

Zinc Oxid Nanotubes Modified by SiO₂ as a Recyclable Catalyst for the Synthesis of 2,3-Dihydroquinazolin-4(1H)-Ones

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Abstract : In recent years, zinc oxid nano tubes have attracted much attention. The direct use of zinc oxid nano tubes modified by SiO₂ as recoverable catalysts for organic reactions is very rare. The catalysts were characterized by XRD. The average particle size of ZnO catalysts is 57 nm and there are high density defects on nano tubes surfaces. A simple and efficient method for the quinazolin derivatives synthesis from the condensation isatoic anhydride and an aromatic aldehyde with ammonium acetate in the presence of a catalytic amount zinc oxid nano tubes modified by SiO₂ is described. The reason proposed for higher catalytic activity of zinc oxid nano tubes modified by SiO₂ is a combination effect of the small particle size and high-density surface defects. The practical and simple method led to excellent yields of the 2,3-Di hydro quinazolin-4(1H)-one derivatives under mild conditions and within short times.

Keywords : 2,3-Dihydroquinazolin-4(1H)-one derivatives, reusable catalyst, SiO₂, zinc oxid nanotubes

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