



SYNTHESIS, CHARACTERIZATION AND ELECTROLUMINESCENCE OF MONO- α -[p-(t-BUTYL)PHENOXY]-SUBSTITUTED COPPER PHTHALOCYANINE

Daocheng Xia

Abstract

A unsymmetrical mono- α -[p-(t-butyl)phenoxy]-substituted copper phthalocyanine is synthesized and characterized by Mass spectrum (MS), ultraviolet-visible (UV/Vis) spectrum, Infrared Spectroscopy (IR) and elemental analysis, which consented with the proposed molecular structures. This synthesized compound is fabricated to organic light-emitting diode (OLED) as light emitting layer composed of ITO/NPB(40 nm)/Pc(30nm)/AlQ(43.5nm)/LiF(0.5nm)/Al(120nm), which is observed having electroluminescence (EL) phenomena at 869 nm and 1062 nm, respectively.

Keywords and phrases: phthalocyanine, synthesis, characterization, electroluminescence.

