



**Synthesis, Characterization and Applications of Polymer-metal chelates derived from Poly(4-acryloxybenzaldehyde)-divinylbenzene salicyloyl hydrazone resins**

**T. Ravi Sankar and P. Venkata Ramana\***

\*Department of Chemistry, Sri Krishnadevaraya University, Anantapur-515 003, **INDIA**

Email: [ramanapv2103@yahoo.com](mailto:ramanapv2103@yahoo.com)

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**ABSTRACT**

*4-acryloxybenzaldehyde was prepared and subjected to suspension polymerization with divinylbenzene as a cross-linking agent. The resulting network polymer was ligated with salicyloyl hydrazine. The functional polymer was treated with transition metal ions, Co(II) and Ni(II). The copolymer and its metal chelates were characterized by elemental analysis, IR, <sup>1</sup>H-NMR, solid state <sup>13</sup>C cross-polarization magic-angle spinning (CP/MAS) NMR, electron paramagnetic resonance (EPR), thermogravimetric and scanning electron microscopy (SEM) studies. The maximum uptake of the metal ions was determined. Metal uptake efficiency and reusability of the ligated polymer resin were also studied.*

**Keywords:** 4-Acryloxy benzaldehyde, Divinyl benzene, Functionalized polymers, Polymer-metal chelates.

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