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Synthesis, Characterization and Photoluminescence Studies of Organic Copolymer Resin

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Abstract

The present paper reports synthesis of copolymer resin and its metal complexes. Copolymer resins (8-HQ5-SAHMDAF-II) have been obtained using condensation method from 8-hydroxyquinoline-5-sulfonic acid, hexamethylenediamine and formaldehyde monomer by using 2M HCl as catalyst with efficient refluxed at about 124 °C to 126 °C temp up to five hrs. The copolymer metal complexes have been integrated utilizing the combined copolymers as ligand with few progress metal particles, for example, Cu^{2+} , Ni^{2+} and Zn^{2+} ions in 2:1 molar proportion. Reactions have been completed with an efficient refluxed about 60°C temp for 3h. The photoluminescence properties of recently integrated copolymer metal complex samples were recorded on RF-501 (PC) S CE (LVD) MODEL. The point of this present investigation is to deliver the cooperative assistance among design and photoluminescence through new and critical commitments from dynamic specialists in the field. The composition of (8-HQ5-SAHMDAF) organic copolymer has been resolved based on essential examination. Number average molecular mass of this copolymer was dictated by non-aqueous conductometric titration method. The copolymer (8-HQ5-SAHMDAF-II) was characterized by FT-IR, ^1H -NMR Spectroscopy.

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