

Supporting Information for

Volatilisation of Substituted Ferrocene Compounds of Differing Sizes from Room Temperature Ionic Liquids: A Kinetic Study

Chaopeng Fu,¹ Leigh Aldous,¹ Edmund J. F. Dickinson,¹ Ninie S. A. Manan^{2,3} and Richard G. Compton^{1,}*

¹ Department of Chemistry, Physical and Theoretical Chemistry Laboratory, University of Oxford, South Parks Road, Oxford OX1 3QZ, United Kingdom

² School of Chemistry and Chemical Engineering, The QUILL Centre, Queen's University Belfast, Belfast BT9 5AG, United Kingdom

³ Department of Chemistry, Faculty of Science, University of Malaya, 50603, Kuala Lumpur, Malaysia

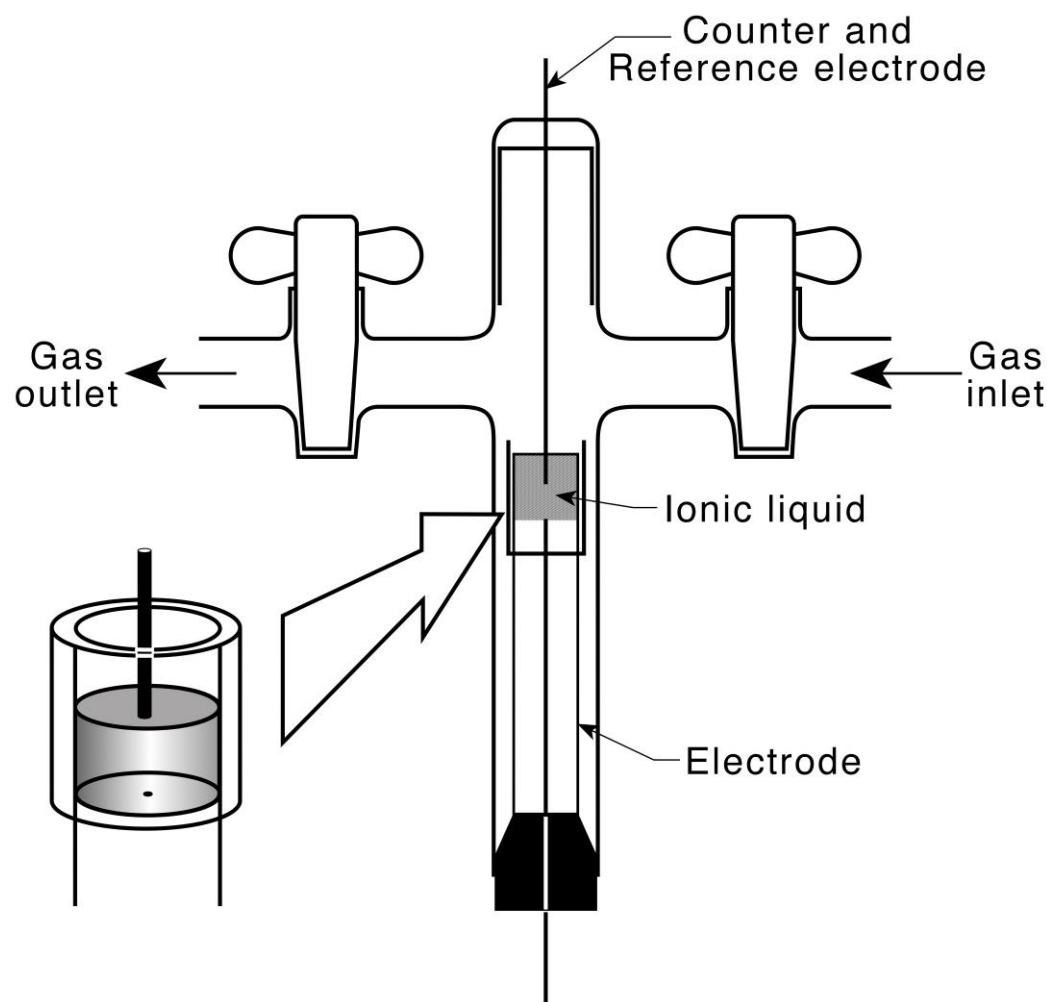


Figure S1 Diagram demonstrating the experimental set-up and geometry of the IL in the T-cell (not to scale).

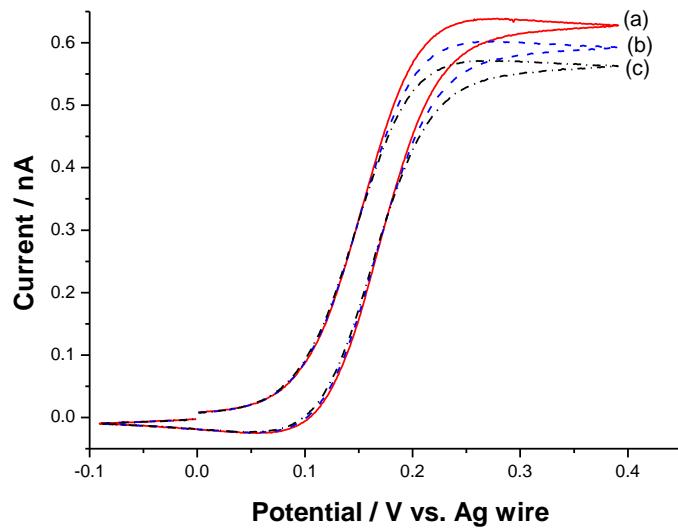


Figure S2 Cyclic voltammetry displaying the oxidation of 1,1'-dimethylferrocene (initial concentration 11.9 mM) in 15 μ L [C₄mpyrr][NTf₂] on a 10.4 μ m platinum microelectrode at 310.15 K, after (a) 210, (b) 510 and (c) 810 min flow of dry nitrogen.

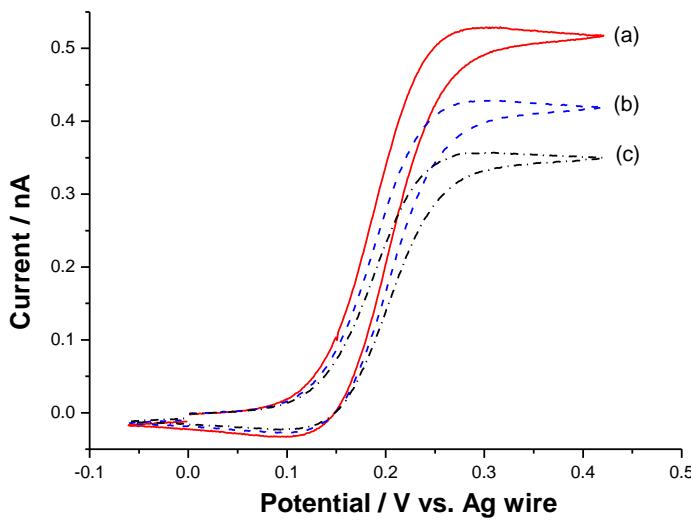


Figure S3 Cyclic voltammetry displaying the oxidation of 1,1'-dimethylferrocene (initial concentration 13.46 mM) in 15 μ L [C₄mim][BF₄] on a 10.4 μ m platinum microelectrode at 310.15 K, after (a) 210, (b) 510 and (c) 810 min flow of dry nitrogen.

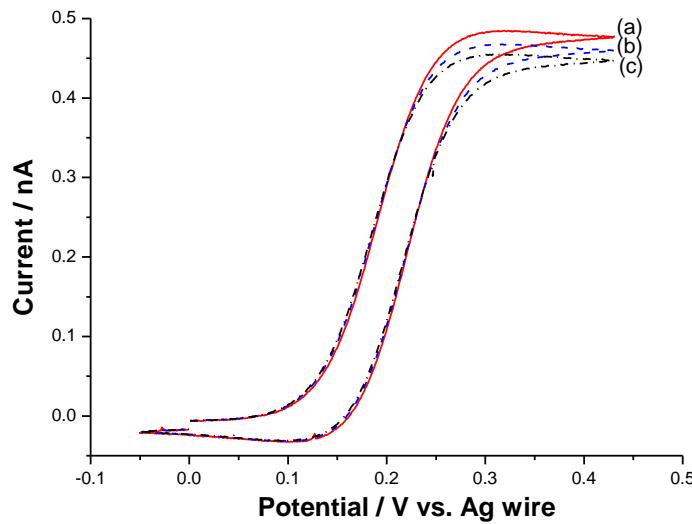


Figure S4 Cyclic voltammetry displaying the oxidation of *n*-butylferrocene (initial concentration 9.90 mM) in 15 μ L [C₄mpyrr][NTf₂] on a 10.4 μ m platinum microelectrode at 310.15 K, after (a) 210, (b) 510 and (c) 810 min flow of dry nitrogen.

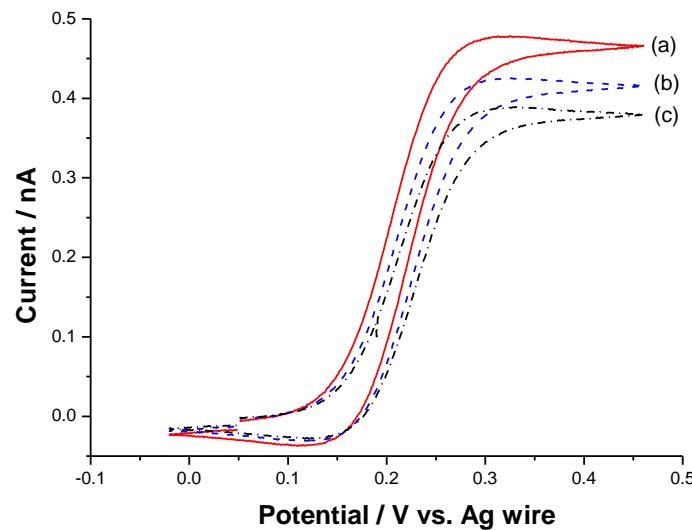


Figure S5 Cyclic voltammetry displaying the oxidation of *n*-butylferrocene (initial concentration 13.30 mM) in 15 μ L [C₄mim][BF₄] on a 10.4 μ m platinum microelectrode at 310.15 K, after (a) 210, (b) 510 and (c) 810 min flow of dry nitrogen.

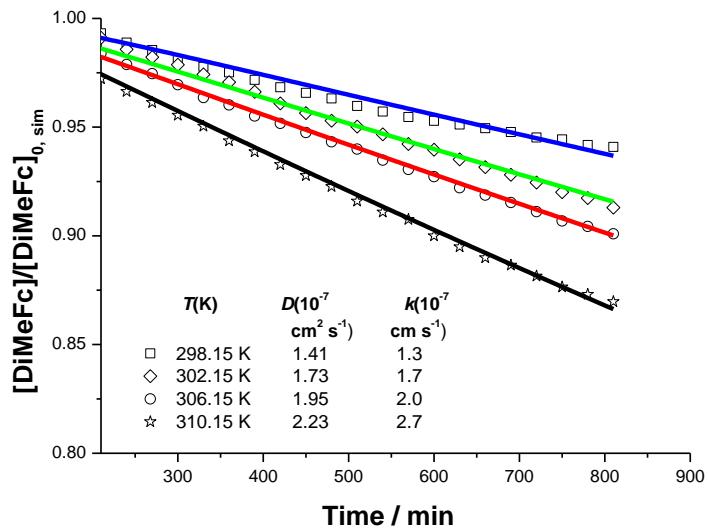


Figure S6 Experimental (symbols) and simulated (—) concentration profiles for 1,1'-dimethylferrocene in 15 μL of [C₄mpyrr][NTf₂] over the temperature range of 298.15 – 310.15 K.

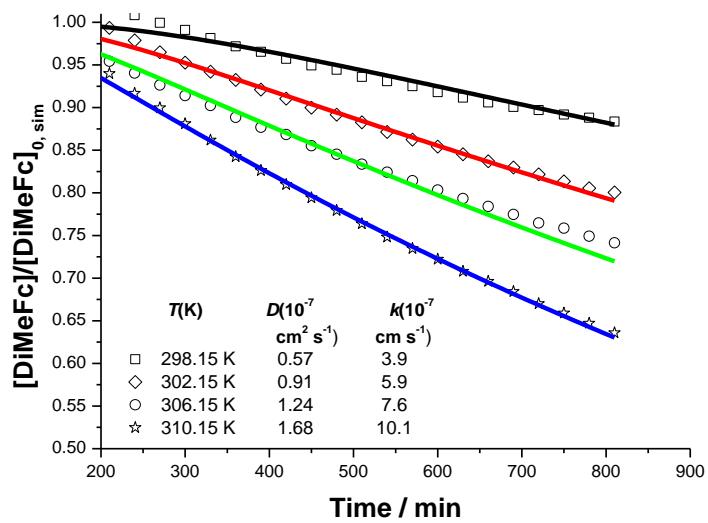


Figure S7 Experimental (symbols) and simulated (—) concentration profiles for 1,1'-dimethylferrocene in 15 μL of [C₄mim][BF₄] over the temperature range of 298.15 – 310.15 K.

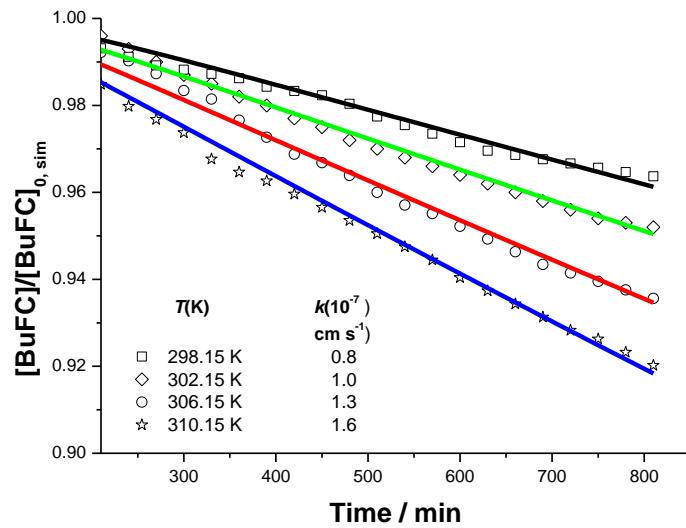


Figure S8 Experimental (symbols) and simulated (—) concentration profiles for *n*-butylferrocene in 15 μL of $[\text{C}_4\text{mpyrr}][\text{NTf}_2]$ over the temperature range of 298.15 – 310.15 K.

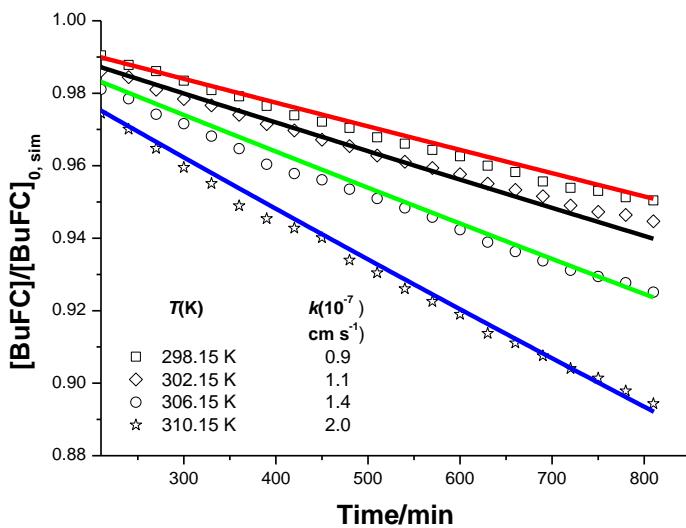


Figure S9 Experimental (symbols) and simulated (—) concentration profiles for *n*-butylferrocene in 15 μL of $[\text{C}_2\text{mim}][\text{NTf}_2]$ over the temperature range of 298.15 – 310.15 K.

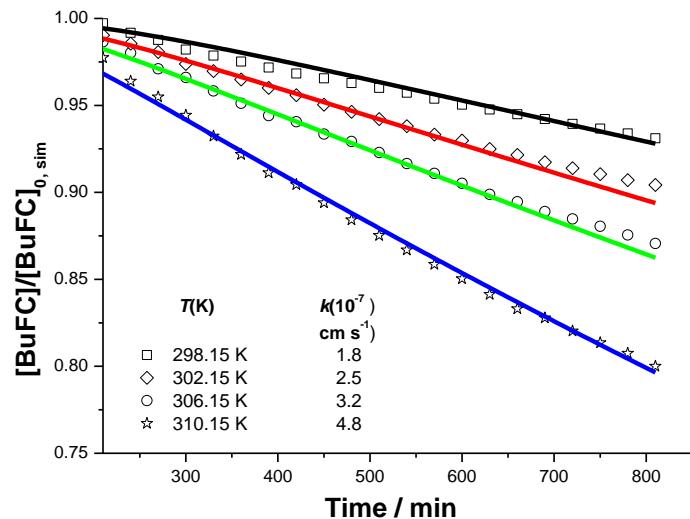


Figure S10 Experimental (symbols) and simulated (—) concentration profiles for *n*-butylferrocene in 15 μL of $[\text{C}_4\text{mim}][\text{BF}_4]$ over the temperature range of 298.15 – 310.15 K.