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Semiconductor Plasmonic Nanocrystals with a Near-Infrared Localized Surface Plasmon Resonance*

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The techniques of preparation of layers of $Cu_{2-x}Se$ semiconductor plasmonic nanocrystals (SPNC) with plasmonic resonances in near infrared region from toluene colloidal solution are described. It is shown that combining QDs with SPNC layers lead to the enhancement of optical response from the QDs. The PVA film makes it possible to optimize the QDs-SPNC interlayer distance and provide most efficient enhancement.

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