Research in Prof. Russell’s Group

Directed Polymer Self-Assembly

Long-range Order
- Solvent Induced Orientation and Ordering
- Topographic Surfaces

Confinement in Polymer Films

Confined Geometries
- Homopolymers
  - Chain Configuration
  - Chain Dynamics
  - Nanorods
  - Gels
- Polymer Mixtures
- Block Copolymers
  - Novel Morphologies
  - Hierarchical Nanostructures

Nanoparticles at Interfaces
- Assembly
- Dynamics
- Interfacial Chemistry
- Cross-linked Sheets
- Devices
- Biological Nanoparticles

Photovoltaic Applications

Directed polymer self-assembly of ordered nanostructures as templates and scaffolds for photovoltaic devices

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