Design and synthesis of multi-component colloidal nanocrystals for catalysis and sensing

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Today it is possible to make nanocrystals with complex shapes, interconnections and topologies. This talk will first briefly describe new methods for imaging the growth and assembly of nanocrystals in the graphene liquid cell, providing new insights into how these materials form. Secondly, I will show examples of nanocrystal synthesis for a designed purpose: the formation of a nested system of nanoparticles for use in catalysis, and the synthesis of branched nanocrystals as a luminescent stress sensor.