension rheology. J. Bergenholtz, J. F. Brady and M. Vicic

**SC2.** The theory underlying the rheology of colloidal dispersions: A GENERIC approach. N. J. Wagner

**SC3.** Dynamic simulation of concentrated colloidal suspensions. K. R. Hase and R. L. Powell

**SC4.** Shear flow of a monolayer of rough spheres. H. J. Wilson

5:15 END

5:30 POSTER SESSION & REFRESHMENTS Savannah Foyer North

7:00 SOCIETY RECEPTION Pool Terrace
Tuesday, February 13

Morning

PL2. The microdynamics of drop breakup and coalescence in flow. L. G. Leal

COFFEE

Lady Davis/Sampson

Rheology in Processing Flows

9:45 PF6. The mystery of the mechanism of sharkskin: Case closed? K. B. Migler, F. Qiao and K. Flynn


RT15. Using the pom-pom equations to analyze polymer melts in exponential shear. R. S. Graham, T. McLeish and O. G. Harlen


RT16. Branching structure and rheological behavior of metallocene polyethylene. S. Costeux, P. M. Wood-Adams and D. Beigzedeh

11:25 PF10. Film: "Non-Newtonian Fluids". K. Walters, M. F. Webster and R. Williams

FD1. The effect of viscous heating on elastic instabilities in torsional flows of polymeric liquids. J. P. Rothstein and G. H. McKinley

FD2. Time scales and destabilization of Newtonian and viscoelastic Taylor-Couette flows caused by viscous heating. J. M. White and S. J. Muller


FD4. Polymer/surfactant-induced effects on the stability of wall-bounded shear flows. B. Sadanandan and R. Sureshkumar

FD5. Stability analysis of polymer melt flows using the pom-pom model. A. Bogaers, A. Grillet, G. Peters and F. Baaijens

LUNCH

Lady Davis/Sampson

Elastomers, Adhesives & Soft Solids


FD6. Breaking up is hard to do. Y. Renardy

FD7. Making breaking up harder to do. M. Renardy

Afternoon

Heyward

Suspensions and Colloidal Systems

SC5. Shear response of layered silicate nanocomposites. R. Krishnamoorti and J. Ren


SC8. A model relating structure of colloidal gels to their elastic properties. H. Wu and M. Morbidelli

SC9. Rheological simple behaviour: The stress equivalent shear rate, a concept to solve complex flow problems. W. Gleis

Heyward

RT18. The effects of entanglement on attempts to obtain molecular architecture information from polyethylene viscocities. D. C. Rohlfing


FD12. Making breaking up harder to do. M. Renardy


FD14. Polymer/surfactant-induced effects on the stability of wall-bounded shear flows. B. Sadanandan and R. Sureshkumar


SC11. Mechanical deformation of 2D aggregated colloids. S. Promkotra and K. T. Miller
2:20  **EA3.** Finite element modeling of PSA peel using a stored elastic energy density failure criterion. *D. D. Lindeman and D. J. Yarusso*


2:20  **FD8.** Dynamics of formation of non-Newtonian drops from capillaries: Comparison of predictions made with generalized Newtonian and viscoelastic constitutive equations. *O. E. Yildirim and O. A. Basaran*

2:45  **EA4.** A visco-elasto-plastic model for materials with yield stress characteristics. *G. H. McKinley*

2:45  **RT22.** The flow and thermodynamic properties of dendritic polymers. *M. E. Mackay, M. Jeong, G. Hay and C. J. Hawker*

2:45  **FD9.** Orientation of symmetric bodies in a second-order liquid at small and nonzero Reynolds number. *G. Galdi*

3:10  **SC12.** The E-FiRST effect: Electrorheology of shear thickening colloidal suspensions. *S. S. Shenoy, N. J. Wagner and J. W. Bender*

3:35  **EA5.** Viscoelasticity of epoxy nanocomposite glasses. *A. Lee, R. L. Blanski and S. H. Phillips*

3:35  **AS1.** Dynamics of associating polymers. *M. Rubinstein and A. N. Semenov*

4:00  **EA6.** Energy release rate for a crack in a tilted block. *A. N. Gent and M. Razzaghi-Kashani*

4:00  **FD10.** Swirling flow of viscoelastic fluids. *D. V. Boger*

4:00  **AS2.** A model for the viscoelastic response of micellar solutions of telechelic polymers. *X. X. Meng and W. B. Russel*

4:00  **SF11.** Axisymmetric flow birefringence: Extension to a time-dependent stagnation flow. *J. Bryant and W. R. Burghardt*

4:25  **EA7.** Force transmission of a constrained polymeric gel cylinder. *J.-H. Yu, D. A. Dillard and D. R. Lefebvre*

4:25  **AS3.** Gelation in physically associating polymer solutions. *S. K. Kumar and J. Douglas*

4:25  **FD12.** Dynamic response of a shear stress transducer. *C. Kolitawong and A. J. Giacomin*

4:50  **EA8.** Dynamic nanoscale contacts to adhesive viscoelastic materials. *M. Giri, D. Bousfield and W. N. Unertl*

4:50  **AS4.** Rheology and dynamics of associative polymers in shear and extension: Theory and experiments. *A. Tripathi, G. H. McKinley, M. K. Tam and R. D. Jenkins*

4:50  **FD13.** Contraction flow behavior of metallocene-catalyzed polyethylenes. *P. J. Doerpinghaus and D. G. Baird*

5:15  **SC13.** Characterization of ER fluids with dynamic drop viscometry. *L. J. Kecskes*

5:30  **SC14.** Probing mobility of magnetic particles inside drying coatings. *A. Potanin*

7:00  **SC15.** Rheological behavior and microstructure of magnetic particle dispersions diluted with nonmagnetic particles. *Y. S. Lee, B. S. Chae and A. M. Lane*

7:00  **SC16.** A slotted plate device for measuring static yield stress. *D. De Kee, L. Zhu and K. Papadopoulos*

8:00  **SC17.** Direct measurement of strongly attractive particle-particle interactions. *K. L. Eccleston and K. T. Miller*
Wednesday, February 14

Morning

8:30

Lady Davis/Sampson

Food and Biopolymers


Barnwell

COFFEE

9:20

Drayton

Associated Polymers and Surfactants

AS5. Structure and rheology of diblock polyelectrolyte gels. **S. R. Bhatia** and **A. Mouchid**

AS6. Ordering transition of PEGs modified with fluorocarbon at both ends: Rheology and SANS. **G. Tae**, **J. A. Kornfield**, **J. A. Hubbell** and **L. Lal**


AS8. Scaling of the material functions in HASE associative polymers - Effect of macromonomer type and constitution. **A. Hirst** and **R. English**


10:10

FB1. Gelation of globular proteins. **S. B. Ross-Murphy**


FB3. Aggregation and gel formation in biopolymer solutions. **A. Stradner**, **S. Romer**, **C. Urban** and **P. Schurenberger**

10:35

FB4. Rheology of concentrated biopolymer systems with elastic filler particles. **J. Marti**, **P. Fischer** and **E. J. Windhab**

FB5. Enzymatic control of rheology in mixed biopolymer gels. **V. B. Pai** and **S. A. Khan**

11:00

FB6. Constitutive analysis of β-glucan/amylopectin blends. **J. A. Byars** and **C. J. Carriere**

11:25

FB7. Ordering of coil-rod copolymers in shear. **A. Hirst** and **R. English**


11:50


SC18. Obtaining the compressive yield stress of suspensions from centrifuge measurements - an inverse problem. **Y. L. Yeow**

SC19. A new oscillation method enabling measurements at very small deflection angles and torques. **J. Laeuger** and **S. Huck**

Afternoon

1:30

FB6. Constitutive analysis of β-glucan/amylopectin blends. **J. A. Byars** and **C. J. Carriere**

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FB13. Scaling of the material functions in HASE associative polymers - Effect of macromonomer type and constitution. **A. Hirst** and **R. English**


SC22. The rheology of highly-filled and reactive suspensions using squeeze flow. **A. J. McHugh** and **A. Walberer**

R. K. Prud'homme and Y. Cheng

AS11. Linear and non-linear rheological properties of nanofibrilar skeleton structures imbedded in various polymer melts.  
C. Friedrich, M. Fahrlander and W. Fraessdorff

MS2. Constitutive equations for linear polymer melts inspired by reptation theory and non-equilibrium thermodynamics.  
A. Levgue, A. N. Beris and R. Keunings

SC24. Simultaneous flotation and sedimentation in three component mixtures.  
S. A. Altobelli and L. A. Mondy

M. F. Webster, D. Ding and K. Sujatha

AS12. Rheo-NMR investigation of shear banding and molecular ordering in wormlike micelle solutions.  
P. T. Callaghan and E. Fischer

MS3. 2-Dimensional rheology and polymer dynamics under non-linear deformations.  
D. van Dusschoten, M. Wilhlem and H. W. Spiess

B. D. Timberlake and J. F. Morris

FB9. Viscoelastic effects observed during 2-D numerical simulation of flow and mixing in a model food mixer.  
J. L. Kokini and R. K. Connelly

AS13. Shear-induced structure in rheothickening surfactant solutions.  
V. Weber, R. Oda, E. Mendes and F. Schosseler

MS4. Ratio of dynamic moduli and estimation of the relaxation time distribution.  
J. Huang and D. G. Baird

S. Feng, A. E. Kaiser, A. L. Graham, J. R. Abbott and M. S. Ingber

2:20

FB10. Modeling of melt conveying in a deep-channel single screw cheese stretcher.  
C. Yu and S. Gunasekaran

S. Amin, R. M. van Zanten, K. P. Rufener, T. W. Kermis, S. J. Dees and J. H. van Zanten

MS5. Constraint release effects in monodisperse and bidisperse polystyrenes in fast transient shearing flows.  
C. Pattamaprom and R. G. Larson

SC27. Consolidation of aggregated suspensions in drying.  
L. A. Brown and C. F. Zukoski

FB11. Experimental investigation of laminar-turbulent transition in pipe flow for fruit purees.  
P. Perona and S. T. Sordo

AS15. Influence of additives on the rheology and structure of wormlike and rodlike micelles.  
L. M. Walker and M. H. T. Truong

MS6. Use cumulative distribution functions in the fitting of discrete spectra.  
B. Caswell

SC28. The rheological behavior of "structured" fibril suspensions.  
R. Liang, L. Han, D. Doraiswamy and R. K. Gupta

4:00

FB12. Effects of post-mortem storage and freezing on the viscoelastic properties of vocal fold tissues.  
R. W. Chan

L. Guo, R. H. Colby, M. Lin and G. P. Dado

MS7. Interrupted shear flow of unentangled polystyrene melts.  
P. G. Santangelo and C. M. Roland

SC29. Rheology and filtrate properties of montmorillonite suspensions with the terpolymer of itaconic acid-acrylamide-2-acrylamido-2-methyl-1-propanesulfonic acid at high temperature.  
Y. Wu, B. Zhang, D. Sun and C. Zhang

4:25


AS17. Synergistic enhancement of rheology in surfactant mixtures.  
S. R. Raghavan and E. W. Kaler

MS8. Time-strain non-separability in polymer viscoelasticity.  
K. S. Cho and Y. Kwon

SC30. Rheological properties and stabilization of magnetorheological fluids in a water in oil emulsion.  
J. H. Park and O. O. Park

5:15
Thursday, February 15

Morning

Lady Davis/Sampson
Liquid Crystalline Systems

Drayton
Associating Polymers and Surfactants

Elliot
Polymer Melts and Solutions

Heyward
Microscopic Rheology

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<th>Session</th>
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<th>Authors</th>
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<td>8:05</td>
<td>LC1</td>
<td>Rheological theory for chiral liquid crystals</td>
<td>A. D. Rey</td>
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<td>8:30</td>
<td>LC2</td>
<td>A unified hydrodynamics theory for nonhomogeneous liquid crystal polymers</td>
<td>Q. Wang</td>
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<td>LC3</td>
<td>Mesostructure evolution in tumbling nematic LCPs between shearing plates</td>
<td>G. Forest</td>
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<td>LC4</td>
<td>Simulating disclinations in sheared nematic polymers</td>
<td>J. J. Feng, J. Tuo and L. G. Leal</td>
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<td>LC5</td>
<td>Prediction and observation of chaotic dynamics in sheared liquid crystalline polymers</td>
<td>M. Grosso, J. Vermant, P. Moldenaers and P. L. Maffettone</td>
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<td>LC6</td>
<td>Transient measurements of lyotropic LCP orientation within the 1-2 plane</td>
<td>W. R. Burghardt and F. E. Caputo</td>
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<td>LC7</td>
<td>Shear-induced texture and its effect on the viscoelastic responses of a main chain thermotropic copolyester HBA/HQ/SA</td>
<td>C.-K. Chan and P. Gao</td>
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<td>11:25</td>
<td>LC8</td>
<td>Cure characterization of nematic bismaleimide thermosets</td>
<td>H. Qin and P. T. Mather</td>
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<tr>
<td>8:05</td>
<td>AS18</td>
<td>The rheology of charged, worm-like micelles</td>
<td>B. A. Schubert, N. J. Wagner and E. W. Kaler</td>
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<td>8:30</td>
<td>AS19</td>
<td>Determination of the end cap energy of worm-like micelles</td>
<td>M. In</td>
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<td>8:55</td>
<td>AS20</td>
<td>Unsteady motion of bubbles and spheres in wormlike micellar solutions</td>
<td>A. L. Belmonte and A. Jayaraman</td>
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<tr>
<td>9:45</td>
<td>AS22</td>
<td>Micro rheological investigation of the dynamics of colloidal particles dispersed in solutions of associative polymers</td>
<td>Q. Lu and M. J. Solomon</td>
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<td>10:10</td>
<td>AS23</td>
<td>Effects of surfactant and salt addition on the rheology of HASE polymers</td>
<td>C. Tu, A. K. M. Lau and M. K. C. Tam</td>
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<td>11:00</td>
<td>AS25</td>
<td>Association of surfactants and hydrophobically modified polyelectrolytes</td>
<td>R. H. Colby, N. Plucktaevesak and L. E. Bromberg</td>
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<td>11:25</td>
<td>AS26</td>
<td>Micro rheological investigation of the dynamics of colloidal particles dispersed in solutions of associative polymers</td>
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<td>8:05</td>
<td>MS9</td>
<td>Reptation-based modeling of flow-induced polymer crystallization</td>
<td>P. L. Maffettone, S. Coppola and N. Grizzuti</td>
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<td>8:30</td>
<td>MS10</td>
<td>The appearance of threads during early stages of shear-induced crystallization in isotactic polypropylene</td>
<td>H. Winter and N. Pogodina</td>
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<tr>
<td>8:55</td>
<td>MS11</td>
<td>Rheological studies of mesomorphic poly(diethylsiloxane)</td>
<td>H. Saxena, R. C. Hedden and C. Cohen</td>
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<td>9:20</td>
<td>MS12</td>
<td>On-line conoscopic measurement of flow induced orientation in flexible polymers</td>
<td>R. L. Van Horn and H. H. Winter</td>
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<td>9:45</td>
<td>MS13</td>
<td>Stress-optical properties of polystyrene and polycarbonate across the dynamic glass transition</td>
<td>H. H. Lee, J. A. Kornfield, G. Hay and K. Yoon</td>
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<td>10:10</td>
<td>MS14</td>
<td>The effect of pressure on the rheological properties of molten polyethylene</td>
<td>H. E. Park and J. M. Dealy</td>
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<td>10:35</td>
<td>MS15</td>
<td>High-pressure rheology of polymer melts plasticized with CO2: Experimental measurements and predictive viscoelastic scaling</td>
<td>J. R. Rover, J. M. DeSimone and S. A. Khan</td>
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<td>11:00</td>
<td>MS16</td>
<td>Novel cuvette rheometer for high pressure, high temperature systems</td>
<td>G. Gappert and H. H. Winter</td>
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<td>11:25</td>
<td>MS17</td>
<td>Fluorescence microscopy experiments and Brownian dynamics simulations of flow behavior of DNA molecules confined to two dimensions</td>
<td>D. J. Olson, P. D. Patel, E. G. Shaqfeh, S. G. Boxer and G. G. Fuller</td>
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<td>8:05</td>
<td>MR1</td>
<td>The physics of the actin cytoskeleton: From nonequilibrium polymer physics to nerve regeneration and cancer diagnosis</td>
<td>J. A. Kas</td>
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<td>8:30</td>
<td>MR2</td>
<td>Viscoelasticity of dilute solutions of semiflexible polymers</td>
<td>M. Pasquali, V. Shankar and D. C. Morse</td>
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<td>8:55</td>
<td>MR3</td>
<td>Stress and conformational relaxation of dilute semiflexible polymer solutions</td>
<td>P. Dimitrakopoulos, J. F. Brady and Z.-G. Wang</td>
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<td>9:20</td>
<td>MR4</td>
<td>Brownian dynamics simulations of single DNA molecules in steady and transient mixed flow</td>
<td>J. S. Hur and E. G. Shaqfeh</td>
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<td>9:45</td>
<td>MR5</td>
<td>Single-polymer dynamics in steady mixed flows</td>
<td>H. Babcock, R. Teixeira, E. G. Shaqfeh and S. Chu</td>
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<td>10:10</td>
<td>MR6</td>
<td>Fluorescence microscopy experiments and Brownian dynamics simulations of flow behavior of DNA molecules confined to two dimensions</td>
<td>D. J. Olson, P. D. Patel, E. G. Shaqfeh, S. G. Boxer and G. G. Fuller</td>
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<tr>
<td>10:35</td>
<td>MR7</td>
<td>Entanglement relaxation and release in model polymer melts</td>
<td>J. A. McCormick, C. K. Hall and S. A. Khan</td>
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<td>11:00</td>
<td>MR8</td>
<td>Non-equilibrium brownian dynamics studies of dendrimers and hyperbranched polymers</td>
<td>A. T. Lee and A. J. McHugh</td>
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11:50  **LC9.** Recoverable compliance and viscosity of aligned block copolymer lamellae.  
*N. P. Balsara, H. Hahn and H. Watanabe*

*L. C. Cerny and E. R. Cerny*

**MS17.** Standard reference materials: Non-Newtonian fluids for rheological measurements.  
*C. R. Schultheisz and G. B. McKenna*

**MR9.** Grabbing the cat by the tail: Manipulating polymers one by one.  
*J. C. Macosko and C. J. Bustamante*
### Poster Session

**Monday 5:30 PM  Savannah Foyer North**

**PO1.** Elongational viscosity measurements of polymer melts using semihyperbolic convergent dies. *P. D. Patil, S. Petrovan and J. Collier*

**PO2.** Transient and steady three-dimensional drop deformation under elongational flow. *Y. T. Hu*

**PO3.** High pressure capillary viscometer. *E. J. Paul, R. K. Prud’homme, S. P. Wesson and R. Clark*

**PO4.** Kinks vs. curves: An examination of the slope discontinuity in capillary flow. *M. T. Shaw and E. M. C. Cua*

**PO5.** In-line rheometry of shear-thinning and shear-thickening complex fluid systems by UVP-PD method. *P. Fischer, J. Skaiık, B. Ouriev and E. J. Windhab*

**PO6.** Shear-banding structure orientated in the vorticity direction observed for equimolar micellar solution. *P. Fischer*


**PO8.** The orientation process of cholesteric liquid crystals with D-(+)-Mannose as chiral inductor. *E. G. Fernandes Jr. and M. R. Alcantara*

**PO9.** Vector chromatography: Modeling micropatterned separation devices. *K. D. Dorfman and H. Brenner*

**PO10.** Sedimentation of symmetric bodies in an Oldroyd-B fluid. *A. Vaidya, G. Galdi and A. Sequeira*

**PO11.** An experimental study of the mixing of dough. *D. M. Binding and M. A. Couch*

**PO12.** Preparing constant viscosity solutions by blending gelatins of different molecular weights. *R. W. Connelly*

**PO13.** Rheology of whey protein isolate/pectin mixed gels. *M. Beaulieu and S. Turgeon*

**PO14.** The relationship between rheology, application method, and final coating structure. *B. G. Dimetry and D. Bousfield*

**PO15.** DMA properties of sheet molding compounds (SMC). *F. Parsi, B. Clark and S. Gullerud*

**PO16.** Thixotropic properties of aqueous dispersions of positively charged Al/Mg mixed metal hydroxides. *D. Sun, W. Hou and C. Zhang*

**PO17.** Yield stress measurement of silicon nitride mixture suspensions. *L. Zhu, D. De Kee and K. Papadopoulos*

**PO18.** Properties of the forpolymer of N-vinyl pyrrolidine with itaconic acid, acrylamide and 2-acrylamido-2-methyl-propanesulfonic acid as fluid loss reducer for drilling fluid at high temperature. *Y. Wu, D. Sun, B. Zhang and C. Zhang*

**PO19.** Rheological and transport properties of suspensions. *A. E. Kaiser and A. L. Graham*

**PO20.** On the effect of compatibilization on interfacial slip in polymer blends. *P. Van Puyvelde, Z. Oomen, G. Groeninckx, P. Moldenaers and J. Mewis*

**PO21.** Preparation of rubber toughened syndiotactic polystyrene blends by reactive compatibilization. *W.-M. Choi and O. O. Park*