We are pleased to kick off the inaugural newsletter that highlights some of our activities from this past year. Our team of faculty, staff scientists, and students have made a number of advancements understanding processes in porous media. In particular, projects this year have focused on:

✦ Chemical enhanced oil recovery - in particular surfactant stabilized foam
✦ Foam mobility control
✦ Low interfacial tension foam
✦ Wettability Alteration
✦ Adsorption and surfactant retention onto different mineral surfaces
✦ The use of sacrificial agents
✦ Visualization of transport processes at the pore-scale
✦ Developing models for 1-D and 2-D foam transport
✦ Molecular modeling of surfactant interfacial behavior
✦ Nanotechnology for porous media processes

Research Highlight:

Biswal and Hirasaki awarded STS-AICHE Best Fundamental Paper for visualizing bubble flow in individual pores

This past year, the South Texas Section of the American Institute of Chemical Engineers awarded their annual best fundamental paper award for their work in visualizing the flow and deformation of individual bubbles through a single pore: “Neighbor-induced bubble pinch-off: novel mechanisms of in situ foam generation in microfluidic channels” published in Soft Matter, 2013, 9, 10971 by Rachel Liontas, Kun Ma, George J. Hirasaki, and Sibani Lisa Biswal

Watch the video at http://youtu.be/-TJocLraGZU

Save the Date:

19th Annual Consortium Meeting will take place Wednesday April 22, 2015 at 8am in Duncan Hall at Rice University
**News**

**Flood Damage**

The Hirasaki laboratory was flood this past August from broken plumbing. This was a mixed blessing. We had to work in temporary space for 6 months but we were able to replace everything that was damaged from the water. This includes replacing the two 20 year old NMR spectrometer with a new Oxford 2 MHz spectrometer with probes that can measure short relaxation times for oil and gas shale. We are negotiating to have an experienced NMR research scientist join us as well as a young visiting professor from China. We expect to showcase many of the new core flooding apparatus during a lab tour at the annual meeting.

**Welcome new staff**

We added two new Ph.D. students to join projects related to the consortium projects. Three postdocs and two visiting professors have also recently joined on our group.

**Good-bye!**

We had four students graduate this past year:

✦ Dr. Charles Conn and Dr. Aparna Raju Sagi joined Shell Westhollow Technology Center in Houston, TX.

✦ Dr. Leyu Cui joined Total in Pau, France.

✦ Hadi Shams Jazayi joined Clariant Oil Services in Houston, TX.

**New Consortium!**

This past year, our newest faculty member, Francisco Vargas, established a Consortium on Petroleum Thermodynamics and Flow Assurance. www.vargaslab.org/ptfac/

**Publications**


*PDF copies of research articles are available upon request*

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