

Electrochemical preparation of conductive films of tetrapyrridylporphyrins coordinated to four $[\text{Ru}(5\text{-NO}_2\text{-phen})_2\text{Cl}]^+$ groups

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This work describes the preparation of a new tetraruthenated porphyrin and the corresponding polymeric film. This macromolecule consists of a Ni(II) tetrapyrridylporphyrin coordinated to four $[\text{Ru}(5\text{-NO}_2\text{-phen})_2\text{Cl}]^+$ moieties. The 5-NO₂-phen ligands are reduced at -0.90 V, generating a radical anion that is able to generate polymeric coatings onto glassy carbon (GC) electrodes. These polymeric films are very stable in aqueous solutions. The polymeric films are characterized by electrochemistry, infrared spectroelectrochemistry (IR-SEC) and atomic force microscopy (AFM). © 2010 Elsevier B.V. All rights reserved.