UF UNIVERSITY of FLORIDA
The Foundation for The Gator Nation

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

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.)
- International Research Collaboration (2011): IIT Madras (NSF-TIE)

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

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PaSS

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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
- Logistics: Time, Distance, Language

Transport of liquids/solids/bio samples

IP issues, ITAR