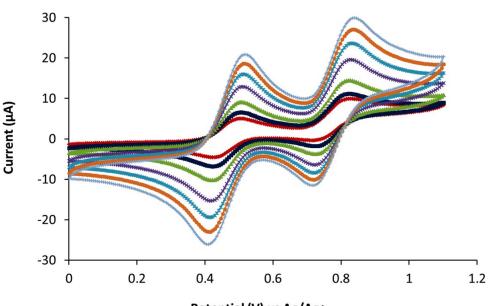
## Developing Energy Efficient Lignin Biomass Processing – Towards Understanding Mediator Behaviour in Ionic Liquids

Majd Eshtaya,<sup>a</sup> Andinet Ejigu,<sup>b</sup> Gill Stephens,<sup>a</sup> Darren A. Walsh,<sup>b</sup> George Z. Chen<sup>a, c</sup> and Anna K. Croft<sup>a</sup>

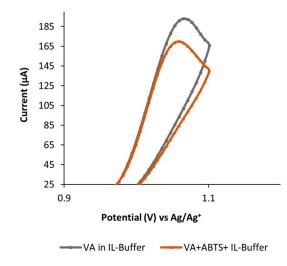
- <sup>a.</sup> Department of Chemical and Environmental Engineering, Faculty of Engineering, University of Nottingham, Nottingham NG7 2RD, UK
- <sup>b.</sup> Department of Chemistry, University of Nottingham, Nottingham NG7 2RD, UK
- <sup>c.</sup> Department of Chemical and Environmental Engineering, Faculty of Science & Engineering, University of NottinghamNingbo China, Ningbo 315100, P. R. China

## **Supplemental Information**

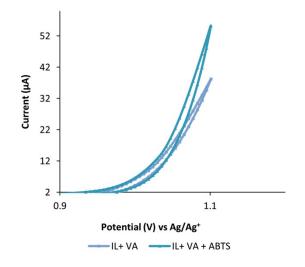


Potential (V) vs Ag/Ag+

Figure A: Cyclic voltammogram of 10 mM ABTS 1 in  $[C_2 mim][C_2 SO_4]$  with varying scan rates (from inside to outside (mV/s): 50, 100, 200, 400, 600, 800 and 1000).



**Figure B**: Cyclic voltammograms of 13.8mM veratryl alcohol **4**, 13.8 mM veratryl alcohol **4** mixed with 1 mM ABTS **1** in 15% (v/v)  $[C_2mim][C_2SO_4]$  in 0.1 M sodium acetate buffer (pH 4.5) recorded at a scan rate of 10 mV/s with current above 25  $\mu$ A between 0.9 and 1.1 V.



**Figure C**: Cyclic voltammograms of 13.76 mM veratryl alcohol **4**, 13.76 mM veratryl alcohol **4** mixed with 1 mM ABTS **1** in  $[C_2 \text{mim}][C_2 SO_4]$  recorded at a scan rate of 10 mV/s with current above 2.0  $\mu$ A between 0.9 and 1.1 V.