

Kinetics and Mechanism of the Oxygen Reduction Reaction in a Protic Ionic Liquid

Darren A. Walsh*, Andinet Ejigu, Joshua Smith, Peter Licence

School of Chemistry, The University of Nottingham, Nottingham NG7 2RD, UK

*darren.walsh@nottingham.ac.uk

Tel: 0044 115 9513437; Fax: 0044 115 9513562

Electronic Supplementary Information

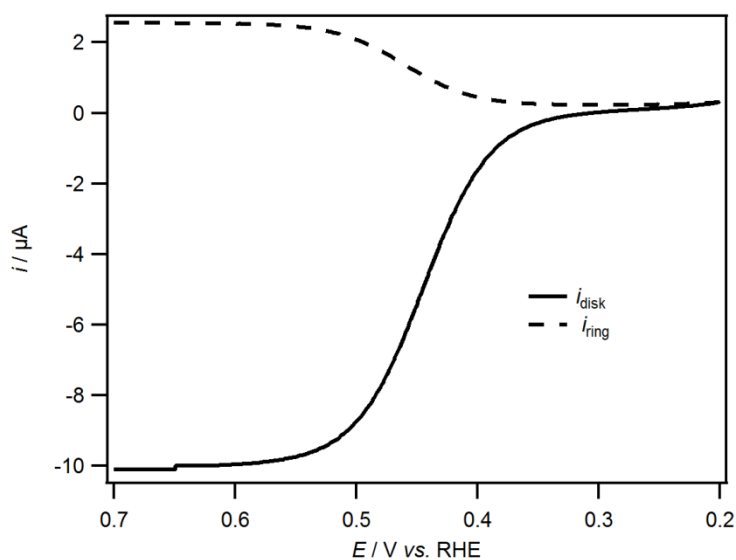


Figure S1. A rotating ring-disk electrode voltammogram obtained at Pt/Pt ring-disk assembly in 5 mM ferrocenemethanol in 1-butyl-3-methylimidazolium bis[(trifluoromethane)sulfonyl]imide at 1600 rpm at 50 °C. The disk potential was scanned from 0.7 V to 0.2 V at 10 mV s⁻¹ and the ring potential was 0.2 V. The calculated collection efficiency at the ring is 25 %.

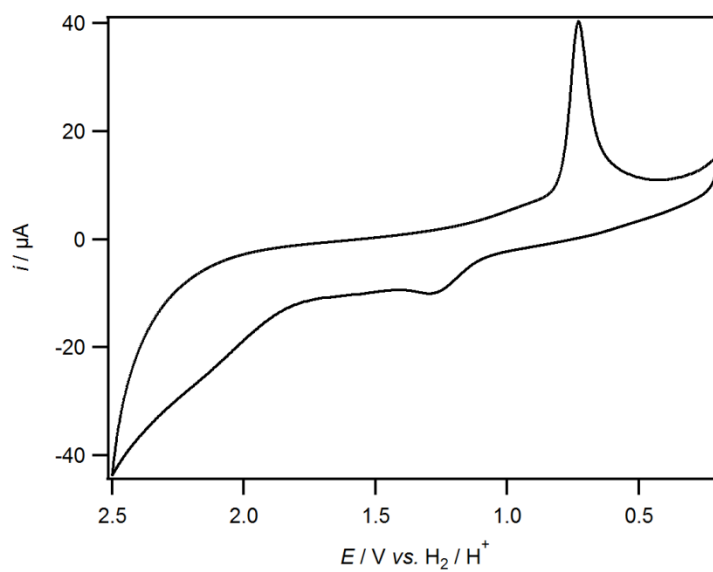


Figure S2. Cyclic voltammogram recorded at a 2 mm diameter Pt electrode in Ar-saturated [dema][TfO]. The potential was scanned between 2.5 V and 0.2 V from an initial potential of 0.2 V at a scan rate of 50 mV s⁻¹. The cell temperature was 60 °C.