Journal of Basic and Applied Engineering Research
Print ISSN: 2350-0077; Online ISSN: 2350-0255; Volume 2, Number 12; April-June, 2015 pp. 1062-1062
© Krishi Sanskriti Publications
http://www.krishisanskriti.org/jbaer.html

Low Cost Highly Efficient Phosphorescent Material for OLED

Navneet K Gondia[1], Jyoti Priya[2] and S.K. Sharma[3]

[1,2,3]Department of Applied Physics, Indian School of Mines(IIT), Dhanbad 826004
E-mail: [1]navneetkumar50.in@gmail.com

Abstract—*Organic Light Emitting Diodes show promise of replacing Liquid crystal Display (LCDs) and other lighting technology due to their low cost, ease of fabrication light weight high contrast and perfect display for all angle. Efficiency of electroluminescent Organic Light emitting Device can be upgraded by using Schiff base metal complex as a emissive layer. The Scope of various metal complexes along with emission characteristics such as wavelength, intensity for their suitable application as OLED phosphor is discussed.We have synthesized a Schiff base Zinc metal complex for OLEDs applications. These metal complexes are characterize by HNMR , XRD and Photoluminescence technique . X ray diffraction of the complex shows peaks this shows that complex are crystalline in nature. The line broadening of the crystalline diffraction peak in Zinc(II) complex shows higher crystallinity of the complex. NMR spectroscopy indicates compound structure and carbon hydrogen framework of the compound. Emission spectra recorded by keeping excitation wavelength fixed at 380nm. We observed a good intensity emission at 349 nm in blue region. CIE chromaticity coordinates was calculated at X= 0.1521& Y= 0.1752. It could be considered as a blue light phosphor for blue light Emitting Material in OLEDs.*

Keywords: *Metal Complex, Schiff base, OLED.*