March 1, 2009-April 30, 2009 Bulletin

News

- **Prof. Timothy McKenna**, Chemical Engineering Dept. at Queen University, Ontario, Canada visited PolyRMC on February 19th.

- Projects of common interest were discussed during visits made by scientists from **Shimadzu** to PolyRMC on March 4th and on April 22nd.

- Advisory Board member Dr. Raymond Farinato, a **Kemira** Research Fellow visited PolyRMC on March 5th.

- Advisory Board member Dr. John McConville, Brookhaven Instrument Corporation (**BIC**) visited PolyRMC the morning of Friday, March 6th.

- The PolyRMC Advisory Board had its 2nd Annual meeting on March 6th. The Board is comprised of distinguished members with very different scientific and business profiles.

- Tomasz Kreft defended his thesis, “Predictive Control of Free Radical Polymerization Reactions Including Copolymeric Polyelectrolytes” on March 18th. He will do his post-doctoral work with Prof. David Haddleton at the Univ. of Warwick, England.

- PolyRMC Advisory Board member, Dr. Chris Roger, visited PolyRMC on April 2nd. **Arkema** has been a long term collaborator.
PolyRMC had a booth at the 9th annual Tulane Engineering Forum on April 3rd. PolyRMC Director, Prof. Reed and Dr. Roger of Arkema Inc. were among the speakers.

Dr. Shaffiq Jaffer, the new Chief Scientific Representative for Total E&P USA visited PolyRMC on April 27th. Total has been a long term collaborator of PolyRMC.

PolyRMC has a new website: http://tulane.edu/sse/polyRMC

New scientific projects and results

- First adaptation of ACOMP to monitoring natural product reactions was made together with PolyRMC visitor Dr. Nodirali Normakhmatov, Uzbek Academy of Sciences.
- First adaptation of ACOMP to controlled synthesis of polymers with well defined properties by 'living' polymerization in emulsion. The effects of different reagents on reaction kinetics and particle size were studied. Dr. Alb was in charge of this project.
- A new device for simultaneously measuring conductivity and pH within a recirculating ACOMP configuration was designed and implemented by Mr. Drenski and Prof. Reed.
- Reaction control: a robust means, using reagent feed to reactor was developed to establish desired trends in composition and molecular weight during free radical copolymerization reactions. Mr. Kreft and PolyRMC staff were involved in this work.
- A novel ACOMP approach was introduced by Mr. Li and Dr. Alb in the study of 'living' copolymerization of charged monomers in organic solvents. Monitoring conductivity in a chosen solvent mixture allowed comonomer composition to be followed.

Ongoing/completed projects with PolyRMC clients

PolyRMC is currently working on projects with several clients locally, nationally, and internationally. PolyRMC is using its unique problem-solving and characterization techniques in diverse fields, including rubber and other synthetic polymers and biopolymers. The Center is also attempting to diminish the carbon footprint and total energy consumption of the polymer manufacturing industry as a whole while, at the same time, reducing costs and increasing competitiveness of polymer manufacturers. The Center envisions accomplishing this through implementation of ACOMP at the industrial level to monitor large-scale polymerizations. PolyRMC is currently seeking industrial collaborators who would like to increase their manufacturing efficiency and product quality, and reduce their manufacturing costs.

If you would like to collaborate with PolyRMC on a project, please contact us.

Thank you,

The PolyRMC Team

http://tulane.edu/sse/polyRMC