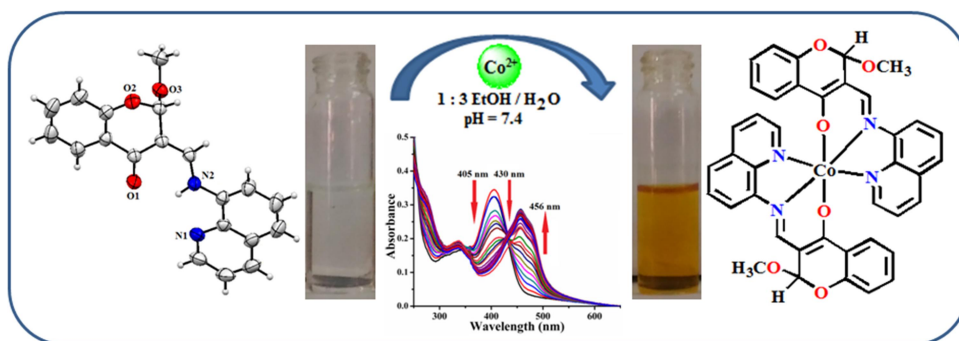


A structurally characterised hormone-quinoline conjugate motif for colorimetric detection of Co^{2+} ions in aqueous medium

Abhishek Maji, Somenath Lohar, Arnab Sarkar, Siddhartha Pal and Pabitra Chattopadhyay*

Department of Chemistry, The University of Burdwan, Golapbag, Burdwan, West Bengal, 713104, India



Abstract. A newly designed **chromone-quinoline** conjugate chemosensor, *2-methoxy-3-(quinolin-8-ylaminomethylene)-chromon-4-one* (HL) have been synthesized and crystallographically characterised that acts as colorimetric probing of Co^{2+} ions with high selectivity over the other competitive cations and anions in EtOH-H₂O (1:3, v/v, pH=7.4). Investigation of the cations recognition behavior showed that the ligand has selective colorimetric sensing properties for cobalt(II) ions by an easy to observe naked-eye color change from colorless to straw-yellow. The probe, in absence or in presence of Co^{2+} ions shows pH independency response over a pH range of 7-10.

Keywords: Chemosensor, cobalt(II) ions, colorimetric response, CHEF.

*Correspondence Author: E-mail: pabitracc@yahoo.com