

عنوان مقاله:

Hydrothermal and Sonochemical Synthesis of Nano-sized Copper(II) and nickel(II) Schiff base complexes: A Precursor For Nano-structured Copper(II) Oxide and Nickel(II) Oxide and Study of their Spectroscopic, Catalytic, Thermal and Antibacterial Properties

محل انتشار:

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خلاصه مقاله:

A new Schiff base ligand, 4,5,9,13,14-pentaaza benzo[b] triphenylen was synthesized by condensation reaction of 2,3-diaminopyridine and 1,10- phenanthroline-5,6-dione. Cu(II) and Ni(II) nanocomplexes were synthesized by the reaction of ligand and melt salt by solvothermal and sonochemistry method. The ligand and its metal complexes have been characterized by CHN, FT-IR, ¹H and ¹³CNMR, UV-Vis, thermal gravimetric analyses (TGA,DSC) and conductivity measurements. CuO and NiO nano-structures were synthesized from [Cu(pdp)₂ ClO₄]₂ and [Ni(pdp)₂ (ClO₄)₂] by calcination in air atmosphere. The structures of the nano-structures were characterized by XRD and SEM techniques. The thermal stability of nano-sized and bulk samples of complexes were studied and compared with each other.

کلمات کلیدی:

;Phendione; Schiff base; hydrothermal,nanostructure; sonochemical

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