



The Society of Rheology 89th Annual Meeting

Embassy Suites Denver Downtown, Denver, Colorado

Meeting Schedule

Monday, October 9, 2017

	<i>CYA</i>	<i>CYB</i>	<i>CYC</i>	<i>CEA</i>	<i>CEB</i>	<i>ASP</i>
8:30	R. T. Bonnecaze (PL1) - <i>CCB</i>					
9:20	Coffee Break					
9:50	EF1	SM1	SC1	NF1	IM1	CR1
10:15	EF2	SM2	SC2	NF2	IM2	CR2
10:40	EF3	SM3	SC3	NF3	IM3	CR3
11:05	EF4	SM4	SC4	NF4	IM4	CR4
11:30	EF5	SM5	SC5	NF5	IM5	CR5
11:55	Lunch Break					
1:30	EF6	SM6	SC6	NF6	IM6	CR6
1:55	EF7	SM7	SC7	NF7	IM7	CR7
2:20	EF8	SM8	SC8	NF8	IM8	CR8
2:45	EF9	SM9	SC9	NF9	IM9	CR9
3:10	Coffee Break					
3:45	EF10	SM10	SC10	NF10	IM10	MM1
4:10	EF11	SM11	SC11	NF11	IM11	MM2
4:35	EF12	SM12	SC12	NF12	IM12	MM3
5:00	EF13		SC13	NF13	IM13	MM4
5:25	End					
6:30	Monday Evening Reception					

Tuesday, October 10, 2017

	<i>CYA</i>	<i>CYB</i>	<i>CYC</i>	<i>CEA</i>	<i>CEB</i>	<i>ASP</i>
8:30	J. A. Kornfield (PL2) - <i>CCB</i>					
9:20	Coffee Break					
9:50	AM1	SM14	EF14	CR10	GS1	MM5
10:15	AM2	SM15	EF15	CR11	GS2	MM6
10:40	AM3	SM16	EF16	CR12	GS3	MM7
11:05	AM4	SM17	EF17	CR13	GS4	MM8
11:30	AM5	SM18	EF18	CR14	GS5	MM9
11:55	Lunch Break / Society Business Meeting					
1:30	AM6	SM19	SC14	NF14	GS6	MM10
1:55	AM7	SM20	SC15	NF15	GS7	MM11
2:20	AM8	SM21	SC16	NF16	GS8	MM12
2:45	AM9	SM22	SC17	NF17	GS9	MM13
3:10	Coffee Break					
3:45	SG1	SM23	SC18	NF18	GS10	MM14
4:10	SG2	SM24	SC19	NF19	GS11	MM15
4:35	SG3	SM25	SC20	NF20	GS12	MM16
5:00	SG4	SM26	SC21	NF21	GS13	MM17
5:25	End					
7:00	Awards Reception - <i>CCF/SLF</i>					
8:00	Awards Banquet - <i>CCB</i>					

Wednesday, October 11, 2017

	<i>CYA</i>	<i>CYB</i>	<i>CYC</i>	<i>CEA</i>	<i>CEB</i>	<i>ASP</i>
8:30	K. Anseth (PL3) - <i>CCB</i>					
9:20	Coffee Break					
9:50	BB1	SM27	SC22	GS14	NF22	SG5
10:15	BB2	SM28	SC23	GS15	NF23	SG6
10:40	BB3	SM29	SC24	GS16	NF24	
11:05	BB4	SM30	SC25	GS17	NF25	SG8
11:30	BB5	SM31	SC26	GS18	NF26	SG9
11:55	Lunch Break					
1:30	BB6	SM32	SC27	GS19	NF27	SG10
1:55	BB7	SM33	SC28	GS20	NF28	SG11
2:20	BB8	SM34	SC29	GS21	NF29	SG12
2:45	BB9	SM35	SC30	GS22	NF30	SG13
3:10	Coffee Break					
3:45	BB10	SM36	SC31	GS23	NF31	SG14
4:10	BB11	SM37	SC32	GS24	NF32	SG15
4:35	BB12	SM38	SC33	GS25	NF33	SG16
5:00	BB13	SM39	SC34	GS26	NF34	
5:25	End					
6:30	Poster Session & Reception - <i>CCB</i>					
6:30	Gallery of Rheology Contest - <i>CCF</i>					

Thursday, October 12, 2017

	<i>CYA</i>	<i>CYB</i>	<i>CYC</i>	<i>CEA</i>	<i>CEB</i>
8:00	A. S. Khair (AP1) - <i>CYC</i>				
8:40	SG18	SM40	SC35	GS27	NF35
9:05	SG19	SM41	SC36	GS28	NF36
9:30	SG20	SM42	SC37	GS29	NF37
9:55	Coffee Break				
10:25	SG21	SM43	SC38	GS30	NF38
10:50		SM44	SC39	GS31	NF39
11:15		SM45	SC40	GS32	NF40
11:40			SC41		NF41
12:05	End				

Session and Room Codes

AM = Active, Motile, and Field Responsive Materials

AP = Award Presentations

BB = Biomaterials and Biological Systems

CR = Computational Rheology

EF = Emulsions, Foams, and Interfacial Rheology

GR = Gallery of Rheology Contest

GS = Gels and Self-Assembled Systems

IM = Inverse Problems and Material Design

MM = Microfluidics and Microfluidics

NF = Non-Newtonian Fluid Mechanics

PL = Plenary Lectures

SC = Suspensions, Colloids and Granular Systems

SG = Solids, Glasses, and Composites

SM = Polymer Solutions and Melts

ASP = Aspen

CCB = Cripple Creek Ballroom

CCF = Cripple Creek Foyer

CEA = Crestone A

CEB = Crestone B

CYA = Crystal A

CYB = Crystal B

CYC = Crystal C

SLF = Silverton Foyer

Monday, October 9

Morning

8:30 **PL1.** Energy, entropy and structure of soft particle glasses. *R. T. Bonnecaze* Cripple Creek Ballroom

9:20 COFFEE BREAK

	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Emulsions, Foams & Interfacial Rheology	Polymer Solutions and Melts	Suspensions, Colloids & Granular Systems	Non-Newtonian Fluid Mechanics	Inverse Problems and Material Design	Computational Rheology
9:50	EF1. A radial Langmuir trough design for simultaneous microscopy and dilatational deformation of a complex fluid-fluid interface. <i>J. R. Samaniuk</i>	SM1. Force-based theory for center-of-mass dynamics in ring polymer liquids. <i>Z. E. Dell and K. S. Schweizer</i>	SC1. Non-Newtonian fluid behavior of dense suspensions in simple shear and extensional flows. <i>R. Seto and G. G. Giusteri</i>	NF1. Effect of fluid elasticity on vortex formation in a planar elongational flow field. <i>N. Burshtein, Z. Konstantinos, A. Q. Shen, R. J. Poole and S. J. Haward</i>	IM1. "Psychorheology": Quantifying the human perception of viscosity through discriminability and perceptual bias in visual and haptic modalities. <i>J. Martin and M. Jogan</i>	CR1. i-Rheo GT: Transforming $G(t)$ obtained from molecular dynamics simulations into the materials' linear viscoelastic properties without artefacts. <i>M. Tassieri</i>
10:15	EF2. Responsive foams for nanoparticle delivery. <i>C. Tang, C. Tian and R. K. Prud'homme</i>	SM2. Probe rheology simulation technique: Polymer melts vs. polymer solutions. <i>P. Nourian, D. Sundaravadivelu Devarajan and R. Khare</i>	SC2. The importance of extensional flow in determining the shear rheology of viscoelastic suspensions. <i>M. Yang, J. Einarsson and E. S. Shaqfeh</i>	NF2. Elastic instability and secondary flow of wormlike micellar solutions in cross-slot flow. <i>M. Cromer and A. Kalb</i>	IM2. Extending yield-stress fluid paradigms for design. <i>A. Z. Nelson, R. Bras, J. Liu, B. Rauzan, R. Nuzzo and R. H. Ewoldt</i>	CR2. Active learning of the constitutive relation by local mesoscopic simulations for continuum computations of non-Newtonian flows. <i>L. Zhao, Z. Li, J. Ouyang, B. Caswell and G. E. Karniadakis</i>
10:40	EF3. Contrasting drainage and stratification in horizontal vs. vertical micellar foam films. <i>S. Yilixiati, E. Wojcik, Y. Zhang and V. Sharma</i>	SM3. Nonequilibrium molecular dynamics simulations of entangled polymer solutions undergoing planar elongational flows. <i>M. H. Nafar Sefiddashti, B. J. Edwards and B. Khomami</i>	SC3. Polyelectrolyte – particle flocculation in complex suspensions with mixed hydrodynamic fields. <i>A. Metaxas, N. Wilkinson and C. Dutcher</i>	NF3. Probing the flow and nanostructure of viscoelastic fluids in tunable, complex deformation fields. <i>P. T. Corona, N. Ruocco, K. Strohm, C. Sasmal, G. Leal and M. E. Helgeson</i>	IM3. Architectural paints: From hierarchical structure to rheology. <i>T. Chatterjee, A. K. Van Dyk, V. V. Ginzburg and N. I. Alan</i>	CR3. Probe rheology simulations for determining linear viscoelasticity of colloidal suspensions. <i>D. Sundaravadivelu Devarajan, P. Nourian and R. Khare</i>
11:05	EF4. Surface forces, flows and fluxes underlying nanoridge formation and instabilities in stratifying, micellar freestanding films. <i>Y. Zhang and V. Sharma</i>	SM4. Brownian dynamics of wall tethered polymers in shear flow. <i>A. Saadat, T. Y. Lin and E. S. Shaqfeh</i>	SC4. Does confinement screen hydrodynamic interactions in colloidal suspensions? <i>C. Aponte-Rivera and R. N. Zia</i>	NF4. Rheological and alignment transitions in rod-like micelle solutions. <i>S. Hudson, J. Weston and K. Weigandt</i>	IM4. Multiscale modeling of polymer-colloid networks for design of latex coating rheology. <i>R. G. Larson, H. Rezvantalab, E. Hajizadeh, S. Yu and S. Wang</i>	CR4. Micro-structure and rheology of random patchy particles. <i>G. Wang and J. W. Swan</i>
11:30	EF5. Effects of elastic flow instabilities on oil displacement in regular and irregular porous networks. <i>I. Sinha, S. Narayan, X. Shi, C. Dutcher and G. F. Christopher</i>	SM5. The role of small amplitude oscillatory shear in solvent-diffusion through amorphous polystyrene in the melt state. <i>W. Nakhle and P. Wood-Adams</i>	SC5. Effect of confinement on colloidal suspension rheology. <i>M. Ramaswamy, C. Ness, N. Lin, B. Leahy, A. Fiore, J. W. Swan and I. Cohen</i>	NF5. Fluctuations of wormlike micelle fluids in pressure driven capillary flow. <i>P. Salipante, S. Meek and S. Hudson</i>	IM5. Toward co-design of surface textures and Non-Newtonian fluids for decreased friction in lubricated viscous sliding. <i>J. K. Schuh, Y. H. Lee, J. T. Allison and R. H. Ewoldt</i>	CR5. Large-amplitude oscillatory shear (LAOS) of a dilute suspension of Brownian spheroids. <i>T. M. Bechtel and A. S. Khair</i>

11:55 LUNCH BREAK

Afternoon

	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Emulsions, Foams & Interfacial Rheology	Polymer Solutions and Melts	Suspensions, Colloids & Granular Systems	Non-Newtonian Fluid Mechanics	Inverse Problems and Material Design	Computational Rheology
1:30	EF6. Does interfacial asphaltene aggregation actually stabilize crude oil/water emulsions through enhanced interfacial rheology? <i>M. Rahman, Y.-J. Lin, S. L. Biswal and G. F. Christopher</i>	SM6. Relaxation dynamics of knotted polymers – knot swelling and end-to-end relaxation. <i>V. Narsimhan, A. R. Klotz and P. S. Doyle</i>	SC6. Shear-induced structural rearrangement in jammed suspensions of soft particle glasses. <i>F. Khabaz, T. Liu, M. Cloitre and R. T. Bonnecaze</i>	NF6. Viscoelastic fluid-structure interactions between flexible circular cylinder and wormlike micelle solution: Role of structural natural frequency. <i>A. A. Dey, Y. Modarres-Sadeghi and J. Rothstein</i>	IM6. Controlling fat digestion with a little help from interfacial rheology. <i>P. Fischer, N. Scheuble, T. Geue and A. Steingoetter</i>	CR6. Three-dimensional Eulerian-Lagrangian solver for suspensions of solid spherical particles with a viscoelastic matrix fluid. <i>S. A. Faroughi, A. Robisson and G. H. McKinley</i>

1:55	EF7. Effect of phase change on the rheology and stability of paraffin wax-in-water Pickering emulsions. <i>P. Chatterjee and P. T. Underhill</i>	SM7. Single polymer relaxation dynamics in entangled solutions. <i>Y. Zhou and C. M. Schroeder</i>	SC7. Effect of roughness on concentrated colloidal suspensions under flow. <i>A. R. Jacob and L. C. Hsiao</i>	NF7. Flow of wormlike micelle solutions past a falling sphere: Role of boundary condition. <i>H. Mohammadigoushki and S. J. Muller</i>	IM7. Characterizing and designing printable, spinnable and sprayable soft materials. <i>J. Dinic, L. N. Jimenez and V. Sharma</i>	CR7. Viscoelastic free surface flow: Blade coating of a Phan-Thien-Tanner fluid. <i>R. M. Martin, R. Rao and K. Tjptowidjojo</i>
2:20	EF8. Flow behavior of submicron emulsions in different concentration regimes. <i>N. Sanatkar and R. Foudazi</i>	SM8. Linear and non-linear rheology of hyper-branched EAA-cb-PP comb block copolymers. <i>C. R. López-Barrón, P. Brant and M. E. Shivokhin</i>	SC8. Soft and hard particles as model systems to study the rheological behavior of concentrated colloidal dispersions. <i>X. Peng, Q. Li, D. Chen and G. B. McKenna</i>	NF8. Unsteady sedimentation of a sphere in wormlike micelle solutions. <i>Y. Zhang and S. J. Muller</i>	IM8. New polymer product development, reaction kinetics and computational rheology. <i>J. M. Soulages</i>	CR8. Applying computational tools of polymer field theory to out-of-equilibrium polymer solutions in flow. <i>C. D. Young and C. E. Sing</i>
2:45	EF9. Shear-induced gelation and structural transitions in ultra-low interfacial tension microemulsions. <i>K. Weigandt, J. Weston and S. Hudson</i>	SM9. Brittle fracture of polymer transient networks. <i>S. Arora, A. Shabbir, O. Hassager, C. Ligoure, and L. Ramos</i>	SC9. Modeling the transient shear flow and predicting Large Amplitude Oscillatory Shear (LAOS) flow of a thermoreversible gel using a scalar structure parameter thixotropic model. <i>M. J. Armstrong, A. N. Beris and N. J. Wagner</i>	NF9. Measuring the effective viscosity of wormlike micelle solutions using complex geometries - does elimination of wall slip in complex geometries make the Cox-Merz rule useful for wormlike micelle solutions? <i>W. H. Hartt, L. A. Bacca and E. Tozzi</i>	IM9. Tailoring rheological response via thickness and macromolecular architecture. <i>D. Vlassopoulos, S. Costanzo, Z.-C. Yan and D. Parisi</i>	CR9. Computational analysis of pinch-off dynamics and printability of simple and complex fluids. <i>J. Dinic and V. Sharma</i>
3:10	COFFEE BREAK					
3:45	EF10. Rheological and structural characterization of multiphase drops from its interfacial wave dynamics. <i>R. W. Udagama and S. Bhattacharya</i>	SM10. Dynamics of Rouse chains undergoing head-to-head association and dissociation: Difference between dielectric and viscoelastic relaxation. <i>H. Watanabe, Y. Matsumiya and Y. Kwon</i>	SC10. Structure, elasticity, and non-equilibrium state diagram of depletion gels. <i>E. M. Furst, K. A. Whitaker, L. C. Hsiao and M. J. Solomon</i>	NF10. Shear stress resonance caused by shear-banding in wormlike micellar solutions. <i>T. Takahashi and M. Ito</i>	IM10. Fitting data is subjective: Structural inference from rheology and uncertainty quantification of single measurement data. <i>P. K. Singh, J. M. Soulages and R. H. Ewoldt</i>	MM1. Multiple particle tracking microrheology of thermally gelling nanoemulsions. <i>L.-C. Cheng, L. C. Hsiao and P. S. Doyle</i>
4:10	EF11. Transport of block copolymers to oil-water interfaces and impact on interfacial properties. <i>M. L. Davidson, M. Gottlieb and L. M. Walker</i>	SM11. On the physics of the stress overshoot in entangled polymer liquids. <i>K. S. Schweizer and S.-J. Xie</i>	SC11. Large anisotropic density fluctuations in sheared attractive dispersions. <i>J. W. Swan and Z. Varga</i>	NF11. A device for simultaneous rheological and microstructural characterization of complex fluids at extreme shear rates. <i>J. Weston, K. Weigandt and S. Hudson</i>	IM11. Selecting design-appropriate material descriptions for linear viscoelastic materials. <i>R. E. Corman, Y. H. Lee, J. T. Allison and R. H. Ewoldt</i>	MM2. Characterization of consecutive phase transitions in a fibrous colloidal gel using μ^2 rheology. <i>M. D. Wehrman, M. J. Milstrey, S. Lindberg and K. M. Schultz</i>
4:35	EF12. Effect of salt valency and concentration on shear and extensional rheology of aqueous polyelectrolyte solutions. <i>A. V. Walter, L. N. Jimenez, J. Dinic, V. Sharma and K. A. Erk</i>	SM12. Dynamics of shape-persistent giant molecules: Zimm melt, elastic plateau, and cooperative glass. <i>G. Liu, X. Feng, K. Lang, R. Zhang, D. Guo, S. Yang and S. Cheng</i>	SC12. High speed confocal imaging of sheared colloidal gels. <i>G. Colombo and J. Vermant</i>	NF12. A new approach to characterising the conformation tensor in viscoelastic turbulence. <i>I. Hameduddin, C. Meneveau, T. A. Zaki and D. F. Gayme</i>	IM12. Application of a parallel tempering algorithm towards inverse modeling. <i>M. J. Armstrong, P. M. Mwasame, A. N. Beris and N. J. Wagner</i>	MM3. Probe microrheology by differential dynamic microscopy. <i>A. V. Bayles, T. M. Squires and M. E. Helgeson</i>
5:00	EF13. Drop breakup dynamics of dilute polymer solutions: Effect of molecular weight, concentration and solvent viscosity. <i>S. Sur and J. Rothstein</i>		SC13. A high frequency rheological study of partially aggregated colloidal dispersions. <i>B. Schroyen, P. Van Puyvelde and J. Vermant</i>	NF13. Dynamics and structures of transitional viscoelastic turbulence in channel flow. <i>A. Shekar, S.-N. Wang and M. D. Graham</i>	IM13. Direct and inverse shape problems in self-consistent field theory: Level set strategies. <i>G. Y. Ouaknin</i>	MM4. Differentiating effects of geometry and fluid rheology on particle dispersion in 2-D microfluidic porous media. <i>J. D. Jacob, R. Krishnamoorti and J. C. Conrad</i>
5:25	END					
6:30	MONDAY EVENING RECEPTION Colorado History Museum					

Tuesday, October 10

Morning

8:30

PL2. Flow, structure and function. *J. A. Kornfield* (Bingham Lecture) Cripple Creek Ballroom

9:20

COFFEE BREAK

	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Active, Motile & Field Responsive Matl	Polymer Solutions and Melts	Emulsions, Foams & Interfacial Rheology	Computational Rheology	Gels and Self-Assembled Systems	Microrheology and Microfluidics
9:50	AM1. Programmable electrical conductivity of lignin- rubber composites for stress detection. <i>N. A. Nguyen, K. M. Meek, C. C. Bowland, S. H. Barnes and A. K. Naskar</i>	SM14. Entanglement density equilibration after cessation of steady shear flow. <i>P. K. Bhattacharjee, D. A. Nguyen, G. H. McKinley and T. Sridhar</i>	EF14. Physical stability of structured fluids containing air bubbles. <i>S. Mirzaagha, R. Pasquino, N. Grizzuti, V. Guida and F. Zonfrilli</i>	CR10. Evaluation of reptation-based modelling of entangled polymeric fluids including chain rotation via NEMD simulation. <i>M. H. Nafar Sefiddashti, B. J. Edwards and B. Khomami</i>	GS1. Mechanistic constitutive model for wormlike micelle solutions with flow-induced structure formation. <i>S. Dutta and M. D. Graham</i>	MM5. Effect of capillary-driven snap-off on fluid displacement in microfluidic porous media with different surface wettability. <i>J. A. Avendaño, N. M. Lima, J. A. Quevedo and M. S. Carvalho</i>
10:15	AM2. The dynamics of magnetic oblate spheroids under a rotating magnetic field. <i>M. Tan and T. W. Walker</i>	SM15. On the dynamics of semiflexible polymers solutions in the tightly-entangled regime: The fall of a theoretical framework. <i>M. Tassieri</i>	EF15. Cocontinuous ternary polymer nanocomposites with interfacial graphene nanoplatelets. <i>L. Bai, R. Sharma, C. W. Macosko and X. Cheng</i>	CR11. How to extract medium-amplitude nonlinearities from large-amplitude oscillatory shear (LAOS)? <i>L. Martinetti, P. K. Singh, J. M. Soulages and R. H. Ewoldt</i>	GS2. Rheology of wormlike micellar solutions in pressure-driven and simple shear flow. <i>C. Caiazza, D. O'Sullivan, V. Guida, A. Jerez, V. Preziosi, G. Tomaiuolo and S. Guido</i>	MM6. Microfluidic-based particle and cell manipulation in strongly shear-thinning fluids. <i>F. Del Giudice, S. Shivani, G. D'Avino and A. Q. Shen</i>
10:40	AM3. Surpassing the theoretical sensitivity of magneto-rheological elastomers. <i>G. Chaudhary, K. S. Schweizer, P. V. Braun and R. H. Ewoldt</i>	SM16. Characterization of polymer architecture: Modeling and experiment. <i>N. E. Valadez-Perez, K. Taletskiy, M. E. Shivokhin and J. D. Schieber</i>	EF16. Global strain-field mapping of a carbon nanotube-laden interface using digital image correlation. <i>S. Vora, H. Patanwala, B. Bogner, S.-Y. Chang, M. S. W. Li and A. Ma</i>	CR12. Non-equilibrium conformational dynamics of a coarse-grained polymer model with internal friction and hydrodynamic interactions. <i>R. Kailasham, R. Chakrabarti and J. R. Prakash</i>	GS3. Linear wormlike micelles behave similarly to entangled linear polymers in fast shear flows. <i>D. Gaudino, R. Pasquino, G. Ianniruberto and N. Grizzuti</i>	MM7. Investigating the dynamics of droplet-breakup in a microfluidic cross-slot device for characterizing the extensional properties of weakly viscoelastic fluids. <i>K. A. Marshall, S. R. Haug and T. W. Walker</i>
11:05	AM4. Deformation dynamics of magnetically actuated colloidal clusters. <i>S. L. Biswal</i>	SM17. Role of topological friction in polymer stretching dynamics. <i>A. K. Omar and Z.-G. Wang</i>	EF17. Visualization of interfacial particle contact angle distributions. <i>M. A. Islam, G. F. Christopher and C. Snoevink</i>	CR13. The dominant role of rheology in flow-induced, multi-phase, multi-morphological crystallization kinetics of isotactic polypropylene. <i>G. W. Peters, E. M. Troisi and G. Grosso</i>	GS4. Multiple energy dissipation processes determined in the linear viscoelasticity of worm-like micelles via measurements of recoverable strain. <i>S. A. Rogers, J. Lee and J. D. Park</i>	MM8. Passive non-linear microrheology for determining extensional viscosity. <i>K. Hsiao, J. Dinic, V. Sharma and C. M. Schroeder</i>
11:30	AM5. Application of nonuniform magnetic fields in a Brownian dynamics model of ferrofluids with an iterative nonstraint scheme to fulfill Maxwell's equations. <i>L. E. Wedgewood and S. H. Dubina</i>	SM18. The hierarchical multi-mode MSF model for extensional and shear flows of linear and LCB polymer melts. <i>M. H. Wagner and E. Narimissa</i>	EF18. Stokesian dynamics simulations of interfacial colloidal aggregation under shear flow. <i>N. Laal-Dehghani and G. F. Christopher</i>	CR14. Encapsulation and porous imbibition models of curing epoxy. <i>K. Tjiptowidjojo, R. Rao, C. C. Roberts and A. K. Kaczmarowski</i>	GS5. Dielectric properties of shear-aligned micelles studied by simultaneous impedance spectroscopy and rheoSANS. <i>J. K. Riley, J. J. Richards, P. D. Butler and N. J. Wagner</i>	MM9. Steady extensional viscosity measured by a differential pressure extensional rheometer (DPER) on a chip. <i>S. G. Kim, S. J. Muller and H. S. Lee</i>
11:55	LUNCH BREAK / SOCIETY BUSINESS MEETING Cripple Creek Ballroom					

Afternoon

	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Active, Motile & Field Responsive Matl	Polymer Solutions and Melts	Suspensions, Colloids & Granular Systems	Non-Newtonian Fluid Mechanics	Gels and Self-Assembled Systems	Microrheology and Microfluidics
1:30	AM6. An active particle in a complex fluid. <i>G. Elfring and C. Datt</i>	SM19. Extensional viscosity of unentangled polymer melts. <i>Y. Matsumiya and H. Watanabe</i>	SC14. Non uniform flows in soft glasses of associative colloids. <i>M. Mattiello and M. Cloitre</i>	NF14. Elastic turbulence in channel flows at low Reynolds number. <i>B. Qin and P. E. Arratia</i>	GS6. Modeling a hydrodynamic instability in freely settling colloidal gels. <i>Z. Varga, J. L. Hofmann and J. W. Swan</i>	MM10. Microfluidics measurements of interfacial tension and viscosity of complex emulsions. <i>S. Narayan and C. Dutcher</i>

1:55	AM7. Not so fast: Single-particle motion in active suspensions. <i>E. W. Burkholder and J. F. Brady</i>	SM20. The mechanism of fracture for entangled polymer liquids in extensional flow. <i>Q. Huang, L. Yu, S. L. Wingstrand, A. L. Skov and O. Hassager</i>	SC15. The role of multivalent ion – polyelectrolyte interactions in microgel rheology. <i>C. S. O'Bryan, C. P. Kabb, S. Park, B. S. Sumerlin and T. E. Angelini</i>	NF15. Viscoelastic shear flow through wavy-wall microchannels. <i>S. J. Haward and A. Q. Shen</i>	GS7. Evaporation-driven convective assembly for continuous fabrication of colloidal crystals. <i>K. Joshi and J. F. Gilchrist</i>	MM11. Design and fabrication of elastically tunable monodisperse microcapsules. <i>D. F. do Nascimento, J. A. Avendaño, A. Mehl, M. J. Moura, W. J. Duncanson and M. S. Carvalho</i>
2:20	AM8. Symmetric shear banding in bacterial “superfluids”. <i>S. Guo, D. Samanta, Y. Peng, X. Xu and X. Cheng</i>	SM21. Extensional rheology and flow-induced crystallization of polyethylene above T_m . <i>S. L. Wingstrand, K. Mortensen, Q. Huang, B. Shen, J. A. Kornfield, L. Imperialy, R. Stepanyan and O. Hassager</i>	SC16. Effect of particle-size dynamics on flow properties of dense spongy-particle systems. <i>P. Anderson, M. Hutter and M. Zakhari</i>	NF16. Towards a mechanism for instability in channel flow of highly shear-thinning viscoelastic fluids. <i>H. A. Castillo and H. J. Wilson</i>	GS8. Permeabilities and fractal dimensions of colloidal networks. <i>L. Gelb, A. Mertz, P. Koenig and A. Graham</i>	MM12. Structural and rheological relaxation upon flow cessation in colloidal dispersions: Transient, nonlinear microrheology. <i>R. P. Mohanty and R. N. Zia</i>
2:45	AM9. Collective motion of microorganisms in complex fluids. <i>A. M. Ardekani and G. Li</i>	SM22. Pinch-off dynamics and extensional rheology of polyelectrolyte solutions. <i>L. N. Jimenez, J. Dimic, N. Parsi and V. Sharma</i>	SC17. Long-term aging behaviors in a model soft colloidal system. <i>Q. Li, X. Peng and G. B. McKenna</i>	NF17. The Einstein viscosity with fluid elasticity. <i>J. Einarsson, M. Yang and E. S. Shaqfeh</i>	GS9. Microstructure, rheology and heterogeneity in colloidal gels. <i>S. Jamali, G. H. McKinley and R. C. Armstrong</i>	MM13. Flow of wormlike micellar solutions around confined microfluidic cylinders. <i>A. Q. Shen and S. J. Haward</i>
3:10	COFFEE BREAK					
	Solids, Glasses, and Composites					
3:45	SG1. Surface detection error in nanoindentation of polymers. <i>Z. Qian, J. Risan, B. Stadnick and G. B. McKenna</i>	SM23. Rheology and fused deposition modeling. <i>M. E. Mackay, Z. Swain and D. Phan</i>	SC18. Wall slip of soft-jammed systems: A simple lubrication process. <i>P. Coussot, X. Zhang, E. Lorenceau and T. Bourouina</i>	NF18. Stress modeling in colloidal dispersions undergoing heterogeneous flows. <i>B. E. Dolata and R. N. Zia</i>	GS10. Optimal Fourier transform for probing oscillatory rheology of networks: Introduction and application to thermoreversible gels. <i>M. Geri, B. Keshavarz, T. Divoux, C. Clasen, D. J. Curtis and G. H. McKinley</i>	MM14. Complex flow structuring and velocity profile evolution in wormlike micellar solutions flowing in a glass microcapillary. <i>C. Caiazza, V. Preziosi, G. Tomaiuolo, D. O'Sullivan, V. Guida and S. Guido</i>
4:10	SG2. Creep responses of amorphous Teflon films deep in the glassy regime. <i>H. Yoon, Y. P. Koh, S. L. Simon and G. B. McKenna</i>	SM24. Molecular weight dependence of weld formation in material extrusion additive manufacturing. <i>J. E. Seppala, C. McIlory, P. D. Olmsted and K. Migler</i>	SC19. How measurements of the recoverable strain lead to an enhanced understanding of the linear rheological behavior of a colloidal glass. <i>J. D. Park and S. A. Rogers</i>	NF19. Vorticity banding in Taylor-Couette flow of graphene-oxide dispersions. <i>C. C. Hopkins, F. Del Giudice, J. R. de Bruyn and A. Q. Shen</i>	GS11. Measuring the viscoelastic properties of gelling systems using optimal Fourier transform techniques. <i>B. Keshavarz, M. Geri, T. Divoux and G. H. McKinley</i>	MM15. DWS microrheology of wormlike micelles as a tool for monitoring drug release. <i>D. Gaudino, M. Reuffer, C. Zhang and F. Scheffold</i>
4:35	SG3. From simple to complex glass-forming liquids: broadening of the glass transition as studied by shear rheology. <i>O.-V. Laukkanen, H. H. Winter, H. Soenen and J. Seppälä</i>	SM25. In situ measurements of polycaprolactone crystallization in additive manufacturing processes. <i>A. P. Kotula, L. A. Northcutt and K. Migler</i>	SC20. Is volume jump isochoric aging the answer to structural recovery in colloidal glasses? <i>S. Banik and G. B. McKenna</i>	NF20. The temperature dependent non-Newtonian rheological characteristics of oil-based metal oxide nanofluids. <i>J. Shelton and N. Saini</i>	GS12. Connecting gel architecture to linear and non-linear rheology. <i>M. Bouzid and E. Del Gado</i>	MM16. High-pressure linear viscoelasticity measurements of polymer solutions and gels. <i>K. A. Dennis, Y. Gao, A. Phatak and E. M. Furst</i>
5:00	SG4. A fundamental approach to structural relaxation and aging of thermally-driven glass formers. <i>P. Mendoza-Méndez, M. Chávez-Paez, P. E. Ramírez-González, M. Medina-Noyola and G. B. McKenna</i>	SM26. Electrodeposition of metals in entangled polymer electrolytes. <i>S. Wei, S. Choudhury, M. D. Tikekar and L. A. Archer</i>	SC21. Testing the paradigms of the colloidal glass transition. <i>J. Wang, X. Peng, Q. Li, G. B. McKenna and R. N. Zia</i>	NF21. Nonlinear rheology of nematic liquid crystals in oscillatory shear in a magnetic field. <i>E. P. Choate and J. Britton</i>	GS13. Non-integer power law scaling of asymptotically nonlinear viscoelasticity of capillary suspensions. <i>I. Natalia, R. H. Ewoldt and E. Koos</i>	MM17. An algebraic approach for determining viscoelastic moduli from creep compliance through application of the Generalised Stokes-Einstein Relation and Burgers model. <i>J. Duffy, F. Mazzeo, S. Amin, A. Minegishi and P. Rolfe</i>
5:25	END					
7:00	AWARDS RECEPTION Cripple Creek & Silverton Foyers					
8:00	AWARDS BANQUET Cripple Creek Ballroom					

Wednesday, October 11

Morning

8:30	PL3. Understanding and probing the dynamics of cell-material interactions in four dimensions. <i>K. Anseth</i> Cripple Creek Ballroom					
9:20	COFFEE BREAK					
	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Biomaterials & Biological Systems	Polymer Solutions and Melts	Suspensions, Colloids & Granular Systems	Gels and Self-Assembled Systems	Non-Newtonian Fluid Mechanics	Solids, Glasses, and Composites
9:50	BB1. Modeling the transient rheology of human blood. <i>J. S. Horner, A. N. Beris, N. J. Wagner and D. S. Woulfe</i>	SM27. Effect of extensional flow on immiscible polymer blend/nanoparticle composites. <i>G. Shebert and Y. L. Joo</i>	SC22. Shear thickening in suspensions: The effects of contact model. <i>H. J. Wilson and A. K. Townsend</i>	GS14. Can rheology distinguish between gelation and glass transition in soft matter? <i>H. H. Winter</i>	NF22. Edge fracture in complex fluids. <i>S. M. Fielding, E. J. Hemingway and H. Kusumaatmaja</i>	SG5. Fluidization and yielding of soft glassy solids. <i>V. V. Vasisht, G. Roberts and E. Del Gado</i>
10:15	BB2. The state of contemporary modeling and analysis of human blood rheology. <i>M. J. Armstrong, E. Ousley, T. Helton and M. Deegan</i>	SM28. Blends of disentangled UHMWPE and HDPE: Oscillatory & extensional rheology, optimized processing conditions for dissolution, and model development. <i>K. Chaudhuri, S. Poddar, A. K. Lele, H. V. Pol, A. Mathur and R. Jasra</i>	SC23. A system-spanning dynamically jammed region in response to impact of cornstarch and water. <i>R. Maharjan, S. Mukhopadhyay, B. Sokol, B. Allen, T. Storz and E. Brown</i>	GS15. Viscoelastic behaviour of a colloidal gel at the critical point. <i>K. Suman and Y. M. Joshi</i>	NF23. Comparison of impulsively induced viscoelastic jets having different shear-rate dependent viscosities. <i>E. Turkoz, A. Perazzo, H. Kim, C. B. Arnold and H. A. Stone</i>	SG6. Elasto-plastic models for soft glasses: The role of load transfer mechanism. <i>B. Tyukodi, D. Vandembroucq and C. E. Maloney</i>
10:40	BB3. Measurement of blood rheology using RheoSpec viscometer with EMS method. <i>T. Hirano and K. Sakai</i>	SM29. Predictions of flow-induced demixing and shear banding in polydisperse polymer melts. <i>J. D. Peterson, G. H. Fredrickson and G. Leal</i>	SC24. Controlling shear thickening in colloidal suspensions by adding shaped, non-colloidal particles. <i>N. J. Wagner</i>	GS16. Using creep testing as an alternative to Multiwave Oscillation for determining the true gel point of network polymers. <i>M. Larsson, J. Duffy, S. Murphy, A. Hill and P. Rolfe</i>	NF24. Computational study of melt fracture. <i>Y. Kwon</i>	
11:05	BB4. Microrheological study of plasma coagulation triggered by intrinsic pathway. <i>Y. Mao, M. Tan, O. J. McCarty and T. W. Walker</i>	SM30. Influence of long-chain branching on thermorheology of a metallocene polyethylene. <i>J. M. Silva</i>	SC25. Hydrodynamic stress in a discontinuous shear thickening colloidal suspension. <i>K. J. Whitcomb and N. J. Wagner</i>	GS17. Relaxation times and "self-healing" recovery of entangled and unentangled supramolecular systems. <i>Z. R. Hinton and N. J. Alvarez</i>	NF25. Liquid rope coiling in a power-law fluid: Simulation and observation of the structuration at the impact. <i>A. S. Pereira, A. Antonietti, R. Castellani and R. Valette</i>	SG8. Rheology in hydrate formation at atmospheric pressure. <i>P. H. de Lima Silva, M. F. Naccache and P. R. de Souza Mendes</i>
11:30	BB5. Continuum modeling of nanoparticles transport in the vasculature. <i>R. Rao, K. Butler, J. Clausen, S. A. Roberts, J. Wagner, Z. Liu and C. Aidun</i>	SM31. Tailored polyolefin interfaces via rheological and process modelling. <i>A. M. Jordan, K. Kim, F. S. Bates, S. Jaffer, O. Lhost and C. W. Macosko</i>	SC26. Rheology and microstructure of dense deformable colloidal suspensions: Interplay between elasto-hydrodynamic and frictional interactions. <i>J. Maia, A. Boromand, S. Khani and B. Grove</i>	GS18. Stress induced abrupt sol-gel transition in associating polymer solutions. <i>I. Parmar, A. K. Lele, M. Badiger and P. Wadgaonkar</i>	NF26. Capillary break-up of liquid-liquid interfaces. <i>S. Formenti, K. Verbeke, F. Briatico Vangosa, N. K. Reddy and C. Clasen</i>	SG9. Measurements and modeling of the viscosity of gas hydrate slurries formed from model water-in-oil and oil-in-water emulsions. <i>A. A. A. Majid, C. A. Koh and D. T. Wu</i>
11:55	LUNCH BREAK					

Afternoon

	<i>Crystal A</i>	<i>Crystal B</i>	<i>Crystal C</i>	<i>Crestone A</i>	<i>Crestone B</i>	<i>Aspen</i>
	Biomaterials & Biological Systems	Polymer Solutions and Melts	Suspensions, Colloids & Granular Systems	Gels and Self-Assembled Systems	Non-Newtonian Fluid Mechanics	Solids, Glasses, and Composites
1:30	BB6. Mechanical characterization of living tissues: the Live Cell Monolayer Rheometer (LCMR). <i>G. G. Fuller, M. C. Merola and J. Pokki</i>	SM32. Characterization of commercial polybutadiene and the effects of microstructure on processing. <i>J. A. Bielby and S. Kheirandish</i>	SC27. Does the Huggins coefficient describe the thermodynamics & rheology of concentrated monoclonal antibody formulations? <i>J. A. Pathak, S. Nugent, M. Bender, M. Woldeyes, D. Corbett, R. Curtis, E. M. Furst, C. J. Roberts and J. F. Douglas</i>	GS19. Effect of normal stresses on the determination of the yield strength. <i>R. L. Thompson, L. R. Sica and P. R. de Souza Mendes</i>	NF27. Numerical simulations of viscoelastic film retraction. <i>M. M. Villone, G. D'Avino, E. Di Maio, M. A. Hulsen and P. L. Maffettone</i>	SG10. Understanding the effect of attractive forces on rheology in dense slurries: Toward better understanding of complex correlations between scales. <i>J. Chun, S. Pednekar and J. Morris</i>

1:55	BB7. Determining the role of tissue inhibitors of metalloproteinases in matrix remodeling during 3D human mesenchymal stem cells motility in cell-degradable hydrogel. <u>M. Daviran</u> , S. M. Longwill and K. M. Schultz	SM33. Rheological properties of plasticized polyacrylonitrile copolymers. <u>J. Yu</u> , G. C. Miller, D. G. Baird and J. S. Riffle	SC28. Predicting the time-dependent rheological behavior of irreversible materials: Cement and waxy crude oil examples. <u>F. H. Marchesini</u> and P. R. de Souza Mendes	GS20. Effect of yield stress during coating of microfibrillar cellulose. <u>J. F. Gilchrist</u> , T. Kaewpetch, J. M. Boettcher, J. C. Boettcher, J. Song and P. T. Spicer	NF28. An attempt to measure the yield stress of microbial polysaccharides in aqueous solution. <u>E. S. Ong</u> and J.-L. Liow	SG11. Rheological characterization of ballistic witness materials. <u>R. Tao</u> , K. D. Rice, A. M. Forster, R. A. Mrozek, S. T. Cole and R. M. Freeney
2:20	BB8. The rheology of type II diabetes – transport of insulin granules in pancreatic beta cells. <u>A. S. Burbidge</u> , E.-H. M. Dioum and F. Christakopoulos	SM34. Glass transition temperature and chain entanglement in conjugated polymers. <u>R. Xie</u> , E. D. Gomez and <u>R. H. Colby</u>	SC29. Yield stress and structure recovery of flocculated micro and nanofibrillated cellulose (MNFC) suspensions. <u>E. G. Facchine</u> , K. Ghosh, P. Vargantwar, R. J. Spontak, O. J. Rojas and S. A. Khan	GS21. Effect of counter anion sizes on polymer dynamics and morphologies for polymerized ionic liquids. <u>A. Matsumoto</u> , T. Noda, C. Jacob, O. Urakawa, J. Runt and T. Inoue	NF29. Visco-plastic sculpting in stable triple layer heavy oil transport flow. <u>P. Sarmadi</u> , S. Hormozi and <u>I. Frigaard</u>	SG12. Cold spray deposition of polymer powders – a novel additive manufacturing technique for polymers. <u>Z. Khalkhali</u> , J. Rothstein and D. P. Schmidt
2:45	BB9. Rheology reveals pro-metastatic lung stiffening following exposure to tumor-derived microparticles. <u>T. Barenholz-Cohen</u> , Y. Merkher, D. Shechter, Y. Shaked and <u>D. Wechs</u>	SM35. Anomalous temperature dependence of rheological properties of star telechelic PDLA ionomer melt. <u>A. Kulkarni</u> , <u>A. K. Lele</u> , P. Sharma and S. Chakrabarty	SC30. The effect of carboxymethyl cellulose (CMC) on Large Amplitude Oscillatory Shear (LAOS) behavior of corn starch suspensions. <u>M. Gao</u> , R. Sadeghi, O. Duvarci and J. Kokini	GS22. Effect of platelet in a soft nanocomposite: Physical gelation and yielding. <u>V. Tanna</u> and <u>H. H. Winter</u>	NF30. Can we elongate a yield stress fluid? <u>X. Zhang</u> , O. Fadoul and <u>P. Coussot</u>	SG13. Thermal and mechanical response of battery insulation materials. <u>S. A. Roberts</u> , A. Headley, K. N. Long, A. D. Martinez, C. C. Roberts and M. E. Stavig
3:10	COFFEE BREAK					
3:45	BB10. Shear-dependent microgel processing for efficient encapsulation of functional nanoparticles. <u>R. K. Prud'homme</u> and B. K. Wilson	SM36. Wide angle X-ray study of nematic interactions in a bi-disperse polystyrene melt. <u>A. Borger</u> , K. Mortensen, J. Kirkensgaard, K. Almdal, Q. Huang and O. Hassager	SC31. Rheological properties of cellulose nanocrystal aqueous suspensions prepared via ultrasonication. <u>Q. Beuguel</u> , J. R. Tavares, P. J. Carreau and <u>M.-C. Heuzey</u>	GS23. Embedding memories in colloidal gels through oscillatory shear. <u>E. M. Schwen</u> , M. Ramaswamy, C.-M. Cheng, L. Jan and I. Cohen	NF31. Sinking bubbles. <u>J. A. Koch</u> and R. H. Ewoldt	SG14. Obtaining and evaluating fiber orientation model parameters using nonlubricated squeeze flow. <u>G. M. Lambert</u> , H. Chen and D. G. Baird
4:10	BB11. Mechanistic action of weak acid drugs on biofilms. <u>B. Kundukad</u> , M. Schussman, K. Yang, T. Seviour, L. Yang, S. Rice, K. Staffan and P. S. Doyle	SM37. SAXS/WAXS studies of flow-induced crystallization of LDPE under uniaxial extensional flow. <u>M. S. Kweon</u> and W. R. Burghardt	SC32. Effects of shape on the rheology of polymer-grafted nanoparticles in solution. <u>D. Parisi</u> , D. Vlassopoulos, B. Loppinet, C.-Y. Liu and Y.-B. Ruan	GS24. Photoinduced viscoelasticity in hydrogels to study cellular mechanotransduction. <u>I. A. Marozas</u> , T. E. Brown, J. J. Cooper-White and K. Anseth	NF32. The role of surface charge convection in the electrohydrodynamics and breakup of prolate drops. <u>R. Sengupta</u> , L. M. Walker and A. S. Khair	SG15. Shear and elongational-induced crystallization of branched poly (lactic acid). <u>A. Jalali</u>
4:35	BB12. Flagellar thrust and motor torques in two-dimensional bacterial motility. <u>P. Lele</u>	SM38. A new approach to polymer rheology via spatially-dependent structural response functions. <u>Y. Wang</u> , Z. Wang, C. Lam and W.-R. Chen	SC33. The microstructural origin of the rheo-dielectric behavior of carbon black suspensions in propylene carbonate. <u>J. J. Richards</u> , J. B. Hipp, J. K. Riley, P. D. Butler and N. J. Wagner	GS25. Hydrogel materials as rheometer tooling for the transient delivery of additives during mechanical rheometry. <u>T. M. Ma</u> , M. Szakasits, P.-K. Kao, J. S. Van Epps and <u>M. J. Solomon</u>	NF33. Chain stretch dynamics and rheology of entangled polymer liquids under continuous startup shear deformation. <u>S.-J. Xie</u> and K. S. Schweizer	SG16. Complex viscosity of small polymer grafted nanoparticles dispersed in entangled matrices. <u>M. Giovino</u> and L. Schadler
5:00	BB13. Controlling the properties of planar large area lipid bilayers. <u>J. Vermant</u> , P. Beltramo and L. Scheidegger	SM39. A Rheo-SANS investigation of a star-linear polymer blend. <u>N. Ruocco</u> , L. T. Andriano and G. Leal	SC34. The impact of colloidal suspension rheology on battery performance. <u>S. L. Morelly</u> , M. H. Tang and N. J. Alvarez	GS26. Rheological properties and swelling behavior of host-guest gels. <u>T. Inoue</u> , T. Katashima and Y. Kashiwagi	NF34. Modeling microstructural inertia effects in material flow. <u>P. M. Mwasame</u> , N. J. Wagner and <u>A. N. Beris</u>	
5:25	END					
6:30	POSTER SESSION & RECEPTION Cripple Creek Ballroom					
6:30	GALLERY OF RHEOLOGY CONTEST Cripple Creek Foyer (Online voting 10 am - 8 pm)					

Thursday, October 12

Morning

8:00	API. Drift redux. <u>A. S. Khair</u> (Metzner Award Presentation) Crystal C				
	<i>Crystal A</i> Solids, Glasses, and Composites	<i>Crystal B</i> Polymer Solutions and Melts	<i>Crystal C</i> Suspensions, Colloids & Granular Systems	<i>Crestone A</i> Gels and Self-Assembled Systems	<i>Crestone B</i> Non-Newtonian Fluid Mechanics
8:40	SG18. Natural fiber surface treatment determined by rheological methods: A case study of hemp in linear medium density polyethylene. <u>D. Rodrigue, D. Yomeni Chimeni and C. Dubois</u>	SM40. Squeezing deformation of entangled melts along with particle-tracking velocimetry. <u>X. Li and S.-Q. Wang</u>	SC35. Transient and steady shear rheology of aqueous graphene oxide dispersions. <u>F. Del Giudice, B. Cunning, R. S. Ruoff and A. Q. Shen</u>	GS27. The influence of supramolecular bonds on the nonlinear rheology of metallogels. <u>J. Hendricks, J. Brassine, J. D. Wilson, D. Vlassopoulos and C. Clasen</u>	NF35. A theoretical framework for steady-state rheometry in generic flow conditions. <u>G. G. Giusteri and R. Seto</u>
9:05	SG19. Rheological properties of biopolymers filled with cellulose nanofibers. <u>F. Safdari, P. J. Carreau, M.-C. Heuzey and M. R. Kamal</u>	SM41. Reconstruction of three-dimensional anisotropic structure from scattering experiments. <u>G.-R. Huang, Y. Wang, B. Wu, Z. Wang, C. Do, G. S. Smith, L. Porcar and W.-R. Chen</u>	SC36. Orientation dynamics of dilute graphene suspensions: Dichroism and modeling. <u>G. Natale, N. K. Reddy and J. Vermant</u>	GS28. Viscoelastic behavior of asphalt-polyolefin physical gels. <u>X. Zhao, T. Dissanayaka, M. Rahman, G. F. Christopher, S. Senadheera and R. Hedden</u>	NF36. Revisit the elongational viscosity of FENE dumbbell model. <u>H. Watanabe and Y. Matsumiya</u>
9:30	SG20. Influence of formulation on morphology and rheology of polypropylene/polyamide blends filled with nanoclay mineral particles. <u>Q. Beuguel, J. Ville, J. Crépin-Leblond, P. Médéric and T. Aubry</u>	SM42. Monitoring phase transitions with simultaneous rheology and Raman spectroscopy. <u>N. C. Crawford, D. Drapcho, M. Rocchia and J. P. Plog</u>	SC37. Free surface flows of particle suspensions. <u>I. R. Siqueira and M. S. Carvalho</u>	GS29. Phase behaviour of block copolymer Pluronic: A rheological perspective. <u>K. Suman, S. Sourav and Y. M. Joshi</u>	NF37. Out-of-plane rotational motion in shear flow of polymer melts and solutions. <u>M. H. Nafar Sefiddashti, C. N. Edwards, B. J. Edwards and B. Khomami</u>
9:55	COFFEE BREAK				
10:25	SG21. Effect of nano-particles and flow induced crystallization kinetics in polymer nanocomposites. <u>D. Roy, A. P. Kotula, J. Gilman, K. Migler and D. Fox</u>	SM43. Influence of automated algorithms on the quality of TTS shift factors. <u>B. Rajaram and A. Franck</u>	SC38. Comparison of different flow assessments for Selective Laser Sintering powders illustrated on a rotational rheometer. <u>A. Shetty and D. Schütz</u>	GS30. Rheological characteristics of water/oil/pluronic block copolymer mesophases. <u>S. Qavi and R. Foudazi</u>	NF38. Open-ended problems in flow of complex fluids. <u>S. S. Deshmukh</u>
10:50	SM44. Various aspects of melt extension to test standard models. <u>J. Liu, Y. Feng, Z. Zhao, A. Avgeropoulos and S.-Q. Wang</u>	SM45. The melt rheology of poly(ethylene oxide) powder mixtures of varying initial molecular weight distribution subject to non-oxidative thermal degradation. <u>C. D. Mansfield, D. G. Baird and C. J. Pino</u>	SC39. Broken necklaces. <u>E. Chaparian, A. Wachs and I. Frigaard</u>	SC40. Flow of colloidal gels and log rolling structures of rod-like colloids. <u>M. Das and G. Petekidis</u>	SC41. Dynamics of nanoparticles in polymer nanocomposites. <u>P. Nath</u>
11:15				GS31. Rheological and tribological behavior of soft complex gels. <u>B. V. Farias, L. C. Hsiao and S. A. Khan</u>	NF39. Exact-solution for cone-plate viscometry. <u>A. J. Giacomin and P. H. Gilbert</u>
11:40				GS32. Self-assembly, structure and rheology of polyelectrolyte complex hydrogels. <u>S. Srivastava, A. Levi, D. Goldfeld and M. Tirrell</u>	NF40. Experimental and numerical modeling of the rolling process of potato dough. <u>S. O. Echemdu</u>
12:05			END		NF41. A general approach on the quantification of continuous flows of non-Newtonian fluids based on the energy balance. <u>H. K. Jang and W. R. Hwang</u>

Poster Session

Wednesday 6:30 PM – 8:30 PM Cripple Creek Ballroom

- PO2.** Rheological measurements for prediction of toothpaste properties: Pumping, squeezing and shape retention. *A. Ahuja, G. Luisi and A. Potanin*
- PO3.** Rheological enhancement of artificial sputum medium. *M. Tan, Y. Mao and T. W. Walker*
- PO4.** Effects of formulation and human saliva on the rheological and tribological behaviors of acid milk gels, a model yogurt system. *H. S. Joyner and M. Baniasadidehkordi*
- PO5.** Fibrinogen adsorption onto phospholipid monolayers: Evolution and stiffening. *I. Williams and T. M. Squires*
- PO6.** Dynamic study of circular DNA by bulk rheology. *D. Kong, S. Banik, M. J. San Francisco, R. M. Robertson-Anderson and G. B. McKenna*
- PO7.** Quantifying enzymatic degradation of uterine fibroid tissue using rheology. *R. D. Corder, R. B. Vachieri, D. K. Taylor, S. R. Gadi, J. M. Cullen, F. L. Jayes and S. A. Khan*
- PO8.** Drag reducing polymers (DRPs) reduce rigid red blood cell traffic in bifurcating microchannel blood flow. *D. Crompton, S. Gudla, M. Jimenez, P. Sundd and M. V. Kameneva*
- PO9.** Using simultaneous rheology and molecular spectroscopy to evaluate melt processability for pharmaceutical hot-melt extrusion. *N. C. Crawford*
- PO10.** Analysis of shear-induced erythrocyte deformation following intracellular content replacement. *L. A. Ziegler, K. B. Zougari, J. H. Waters and M. V. Kameneva*
- PO11.** Determination of macroscopic rheological properties of human mesenchymal stem cell laden poly(ethylene glycol) hydrogels. *M. S. Mazzeo and K. M. Schultz*
- PO12.** Quantitative predictions of 2D and 3D dam-break cases using $\mu(I)$ rheology: Quasi static or inertial regimes and scaling laws. *S. Riber, R. Castellani, E. Hachem and R. Valette*
- PO13.** Diffusion and equilibrium structure of bidisperse colloidal suspensions confined by a spherical cavity. *E. Gonzalez, C. Aponte-Rivera and R. N. Zia*
- PO14.** Phase transition of jammed suspensions of soft particles glasses in steady and oscillatory shear flows. *F. Khabaz, T. Liu, M. Cloitre and R. T. Bonnecaze*
- PO15.** Uncertainty quantification in computations of a sedimenting sphere in Carbopol. *J. Kim, P. K. Singh, J. B. Freund and R. H. Ewoldt*
- PO16.** Mesoscale modeling of transiently networked fluids. *L. Zhou and L. P. Cook*
- PO17.** Multi-chain slip-spring simulation for entangled symmetric star polymer melts. *A. Pandey and Y. Masubuchi*
- PO18.** Modelling and visualizing the flow of standard reference materials for the calibration of rheometers used in the cement and concrete industries. *N. S. Martyts, W. L. George, S. G. Satterfield and C. F. Ferraris*
- PO19.** Structural analysis of aggregate breakup process under uniaxial extensional flow. *S. H. Kim and K. H. Ahn*
- PO20.** Bayesian information criterion (BIC) for model selection with thixotropic yield stress fluids. *A. S. Margotta and R. H. Ewoldt*
- PO21.** Study 3-dimensional giant molecules for dynamics beyond 1-D Polymers. *G. Liu, X. Feng, K. Lang, R. Zhang, D. Guo, S. Yang and S. Cheng*
- PO22.** Numerical simulations of thixotropic fluid flows: Some preliminary results. *M. Ferreira, G. F. Furtado and S. Frey*
- PO23.** Imbalanced outflows, recirculation and vortex breakdown at a microfluidic T-junction. *S. T. Chan, S. J. Haward, K. Toda-Peters and A. Q. Shen*
- PO24.** The μ -rheometer: An effective microfluidic platform to measure the relaxation time of weakly viscoelastic polymer solutions. *F. Del Giudice, G. D'Avino, I. De Santo, V. Calcagno, V. Esposito Taliento, S. J. Haward, F. Greco, P. A. Netti, P. L. Maffettone and A. Q. Shen*
- PO25.** Viscoelastic flow around microfluidic cylinders with high aspect ratios and low blockage ratios. *S. J. Haward, K. Toda-Peters and A. Q. Shen*
- PO26.** Effect of surfactant and salt on oil displacement through microfluidic porous network. *S. E. Rahman, I. Sinha and G. F. Christopher*
- PO27.** Three-dimensional visualization of oil displacement by flexible microcapsules suspensions in porous media. *J. R. Vimieiro, D. F. Nascimento and M. S. Carvalho*
- PO28.** Combining rheometry, microscopy, and modulated temperature differential scanning calorimetry to assess wax crystallization in crude oils. *F. Paiva, V. Calado and F. H. Marchesini*
- PO29.** Aging oil-water interfaces with asphaltene adsorption: Interface rheology and heterogeneity. *C.-C. Chang, N. Arash, M. Vincent and S. Todd*
- PO30.** Simple method for determining stress and strain constants for non-standard measuring systems on a rotational rheometer. *J. Casola, K. Yang, J. Duffy, A. Hill and S. Murphy*
- PO31.** Characterizing the modulus of a sealant using outdoor exposure. *C. C. White, E. O'Brien, K. T. Tan and D. Hunston*
- PO32.** Precise control over position and orientation of anisotropic colloidal particles using a Stokes trap. *D. Kumar, A. Shenoy and C. M. Schroeder*
- PO33.** New approaches to asphalt testing. *G. W. Kamykowski*
- PO34.** Accurate measurement of low viscosity liquid at low shear-rate range by Rheology Spectrometer. *Y. Yamakawa, Y. Okada and K. Sakai*
- PO35.** On-line viscosity monitoring in a mixing tank with non-Newtonian fluids. *H. J. Jo and W. R. Hwang*

- PO36.** Frequency sweeps: Can time be eliminated? *M. T. Shaw*
- PO37.** Rheological analysis tools for complex materials. *D. Moonay*
- PO38.** Extensional rheometry with a handheld mobile device. *K. A. Marshall, A. M. Liedtke and T. W. Walker*
- PO39.** Physical interpretation of oscillatory shear flow: Application of Sequence of Physical Process (SPP) analysis to Soft Glassy Rheology (SGR) model. *J. D. Park and S. A. Rogers*
- PO40.** Sequencing the transient rheology of soft solids. *C.-W. Lee and S. A. Rogers*
- PO41.** Using LAOS and transient data to “fingerprint” human blood rheological data. *T. Helton*
- PO42.** Comparison of simple rheological models in fitting and predicting steady state and transient blood rheology. *M. Deegan and M. J. Armstrong*
- PO43.** Shear thickening behavior of suspensions of acetylated cassava starch in glycerol. *O. F. Silva and V. Calado*
- PO44.** Experimental study on reversible formation of 2D flocs from plate-like particles dispersed in Newtonian fluid under torsional flow. *H. Lee and C. Kim*
- PO45.** Superposition rheology and anisotropy in rheological properties of sheared colloidal gels. *G. Colombo and J. Vermant*
- PO46.** Using thermal processing to control structure and rheology in thermoresponsive colloidal gels. *T. Nguyen, J. Kim and M. E. Helgeson*
- PO47.** Characterizing caking behavior in cohesive bulk solids using a rotational rheometer. *J.-G. Polich, A. Shetty and G. Paroline*
- PO48.** Hyper time-resolution rheology measurement by airborne liquid droplet analysis. *K. Sakai, S. Mitani and Y. Yamakawa*
- PO49.** Linear viscoelasticity of a dilute emulsion of drops containing soluble surfactant. *R. Sengupta, L. M. Walker and A. S. Khair*
- PO50.** Free surface flows and extensional rheology of polymer solutions. *J. Dinic, L. N. Jimenez, M. Biagioli, A. Estrada and V. Sharma*
- PO51.** Influence of interfacial elasticity on drainage in foam films using Dynamic Fluid-film Interferometry. *J. M. Frostad, G. L. Lin and G. G. Fuller*
- PO52.** Viscoelastic properties of ultrathin atactic poly(methyl methacrylate) films dewetting on a liquid substrate. *C. Lou and G. B. McKenna*
- PO53.** Effect of viscoelasticity on liquid curtain breakup. *M. S. Bazzi and M. S. Carvalho*
- PO54.** Rheo-NMR of transient and steady state shear-banding in wormlike micelles. *R. N. Al-kaby, S. L. Codd, J. D. Seymour, T. I. Brox and J. R. Brown*
- PO55.** Shear induced de-mixing in a shear banding wormlike micellar solution. *A. Dalili and H. Mohammadigoushki*
- PO56.** Design of patchy nanoparticles via the self-assembly of triblock terpolymers in selective solvents. *N. Moreno and E. Fried*
- PO57.** The synergistic effects of polymer nanocomposites based on chemically stitched CNT/graphene hybrids: Rheological and electrical properties. *M. Heydarnejad Moghadam, F. Goharpey and H. Nazockdast*
- PO58.** Linear viscoelasticity of epoxy monomer/TiO₂ nanoparticle mixtures under curing. *K. B. Riad and P. Wood-Adams*
- PO59.** Mechanical property and glass transition temperature measurements on freestanding ultrathin films of unblended rigid polyvinyl chloride (RPVC) and their deviation from bulk behavior using the nanobubble inflation technique. *A. A. Denton, H. Yoon and G. B. McKenna*
- PO60.** Global strain-field mapping of a carbon nanotube-laden interface using digital image correlation. *S.-Y. Chang, S. Vora, H. Patanwala, B. Bognet, M. S. W. Li and A. Ma*
- PO61.** Linear dynamic mechanics and creep flow of matrix-free polymer grafted nanocomposites. *E. N. Buenning, D. Parisi, B. Benicewicz, D. Vlassopoulos and S. K. Kumar*
- PO62.** Viscoelastic characterization of CNT-grafted fiber reinforced epoxy composite. *A. Krishnamurthy, R. Tao, S. Doshi, E. Thostenson and A. M. Forster*
- PO63.** Effect of CNT synthesis conditions on nonlinear rheological response of CNT/PVDF nanocomposites. *M. Kamkar, S. Sadeghi, M. Arjmand and U. Sundararaj*
- PO64.** The synergistic effects of polymer nanocomposites based on chemically stitched CNT/graphene hybrids: Rheological, electrical and mechanical properties. *M. Heydarnejad Moghadam, F. Goharpey and N. Hosein*
- PO65.** Nano-rheology of entangled polymer melts. *T. Ge, G. S. Grest and M. Rubinstein*
- PO66.** Complicated issues in paint making: Order of addition and so on. *H. Sun*
- PO67.** Microrheology of a drying paint. *S. Varghese, R. M. Rock, J. F. Gilchrist and C. L. Wirth*
- PO68.** Linear and non-linear rheology of PBT/PTHF segmented copolymers. *A. De Almeida, G. Baeza and D. Vlassopoulos*
- PO69.** Linear rheological responses of second-generation dendronized wedge-type polymer. *Z. Qian, A. B. Chang, T.-P. Lin, P. E. Guzman, R. H. Grubbs and G. B. McKenna*
- PO70.** A transient study of the gelation of aqueous solutions of pluronic F-127 using SAOS. *C. C. Hopkins and J. R. de Bruyn*
- PO71.** Wide angle X-ray scattering study of nematic interactions in a bi-disperse polystyrene melt. *A. Berger, K. Mortensen, Q. Huang, O. Hassager, J. Kirkensgaard and K. Almdal*
- PO72.** Flow-induced crystallization in isotactic polypropylene via simultaneous measures of modulus, helicity and morphology. *K. Migler and A. P. Kotula*
- PO73.** Shear alignment and relaxation behavior of pluronic/water/p-xylene mesophases. *S. Qavi and R. Foudazi*
- PO75.** Rheological properties of corn stover slurries during fermentation to ethanol. *S. Ghosh, B. Epps and L. Lynd*
- PO76.** Rheological properties and interparticle interactions of fuel cell catalyst dispersions. *S. A. Mauger, S. Khandavalli, J. J. Stickel, K. Hurst, K. C. Neyerlin and M. Ulsh*
- PO77.** The conformation and dynamics of polyelectrolytes in ionic liquids with high salt concentrations. *A. Matsumoto and A. Q. Shen*
- PO78.** Filament dynamics in a salt-free viscoelastic surfactant solutions. *R. Omidvar and H. Mohammadigoushki*

- PO79.** Thermalized formulation of soft glassy rheology. *R. S. Hoy*
- PO80.** Glass former colloids dynamics in isochoric conditions. *D. Pierleoni, F. Doghieri and G. B. McKenna*
- PO81.** Linear rheology of a nematic liquid crystal in the presence of a magnetic field. *J. Britton and E. P. Choate*
- PO82.** Chitosan as a yield stress fluid: Concentration dependent rheology and microdynamics. *N. M. Gasbarro and M. J. Solomon*
- PO83.** Observation of dynamically correlated region in colloidal glasses by small-angle neutron scattering. *Z. Wang, T. Iwashita, L. Porcar, Y. Wang, Y. Liu, L. Sanchez-Diaz, B. Wu, T. Egami and W.-R. Chen*
- PO84.** Feel the burn: Incorporating tribological techniques to characterize fabric wear. *J. P. Eickhoff and D. Echard*
- PO85.** Rheology investigation of architectural paints. *Y. Wang*
- PO86.** Design criteria for thixotropic yield-stress fluids for hose flow and surface coating. *B. C. Blackwell, A. Wu and R. H. Ewoldt*
- PO87.** Effect of rising motion of spherical bodies on structured fluids with yield stress. *S. Mirzaagha, R. Pasquino, V. Guida, F. Zonfrilli and N. Grizzuti*
- PO88.** Big effects of small sticky nanoparticles on the glass transition, fragility, and viscoelastic properties of polymer nanocomposites. *S. Cheng, S.-J. Xie, J.-M. Carrillo, R. Carroll, H. Martin, M. Dadmun, B. Sumpter, K. S. Schweizer and A. Sokolov*

Gallery of Rheology

Preview: Monday 1:30 PM – 5:00 PM, Tuesday 8:30 AM – 4:00 PM, Wednesday 8:30 AM – 4:00 PM

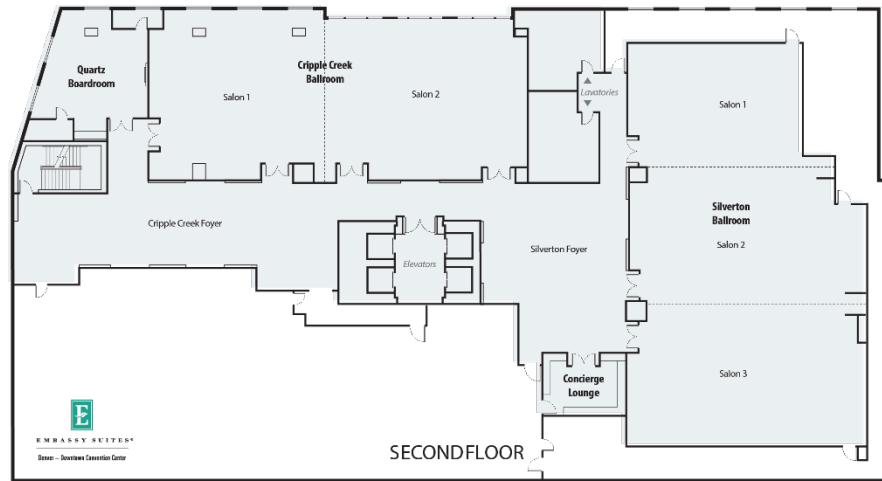
Contest: Wednesday 6:30 PM – 8:30 PM (Online voting 10:00 AM – 8:00 PM)

Cripple Creek Foyer

- GR1.** Cells dynamically engineer the rheology of their microenvironment. *K. M. Schultz and M. Daviran*
- GR2.** Microstructural deformation in active matter. *E. W. Burkholder and J. F. Brady*
- GR3.** Recreating the starry night via shear rheometry. *G. Chaudhary, G. Juarez and R. H. Ewoldt*
- GR4.** The Möbius dance: Hydrodynamic interactions of non-orientable objects moving in a fluid. *N. Moreno, D. Vazquez-Cortes and E. Fried*
- GR5.** High speed confocal imaging of sheared colloidal gels. *G. Colombo and J. Vermant*
- GR6.** Spreading of oil-in-water emulsions on water surface. *N. Sanatkar, A. Y. Malkin and R. Foudazi*
- GR7.** Bead formation on a viscoelastic drop's tail. *H. Xu and R. J. Poole*
- GR8.** From liquid to solid in a splash. *M. Geri, B. Keshavarz and G. H. McKinley*
- GR9.** High-speed imaging of fracture in polymer liquids under extensional flow. *Q. Huang, N. J. Alvarez, A. Shabbir and O. Hassager*
- GR10.** Yield-stress fluids can be highly extensible. *A. Z. Nelson and R. H. Ewoldt*
- GR11.** Silly putty tetrapus. *A. Vananroye, P. Van Puyvelde and C. Clasen*
- GR12.** Direct observation of single polymer dynamics in large-amplitude oscillatory extension (LAOE). *Y. Zhou and C. M. Schroeder*
- GR13.** Microfluidic comet tails. *S. J. Haward and A. Q. Shen*
- GR14.** Chevron-like waves of a submerged viscoelastic jet. *B. Keshavarz, M. Geri and G. H. McKinley*
- GR15.** Flexible sheet oscillation due to elastic instabilities in a flow of wormlike micelle solution. *A. A. Dey, Y. Modarres-Sadeghi and J. Rothstein*
- GR16.** Yield-stress fluid fingering instability. *A. Z. Nelson and R. H. Ewoldt*
- GR17.** Calming a storm: Controlling formation and intensity of a “micro-typhoon”. *N. Burshtein, A. Q. Shen and S. J. Haward*

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Embassy Suites Denver Downtown Meeting Space



Social Program and Special Events

Sunday, October 8	Student-Industry Forum 4:00 PM – 6:00 PM <i>Sponsored by American Institute of Physics and DowDuPont</i>	Crystal Ballroom C
	Welcoming Reception 6:30 PM – 8:30 PM	Cripple Creek Ballroom
Monday, October 9	Gallery of Rheology Preview 1:30 PM – 5:00 PM	Cripple Creek Foyer
	Monday Evening Reception 6:30 PM – 9:30 PM <i>Reception hosted by TA Instruments</i>	Colorado History Museum
Tuesday, October 10	Gallery of Rheology Preview 8:30 AM – 4:00 PM	Cripple Creek Foyer
	Society Business Meeting 11:55 AM – 1:30 PM	Cripple Creek Ballroom
	Awards Reception 7:00 PM – 8:00 PM	Cripple Creek & Silverton Foyers
	Awards Banquet 8:00 PM	Cripple Creek Ballroom
Wednesday, October 11	Gallery of Rheology Preview 8:30 AM – 4:00 PM	Cripple Creek Foyer
	Poster Session and Reception 6:30 PM – 8:30 PM <i>Sponsored by Anton-Paar USA</i>	Cripple Creek Ballroom
	Gallery of Rheology Contest 6:30 PM – 8:30 PM Online voting 10 AM – 8 PM	Cripple Creek Foyer

The Society of Rheology gratefully acknowledges the generous support of Anton-Paar USA, Malvern Instruments, TA Instruments, American Institute of Physics, and DowDuPont.