Industrial Partnership for Research in Interfacial and Materials Engineering
IPRIME History

- CIE (Center for Interfacial Engineering)
  - Funded by NSF from 1988 to 1999
  - Industrial outreach, 114 resident fellows
  - Fostered a culture of integrated research, education and industrial interaction

- Members encouraged continued collaboration

- IPrime (Industrial Partnership for Interfacial and Materials Engineering)
• **Highly Interdisciplinary** (54 faculty in 9 departments)
  – Biochemistry, Molecular Biology and Biophysics
  – Biomedical Engineering
  – Bioproducts and Biosystems Engineering
  – Electrical and Computer Engineering
  – Chemical Engineering and Materials Science
  – Chemistry
  – Mechanical Engineering
  – Pharmaceutics
  – Physics

• **Pre-Competitive and Non-Proprietary**

• **8 Research Programs**
  – 4 MRSEC and 4 others
  – One of the largest MRSECs
  – ~$3 million per year (6 yr grant – renewal 2014)
Research Programs

- Biocatalysis and Biotechnology (BB)
- Biomaterials and Pharmaceutical Materials (BPM)
- Coating Process Fundamentals (CPF)
- Magnetic Heterostructures (MH) - MRSEC
- Microstructured Polymers (MP) - MRSEC
- Nanostructural Materials and Processes (NMP)
- Organic Optoelectronic Interfaces (OEI) - MRSEC
- Renewable Energy Materials (REM) - MRSEC
Industrial Support

- More than $1,800,000 per year in contributions from over 50 companies

- Sponsor Membership ($50,000 per year)
  - Participation in up to 4 research programs
  - Possibility of an Industrial Fellow
  - Participation on the Policy and Planning Board (PPB)

- Affiliate Membership ($40,000 per year)
  - Participation in one research program, no Industrial Fellow

- Small company option
  - $7,500 minimum
  - Or 0.03% of sales per year, up to $40,000
IPrime Member Companies

3M  Agilent Technologies  AsahiKASEI  ASHLAND  BASF
Bergquist Company  Boston Scientific  Cabot  CooperVision  CORNING  DNP
Donaldson  Dow
DOW CORNING  DuPont  EASTMAN  ECOLAB  Evonik Industries  ExxonMobil
General Mills  H.B. Fuller  Hearing Components  Henkel  Hershey's  Hysitron
IKONICS Corporation  Interfacial Solutions  Infineum  Lord  Megtec  Medtronic
Nano Copoeia  NewPage  National Institute of Standards and Technology  Nitto Denko  Optomec
Panasonic  Physical Electronics  Sabic  SAGE Electrochemicals, Inc.  Sandia National Laboratories
Schlumberger  Segetis  Stratasys
TA Instruments  ‘TORAY’  Innovation by Chemistry  Total  Toyota
Upsher-Smith  Valspar
How does I’ help innovation?

• industrial partners are asked hard questions
• learn new levers to pull
• meet people, topics never would see
• direct competitors talk about common challenges

• bring in new ideas for research
• keep faculty grounded in real world
• polished, employable students
• unrestricted funds for faculty
  – Initiate a blue sky project
  – Bridge between major grants

• foster a culture of integrated research, education and industrial interaction
Factors Affecting Success
Staff/Structure

• embrace “customer focus” (make it easy for industry to do business with you)
• understand R&D management issues
• bridge the gap between pure and applied science
• foster a collegial culture
• open approach minimizes legal wrangling