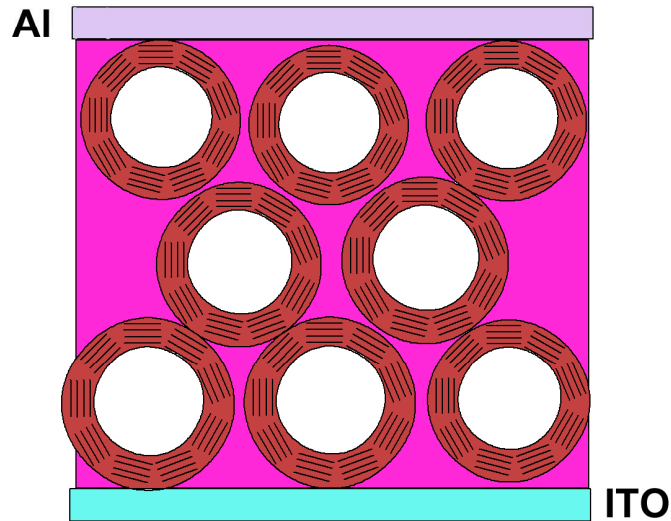
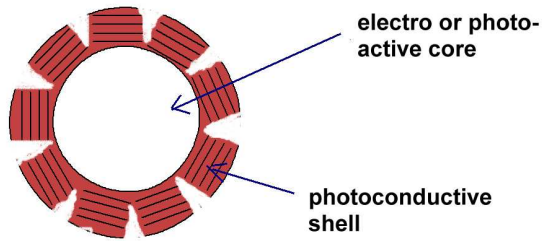
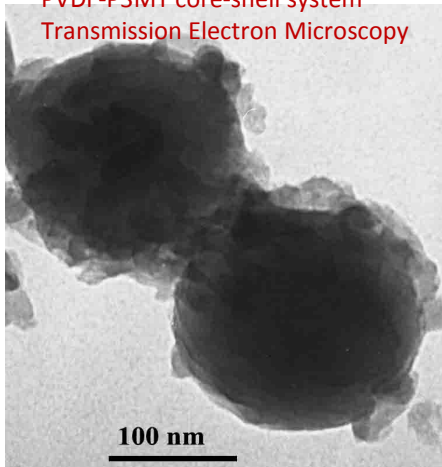


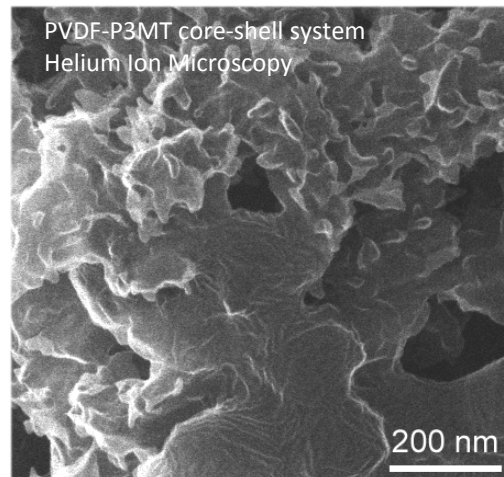
core-shell nanoparticles



PVDF-P3MT core-shell system
Transmission Electron Microscopy



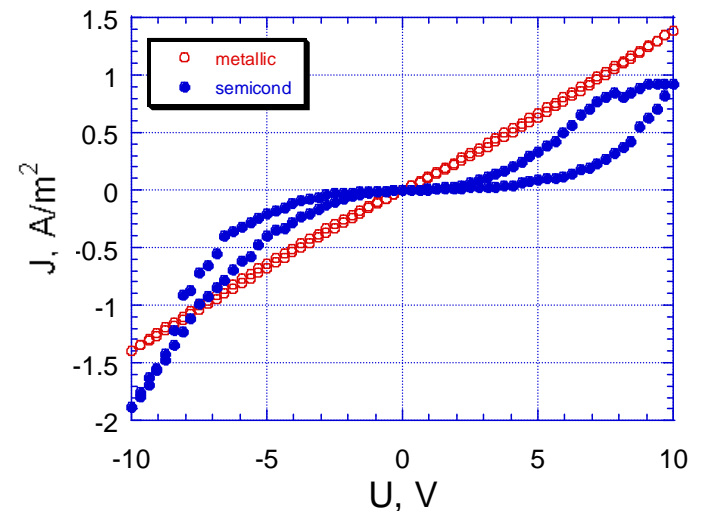
PVDF-P3MT core-shell system
Helium Ion Microscopy



Nanostructured polymer materials for organic solar cells

- Nanostructured polymer-polymer or hybrid polymer-inorganic nanoparticle systems
- Control of crystalline polymer morphology through degree of confinement
- Hierarchical structures with optimized pathways for charge carriers and excitons
- Ferroelectric PVDF core can be used to produce strong local electric field

PVDF core - P3MT shell



Nonlinear current-voltage characteristics are observed for photoconductive polythiophene (P3MT) shell