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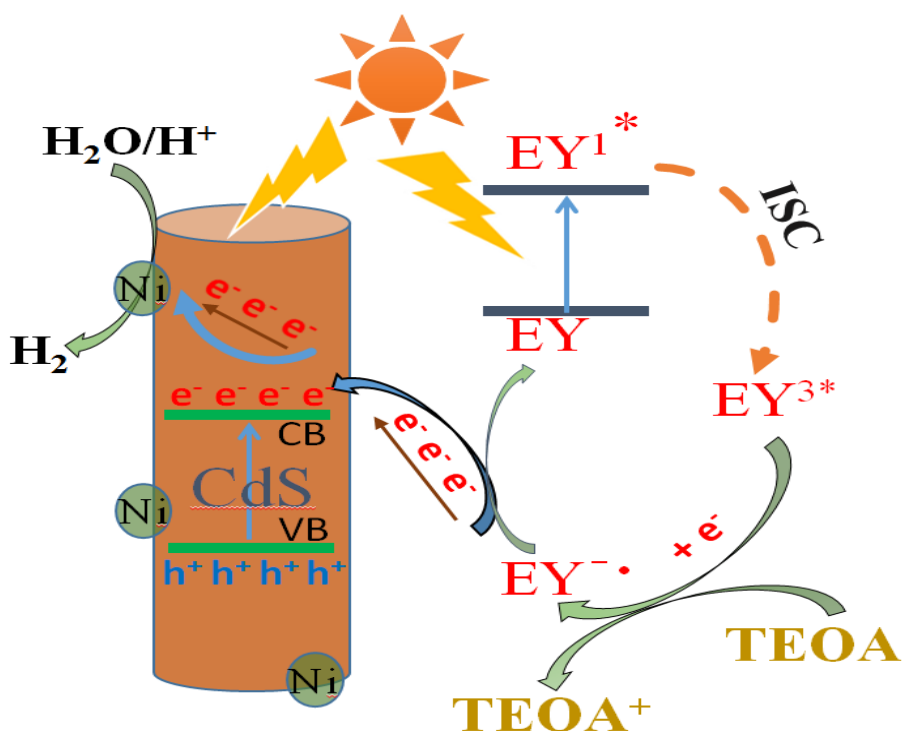
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The Roles of Ni Nanoparticles over CdS Nanorods for Improved Photocatalytic Stability and Activity

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The non-noble metal Ni nanoparticles as cocatalyst to modify CdS nanorods exhibited high activity of hydrogen evolution by dye sensitized photocatalytic water splitting in visible light ($\lambda \geq 420\text{nm}$). The promotion of photocatalytic hydrogen evolution activity should be attributed to the synergistic action of CdS and dyes in the system. Ni nanoparticles provide an outlet for photogenerated electrons as a cocatalyst, while CdS and dye eosin cooperate together to assume the role of electron donor and transport.

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