

## Electrodeposition of Ni-Mo-rGO composite electrodes for efficient hydrogen production in alkaline medium

Sandhya Shetty, M. Mohamed Jaffer Sadiq, D. Krishna Bhat  
and A. Chitharanjan Hegde\*

Department of Chemistry  
National Institute of Technology Karnataka,  
Surathkal, Surathkal - 575025, India

\*E-mail: [acrhegde@gmail.com](mailto:acrhegde@gmail.com),  
Phone: +91-9980360242, Fax: 0824-2474033

### Supplementary Information

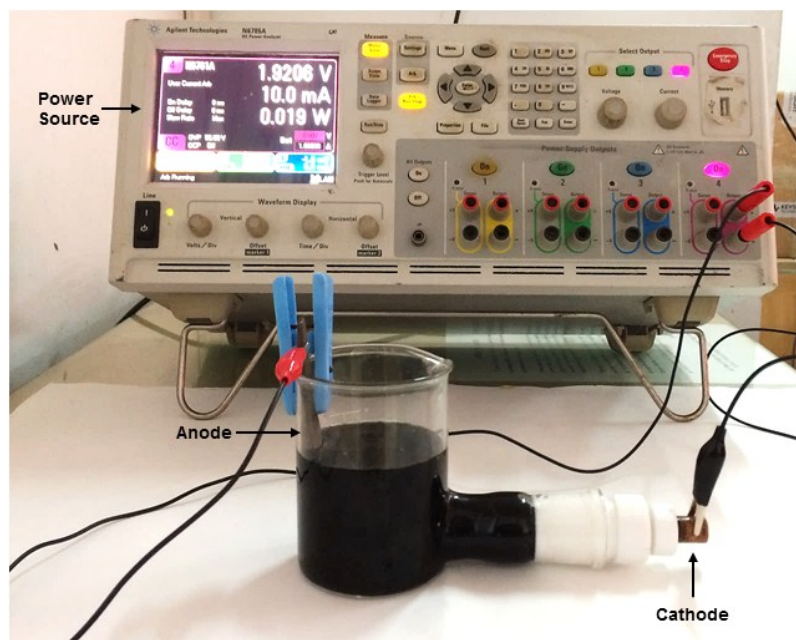


Fig. S1 Customized glass cell used for electrodeposition of Ni-Mo-rGO composite coatings from the electrolyte

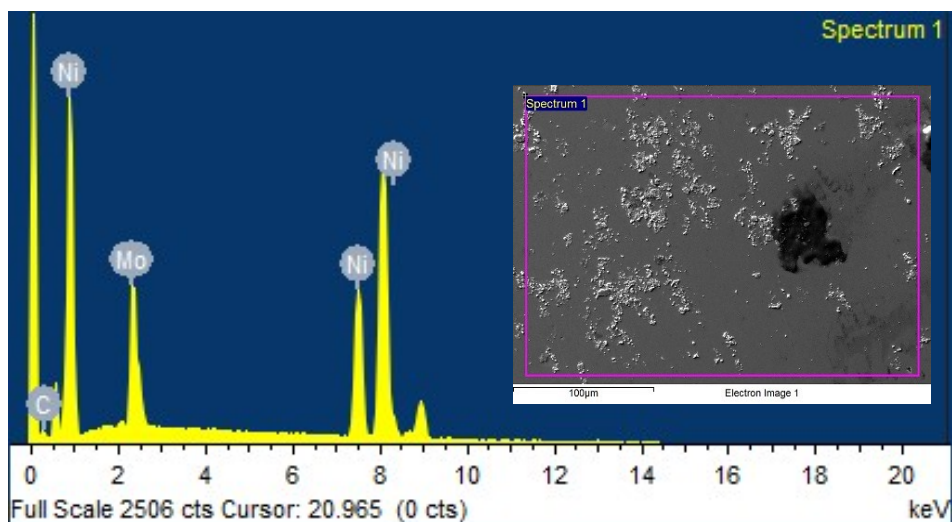


Fig. S2 EDX spectrum of the Ni–Mo–rGO composite coating developed at  $1.0 \text{ A dm}^{-2}$  showing the peaks for Ni, Mo, and C

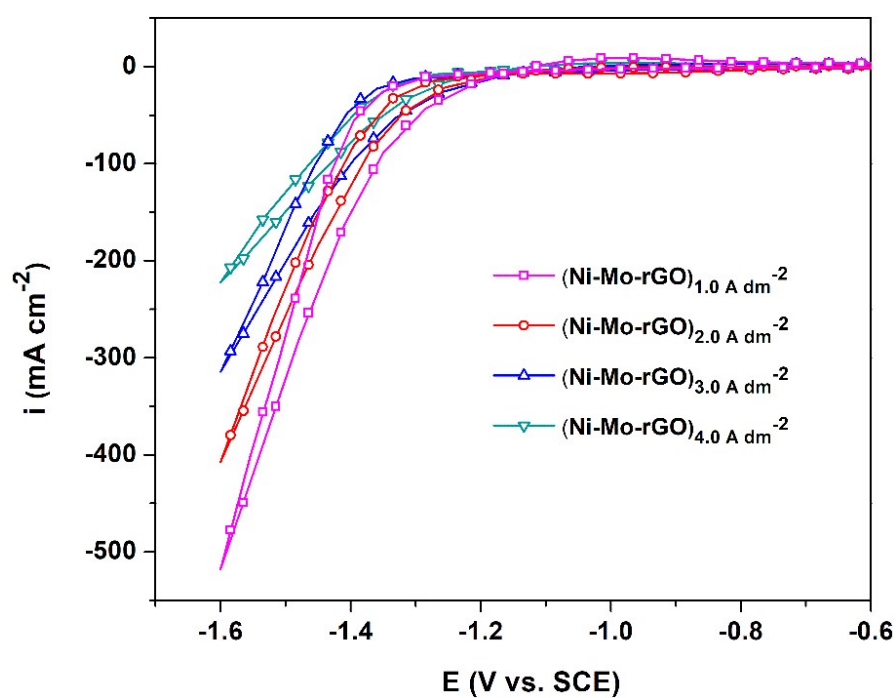


Fig. S3 Cyclic voltammograms of Ni–Mo–rGO coatings deposited at different c.d.'s showing their cathodic peak current density,  $i_{pc}$  for HER

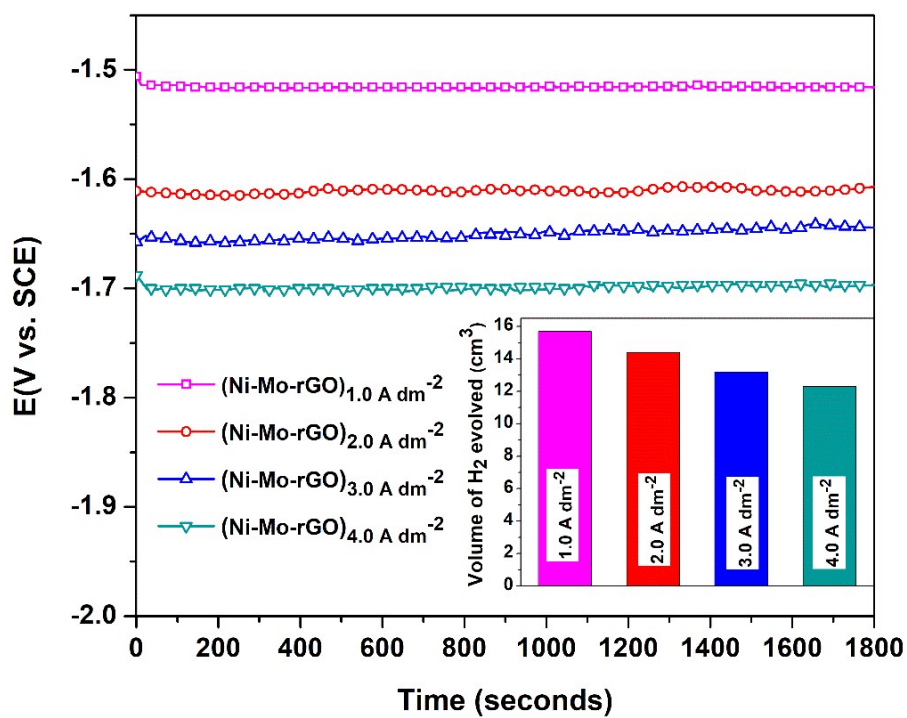


Fig. S4 Chronopotentiograms of Ni–Mo–rGO composite coatings, deposited at different c.d.’s under impressed cathodic current of  $-300 \text{ mA cm}^{-2}$  with the volume of  $\text{H}_2$  evolved in 300 s on each test electrodes are shown in the inset