

SPECTROSCOPIC AND ELECTRICAL PROPERTIES OF PHTHALOCYANINATO COBALT (II)

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ABSTRACT

Phthalocyaninato Cobalt (II), PcCo (II), was synthesized and characterized by CHN, and spectroscopic methods. The complex was doped with Iodine and DDQ. Electronic spectroscopy shows the increase of height of Q and Soret bands with concentration. And the shift of the Q band of the doped complex (for both Iodine and DDQ Doping). The x-ray shows its crystalline structure, with a characteristic d-spacings. The mass spectrum of electron impact didn't show the molecular ion, but the other mass fragments show the suggested fragmentation of the molecular ion. The DC electrical properties of the undoped complex Iodine and DDQ doped was studied and show that, Iodine doping gives higher electrical conductivity than both undoped and DDQ doped. The doping suggests the formation of charge transfer complexes, from donor and accepters.

KEYWORDS: Phthalocyaninato Cobalt (II), Iodine and DDQ Doping, Spectroscopic Study of X-Ray and Mass Spectra