Center for Particulate and Surfactant Systems (CPaSS)

- Established as a NSF Joint I/UCRC in 2008 with 2 sites; recently added 1 site
- Lead Site: University of Florida, Brij M. Moudgil (Dir.), R. Guico (Site Dir.)
- Partner Site: Columbia University, P. Somasundaran (Dir.)
- International Partner Site (2012): Dharmsinh Desai University in Nadiad, Gujarat, India, A. Shukla and D.O. Shah (Dirs.)

CPaSS Mission

Deliver a comprehensive knowledge of the interplay between particles and surfactant systems that will lead to processes and products with minimal environmental impact
How does the Center promote international relations and sharing research with such partners

✓ Visiting international research centers, and hosting graduate students, post doctoral fellows and faculty from abroad:

• Visits to DDU, El-Kay and Tata, Asian Paints, United Phosphorus, India; Kao, Osaka U, Tokyo U, Tokyo Agri U, Hosokawa Micron, Japan
• Post doctoral/graduate students, CMRDI, Egypt; Nagoya U; Osaka Prefecture U, Japan; Tsinghua Univ, China
• Prof. Jan Marijnissen, Delft Univ of Tech, The Netherlands;
• Prof. David Boger, U of Melbourne/Monash, Australia
• Dr. E. Sayed Abdel-AL, Dr. M. Rashad, CMRDI, Egypt
• Dr. J. Curtis - sabbatical at UNSW, Australia

✓ Leveraging $s at both places: write joint research proposals:

• Professor P. Somasundaran - Green surfactants (NSF TIE Project with IIT Madras)
• Dr. Kevin Powers and Drs. Sayed and Rashad - Production of Mullite from Waste materials (US-Egypt research fund)

✓ Organizing/Participating in international workshops/seminars:

• Dr. Kevin Powers, plenary speaker in Egypt’s, 1st International Conference on Advanced Basic & Applied Sciences, 5-9 Nov 2012.
What do students gain from international collaborations

- Students acquire new research skills, learn about new tools, different approaches in problem solving (*out of the box thinking*), and gain deeper knowledge in their chosen as well as allied fields (attend seminars, group meetings, brainstorming sessions)
- Learn about the culture, communication skills and norms, societal dos and don’ts

How does your Center promote commercialization of proof of concept research findings

- Partnering with small companies by writing joint research/SBIR proposals (NanoHygienix, Sinmat, Integrated Microsensors, OndaVia, G4 Synergetics)
- Campus seminars, workshops
What are Dos and Don’ts for Fostering International Partnerships

- Choose programs that fill critical gaps:
  - Optimize collaborations rather than Maximize
  - Right Chemistry and passion to serve students, scholars, industry and society are vital
  - Good fit for the two centers (research philosophy, admin)
- Buy in from all stakeholders “a must” - NSF, IAB members, faculty and students
- Strong commitment from college/university administration
- Avoid rushing into partnerships, make sure all stakeholders clearly understand mutual benefits, and responsibilities
- Do not be complacent about moving the process along - do not take things for granted in formalizing the partnership

Challenges

- Visa problems
- Transportation of liquids/solids/bio samples
- Logistics: Time, Distance, Language
- IP issues, ITAR