

Metal Nanoclusters: A New Light Harvesting Antenna for Solar Energy Conversion

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Noble metal nanoclusters (NCs) with molecule-like behavior have emerged as a new light harvester in solar energy conversion systems. Despite several important strides made recently, efforts toward the utilization of NCs as a light harvester have been primarily restricted to proving their potency and feasibility. A complete characterization of metal cluster-sensitized solar cells (MCSSCs) is still lacking, and hence comprehensive understanding of the interfacial events and limiting factors that dictate their performance remains elusive. In this presentation, the utilization of Au and Ag NCs in MCSSCs and in-depth spectroscopic and electrochemical investigation on electrode/electrolyte interface is discussed.