Presentation
Through-Shell Communication in Polymer Nanocapsules for Controlled Catalysis

1. Formation of nanocapsules
   - Self assembly
   - Surfactant based
2. Morphology of Nanocapsules
   - *Ultra-thin* hollow capsules
   - Large Internal volume
3. Uses
   - Sensing (via Raman scattering)
   - Delivery (via pores)
   - Catalysis
4. Through-Shell communication
   - Via Catalytic Control
   - Capsules allow for controlled reactions
   - Isolation allows for not overloading the catalyst
5. Chemical control and Information Transfer Control of Activity
6. Future Outlooks
   - Applying to flow chemistry
     - Microfluidic devices and reactive chemistry
     - Multifunctional system: Different products, depending on catalyst

Questions/Notes

Q. What kind of reactions are you considering; what kind of product are you looking for?
A. Reactions are based on individual species; this is more of a proof-of-concept exploration

N. Number the slides, start with the problem first and dive into the chemistry second

Q. What have you done so far?
A. A compound has been made, and there is work to try to get enough for experimentation

Q. How does the capsule complete loading?
A. Active loading that attracts things into the capsule

Q. What is the encapsulation efficiency?
A. Around 60-80% efficiency.
Q. Is the connection to the catalyst through the pore?
A. Yes
Q. Is it thermodynamically favorable?
A. I believe it is possible for it to be
Q. Why is this important?
A. Green chemistry wants to use renewable feed stocks, this allows for the use of chemicals from the same feed stock.

On the Fly Networking: The Elevator Pitch
This talk addresses introductions, how to give an elevator pitch, and how to make your important parts stand out to important parties in a conversation.

1. Identify your goals
2. Explain what you do (Wide scope here!)
   Not what you study, but what you **do**.
3. Communicate unique selling proposition

Announcements
- Three-Minute-Thesis session on 2/8 (Friday)
- Please put conferences and professional development events attended in Google Docs
- No Meeting on February 20th; Randi will update regarding dates for subsequent meetings

Upcoming meeting: TBA
Facilitator: Kevin Rivera
Minute taker: TBA

**Attendees:**
Kevin Rivera
Pierre Fils
Jessica Maita
Cristian Aviles Martin
Brandon Williams
Roman Mays
Godwin Dzidotor
Shelby Brewer
Steven J. Toro
Luis Antonio
Aida Ghiaei
Randi Mendes