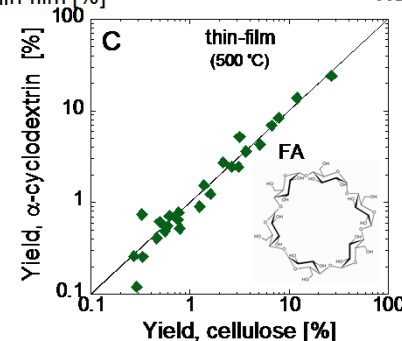
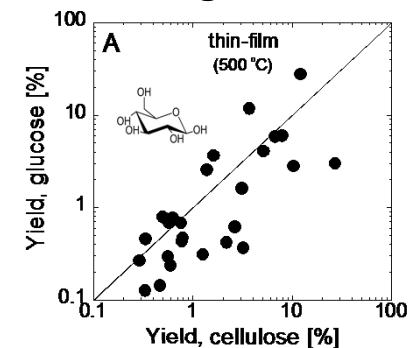
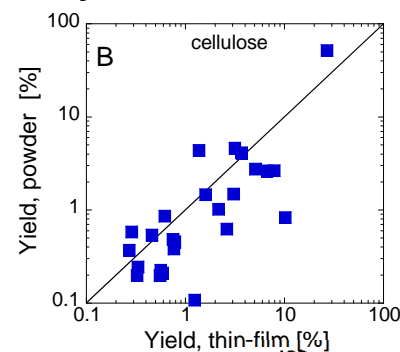
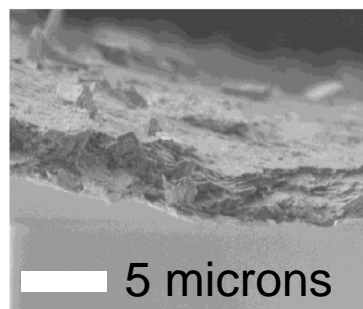
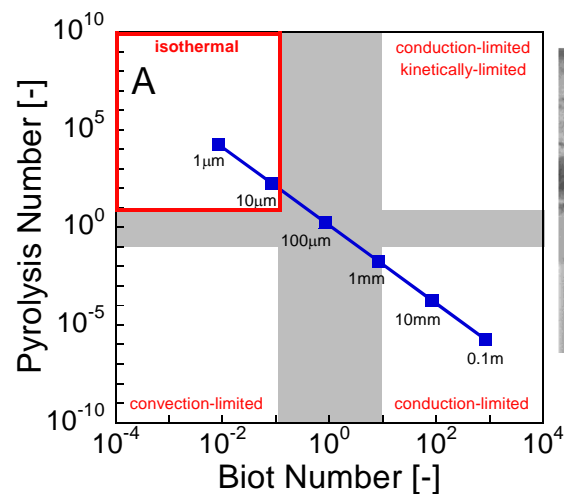


# Revealing Pyrolysis Chemistry of Cellulose

- ✓ Design a system to eliminate internal and external heat transfer and mass transfer
- ✓ **Heat Characteristic Length < 10 microns**
- ✓ Develop analytics to quantify >90% of carbon

- ✓ Transport affects product distribution
- ✓ Glucose is a poor surrogate of cellulose
- ✓ **Cyclodextrin is an excellent surrogate**



- ✓ **CPMD simulations reveal pyrolysis chemistry that differs from that in liquid phase**

