

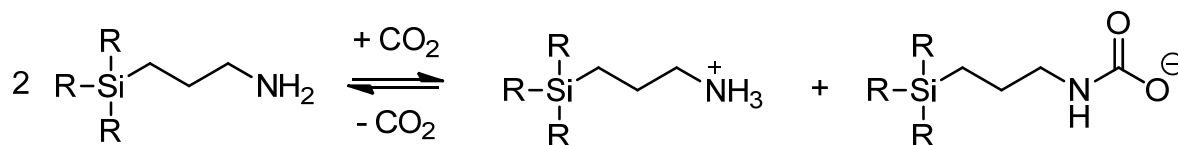


Smart Solvents for Sustainable Nanoparticles



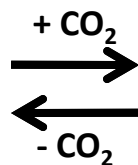
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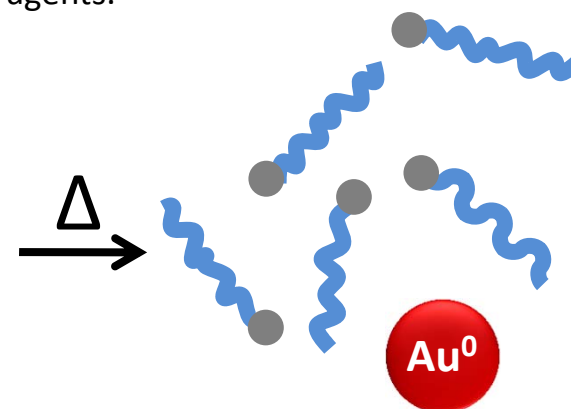
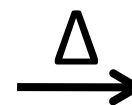
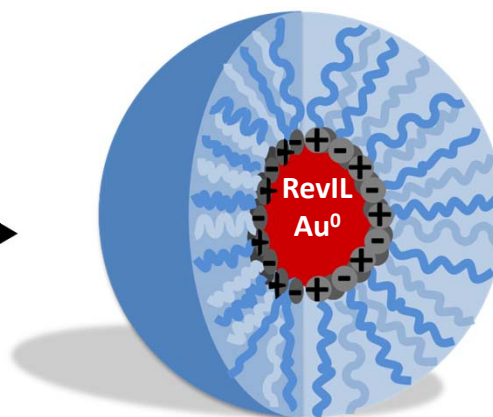
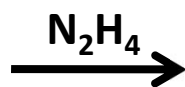
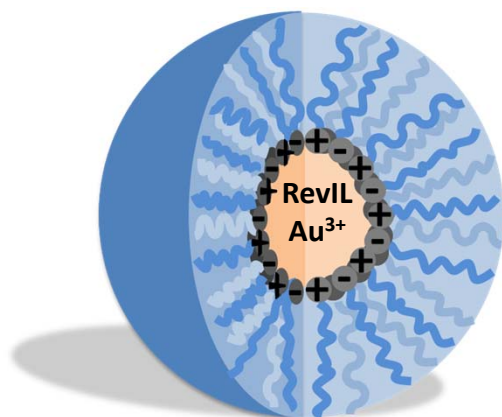


R = Et, Pr, Hex, *i*Pr, etc.

molecular



ionic



We are using reversible ionic liquids (RevILs) as switchable surfactants for nanoparticle synthesis, making use of a built-in molecular “switch.” Turning the ionic form of the capping agent “on” allows us to use reverse micelles as synthetic templates for nanoparticles; turning the capping agent “off” allows us to easily separate the nanoparticles from solution. This eliminates the additional synthetic steps associated with removal of traditional capping agents.