

NS-002

<Invited Speaker>

Assembled Nanocrystal Quantum Dots for Photovoltaics

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Strategies to facilitate carrier transfer/transport while preserving confined characteristics of isolated nanocrystal quantum dots (NQDs) will be discussed. Specifically, synthesis and characterizations of 1) the fabrication of neat NQD solids (assembled NQD films) with modified surfaces by attaching ligands or by applying physical processes such as heat annealing [J. Phys. Chem. C (2011), 115(3), 607] and 2) coupling NQDs to one-dimensional nanostructures such as single-walled carbon nanotubes (SWNTs) [ACS Nano, (2010) 4(1), 324] will be presented. Further, recent achievement ours of fabricating NQDs assemblies into photovoltaic devices for elucidating transfer mechanism witll be discussed.

Keyword: 양자점