IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 4, April 2022
Impact Factor: 6.252

Synthesis, Characterization, and Photoluminescence Study of Copolymer Derived From 2-Amino 6-nitrobenzothiozol and Oxamide with Formaldehyde

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Abstract: *The current research article describes the synthesis of BOF-III copolymer from 2-amino 6-nitrobenzohiazole, oxamide, and formaldehyde used as a monomer in 3:1:5 molar ratios using polycondensation polymerization method in presence of 2M HCl as acid catalyst. The structure of the synthesized copolymer was characterized using elemental analysis and spectral techniques such as UV–Visible, FT-IR, and ^{1}H–NMR spectroscopy. The molecular weight of the copolymer was measured using a non-aqueous conductometric titration method. Scanning electron microscopy was used to investigate the surface morphology of a copolymer. The RF-501 (PC) S CE (LVD) MODEL PL spectrometer was used to evaluate the photoluminescence properties of newly synthesized copolymer. With significant input from current researchers in the field, the overall purpose of this development is to produce new polymeric material and analyze their photo luminescent properties.*

Keywords: Copolymer, Elemental Analysis, Spectroscopy, Photoluminescence

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Impact Factor: 6.252

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