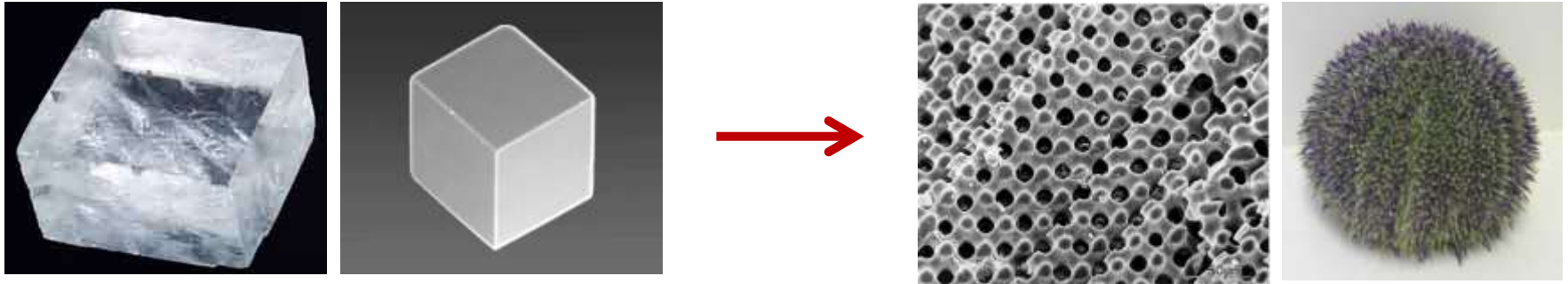
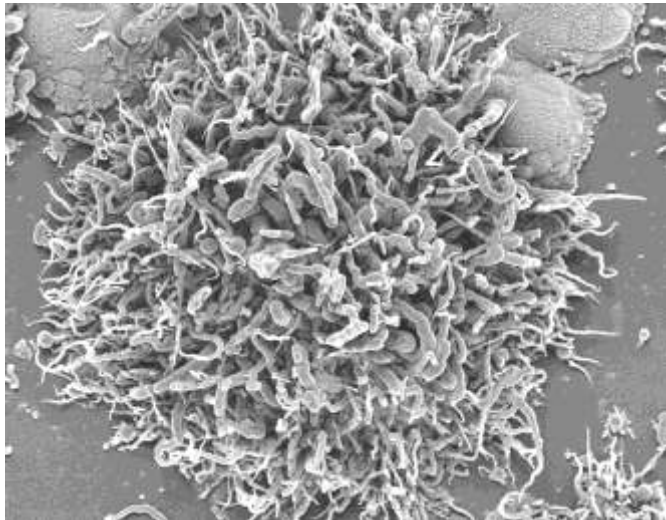


Meldrum Group, School of Chemistry
Bio-inspired Crystallization

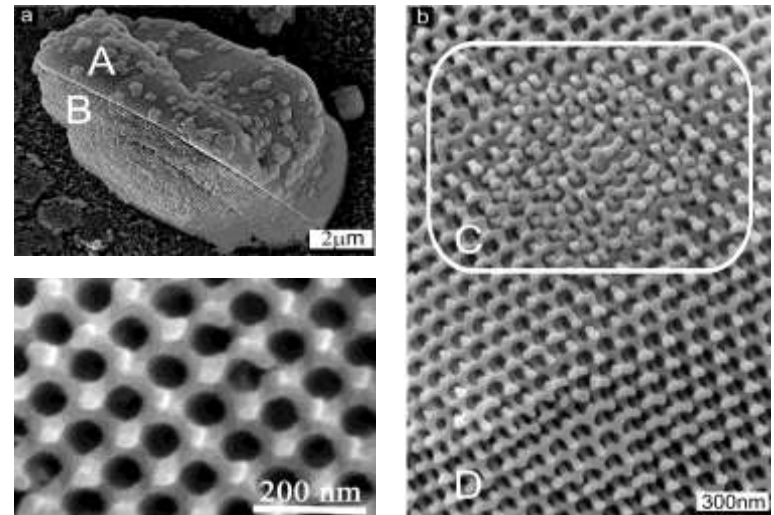


Link structure and properties

Controlling Morphologies

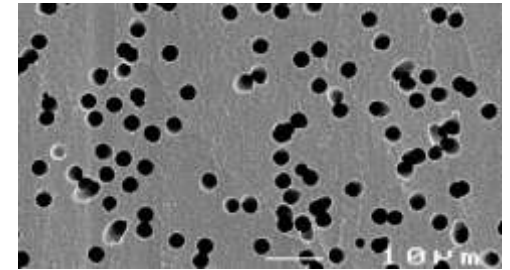


Soluble Additives

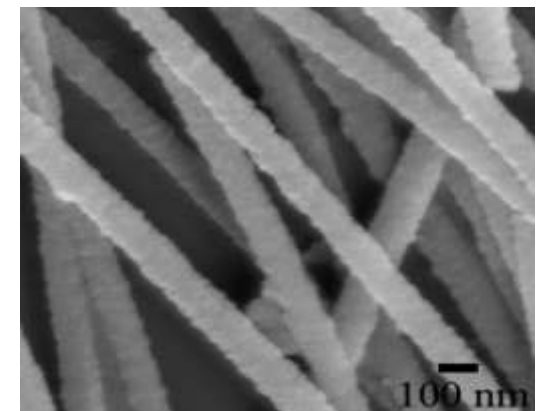
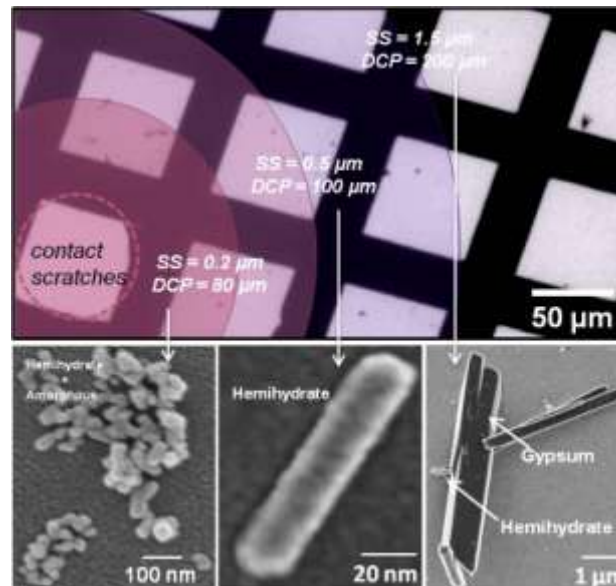
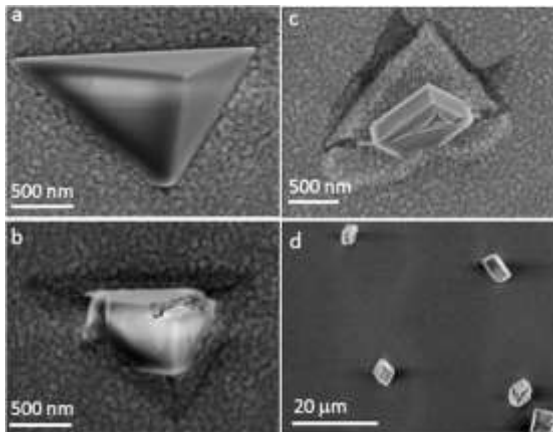


Templating

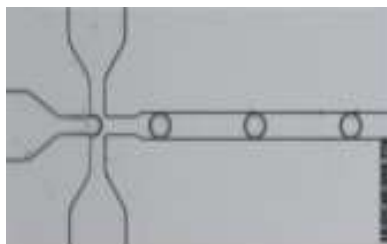
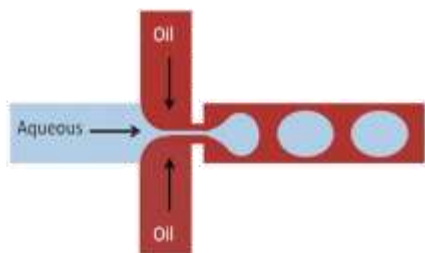
Crystallization in Confinement



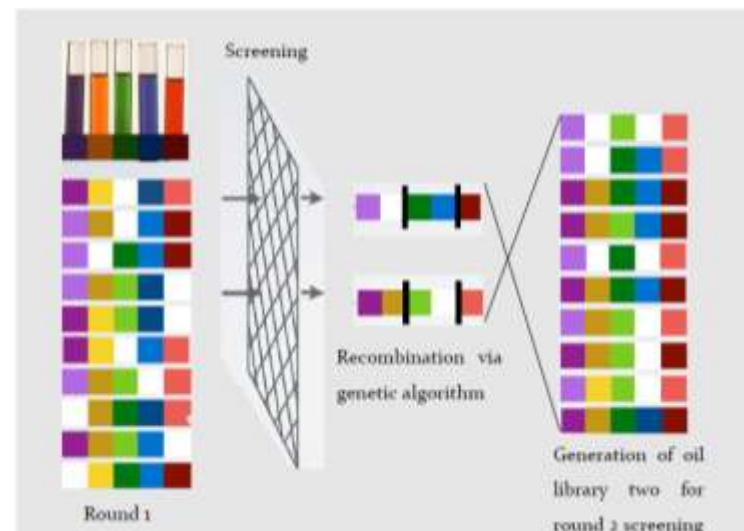
Study
crystal growth
process



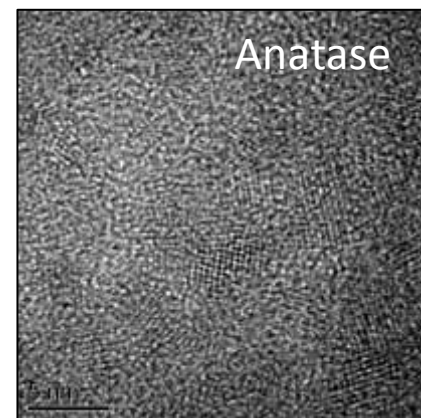
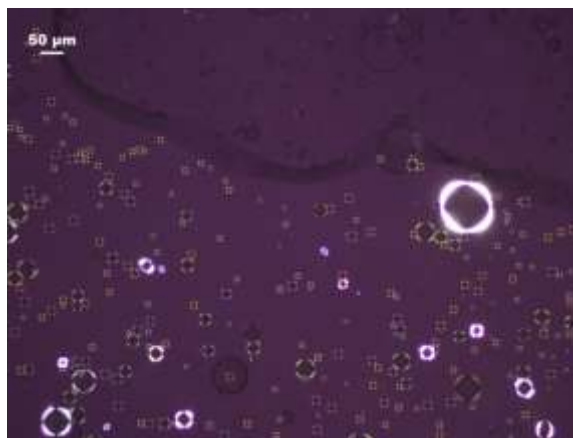
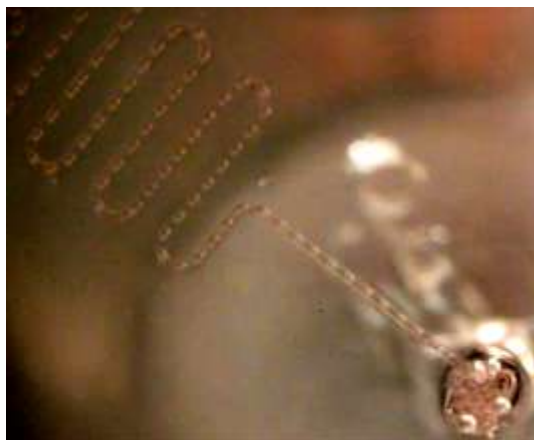
Droplets in Microfluidic Systems



Using **genetic algorithms** produce stable droplets and mineral shells

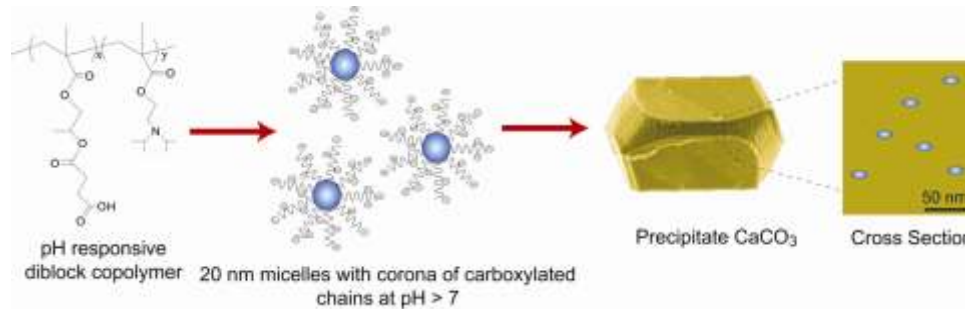
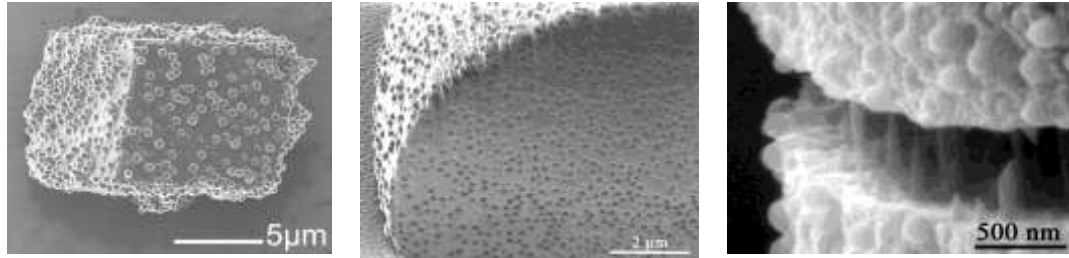


Use droplets for Crystallization and to make mineral shells



Some oil combinations **promote formation of TiO_2 shells** from the water-stable titanium precursor TiBALDH

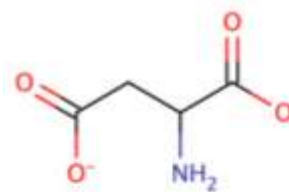
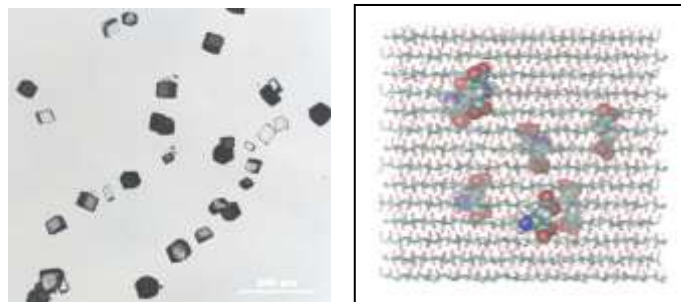
Composite Single Crystals \Rightarrow One Pot Method



Harder than calcite !



**Magnetite
Gold**



3wt% Asp incorporated

Harder than calcite !

