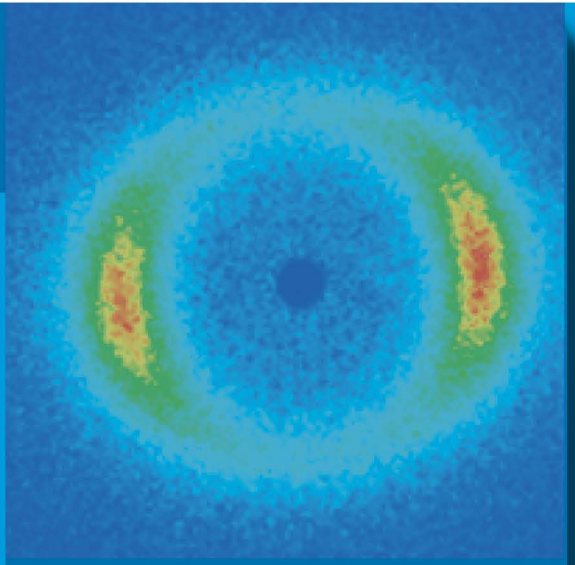
Center for Neutron Science

Seminar



Dr. Lilo Pozzo

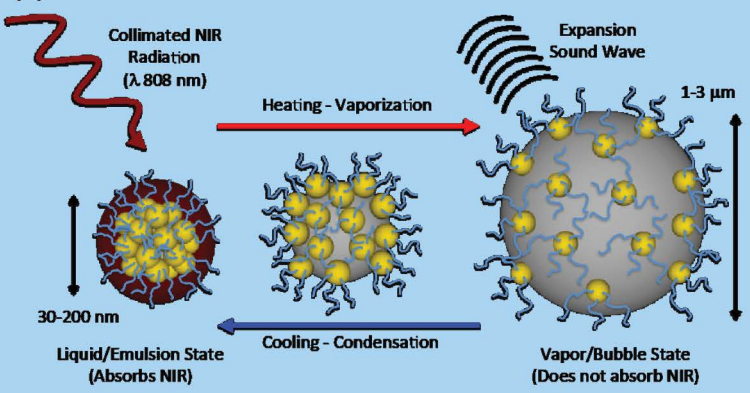
Department of Chemical Engineering

University of Washington

Dr. Pozzo's research interests are in the area of soft materials and nanotechnology. Her group focuses on controlling and manipulating self-assembly and on developing structure-function relationships for a variety of nano-structured materials having applications in health, alternative energy and separations. Prof. Pozzo obtained her B.S. from the University of Puerto Rico at Mayagüez and her PhD in Chemical Engineering from Carnegie Mellon University in Pittsburgh PA. She also worked in the NIST Center for Neutron Research as a post-doctoral fellow and is currently an Associate Professor of Chemical Engineering at the University of Washington where she has served since 2007. In addition to research, she is also dedicated to improving Chemical Engineering undergraduate education with curriculum reform and course development.

Ultrasound and Photo-acoustic Nano-Emulsion Agents for use in Medicine

Molecularly engineered nano-emulsion systems are finding increased interest for use in medicine as imaging and therapeutic agents. In particular, perfluorinated emulsions act as powerful contrast agents with controlled triggering in ultrasound and photoacoustic imaging modalities. In these systems, energy delivered non-invasively by near-infrared light and/or by ultrasound fields promotes the controllable cavitation of nanodropplets to transciently produce micrometer bubbles. Under suitable conditions, abrupt vapor re-condensation and bubble collapse generates strong acoustic fields that are used for sensing, image reconstruction, drug delivery and/or tumor or blod clot ablation. This talk will cover recent results from my group related to the synthesis, characterization, optimization and use of novel phase-change nano-emulsion systems intended for use in medical applications.



DATE:

November 15, 2017

TIME CHANGE:

~~**11:00 a.m.**~~

1:00 p.m.

LOCATION:

366 Colburn Lab

UNIVERSITY OF DELAWARE