PolyRMC 2nd Bulletin 2010

**News**

- PolyRMC Associate Director for Research, Alina Alb chaired the ACS Spring 2010 Division of Polymer Chemistry session, "General Topics in the Characterization of Polymers" in March 2010 in San Francisco. Prof. Alb presented "Online monitoring of nitroxide mediated polymerization in emulsion" and "Deviations from livingness during gradient copolymerization by RAFT." Graduate student Zheng Li presented, "Toward amphiphilic diblock copolymers by RAFT, kinetic study on pH responsive polymers." Graduate student Colin McFaul presented, "During synthesis monitoring of polymer lower critical solution temperature."

- Prof. Alb, traveled to Brazil to visit with colleagues and collaborators in Rio de Janeiro, São Paulo, São Carlos, Curitiba, and Porto Alegre. The trip was sponsored by NSF under a collaboration grant with the Brazilian government.

- PolyRMC spun off Advanced Polymer Monitoring Technologies LLC (New Orleans, LA), a start-up company that will seek to commercialize PolyRMC innovations, including the ACOMP and SMSLS technologies. Contact Alex Reed for more information.

- Prof. Alb and PolyRMC Director, Prof. Wayne Reed, prepared a short course on ACOMP which was presented at the 23rd International Symposium on Polymer Analysis and Characterization (ISPAC) in Pohang, Republic of Korea, in May.

**Ongoing Collaborations**

- PolyRMC continued its collaboration with Nalco in Garryville, LA.

- PolyRMC began collaborating with Prof. John Anderson at UL-Monroe on an instrumentation development project.

- PolyRMC recently began collaborations with Rhodia Corporation (Paris, France).

- PolyRMC has continued R&D work with Lion Copolymer (Geismar, LA).

- PolyRMC is currently working on projects with various other University and Industrial collaborators.

**Upcoming Events**

- Prof. Reed will be a keynote speaker at the 10th International Workshop on Polymer Reaction Engineering sponsored by Dechema, the German society for chemical and biotechnology, in Hamburg, Germany, October 10-13, 2010.

- PolyRMC, in partnership with Brookhaven Instruments Corporation, will host a 2 day GPC background course and an additional special 2 day GPC hands-on course in October 2010. Contact Alex Reed at areed@tulane.edu or (504)865-5087 for more information.
Thank You,
The PolyRMC Team

Scientific Projects

- Amphiphilic diblock copolymers by RAFT - micellization and association phenomena.
- Synthesis of nanocomposite materials via online monitoring of living polymerization methodologies.
- Surfactant/polymer interactions.
- Polymerization in heterogeneous phase - inverse emulsion polymerization.
- Thermodynamic origins of scattering phase transition signatures in micellar systems.
- The effect of charged comonomers on the lower critical solution temperature of copolyelectrolytes.
- New advances in 2nd generation ACOMP; monitoring the onset and evolution of polymer stimuli responsive behavior during synthesis.
- Theoretical light scattering signatures during diblock copolymers synthesis by RAFT.
- Light scattering studies of the effects of different agents on protein stability by simultaneous measurements of solutions under various conditions using proprietary static light scattering technology.

If you would like to contact PolyRMC regarding a research project, IP question, or any other type of inquiry please call or email Alex Reed at (504) 865-5087 or areed2@tulane.edu.

Thank You,
The PolyRMC Team

Publications

A.M. Alb, W.F. Reed, "Fundamental measurements in online polymerization reaction monitoring and control, with a focus on ACOMP", invited review, Macromolecular Reactor Engineering, Doi 10.1002/mren.200900079

Li, Zheng; Serelis, Algirdas K.; Reed, Wayne F.; Alb, Alina M. "Toward amphiphilic diblock copolymers by RAFT. Kinetic study on pH responsive polymers" Polymer Preprints, 2010, 51, 476-477.

Li, Zheng; Serelis, Algirdas K.; Reed, Wayne F.; Alb, Alina M. "Deviations from livingness during gradient copolymerization by RAFT." Polymer Preprints, 2010, 51, 84-85.


"Study on the copolymerization of 2-(dimethylamino)ethyl acrylate with styrene by RAFT. Deviations from reaction control/livingness", Z. Li, A. K. Serelis, W. F. Reed and A. M. Alb, submitted to Polymer

Patents