

Zeolitic Imidazole Frameworks-8 (ZIF-8) Modified with Cu(II)/Ni(II)/Co(II) As Bifunctional ORR/OER Electrocatalytic Material

Annisa Nur Buana Wati¹, Ubed Sonai Fahrudin Arrozi², Abu Masykur¹,
Sri Hastuti¹, Atmanto Heru Wibowo^{1,*}

¹Department of Chemistry, Faculty of Mathematics and Sciences, Universitas Sebelas Maret, Jl. Ir. Sutami No. 36A. Jebres, Surakarta 57126, Central Java, Indonesia

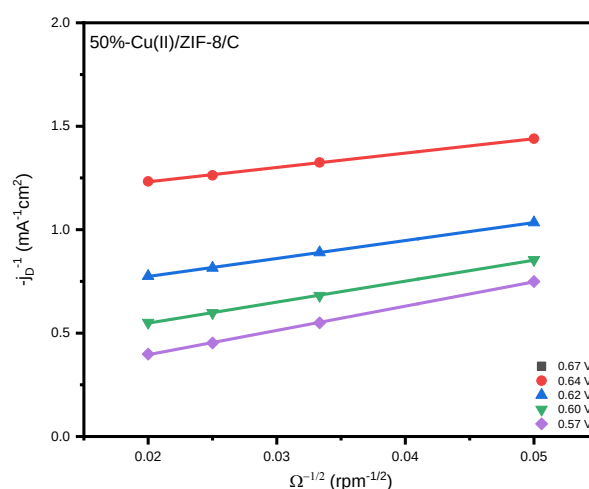
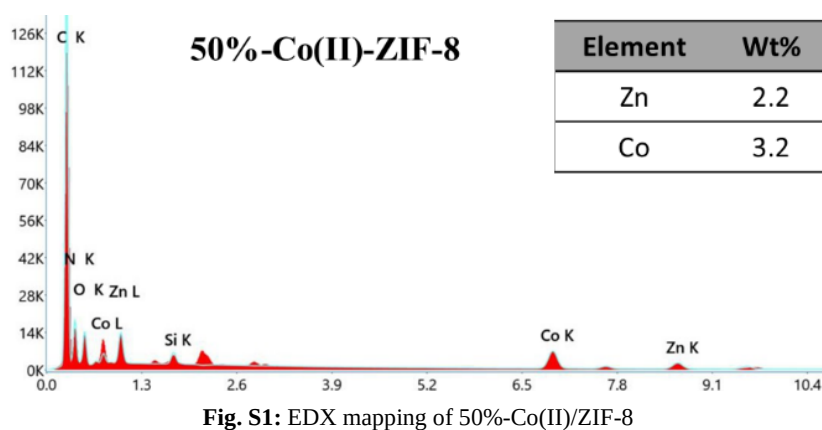
²Department of Chemistry, Faculty of Mathematics and Sciences, State University of Malang, Jl. Semarang 5, Malang 65145, East Java, Indonesia

*Author to whom correspondence should be addressed:

E-mail: aheruwibowo@staff.uns.ac.id

(Received February 21, 2025; Revised July 24, 2025; Accepted September 10, 2025)

Supporting Information



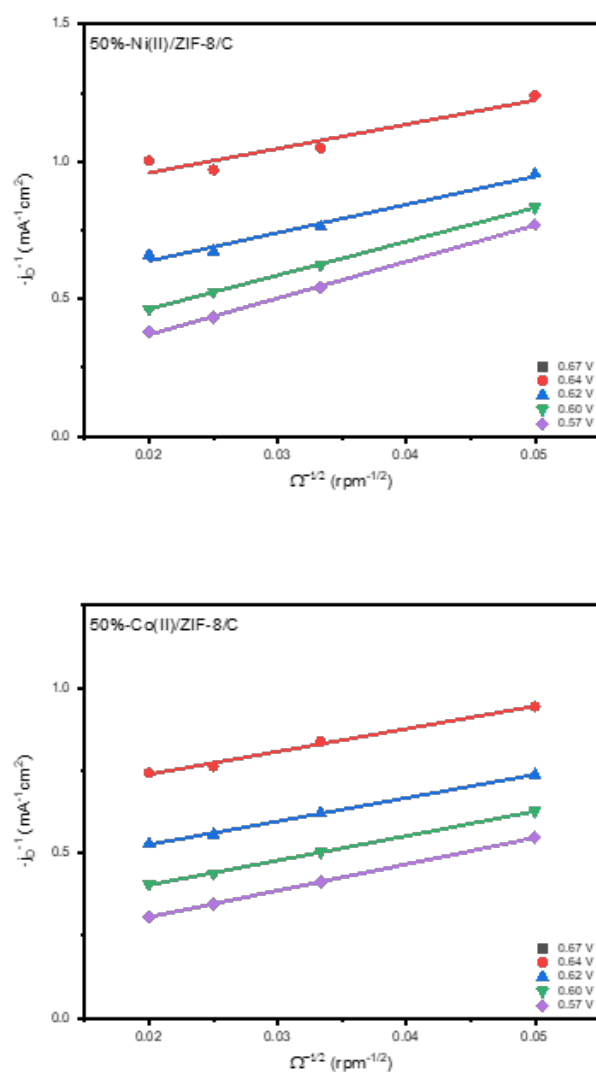


Fig. S2: Koutecky-Levich plots determined from Figure 1a-c of the modified ZIF-8 at different electrode potential values

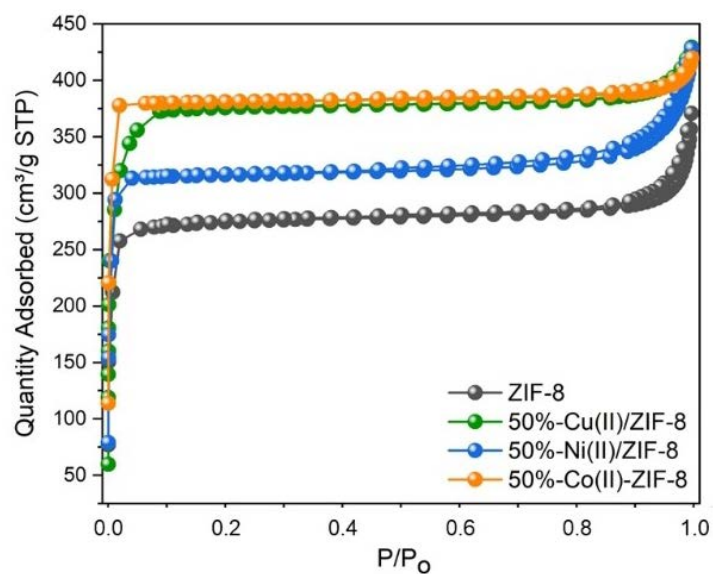


Fig. S3: Nitrogen physisorption plots of the modified ZIF-8