I. Supplementary Material

On the Cobalt and Cobalt Oxide Electrodeposition from Glyceline Deep Eutectic Solvent

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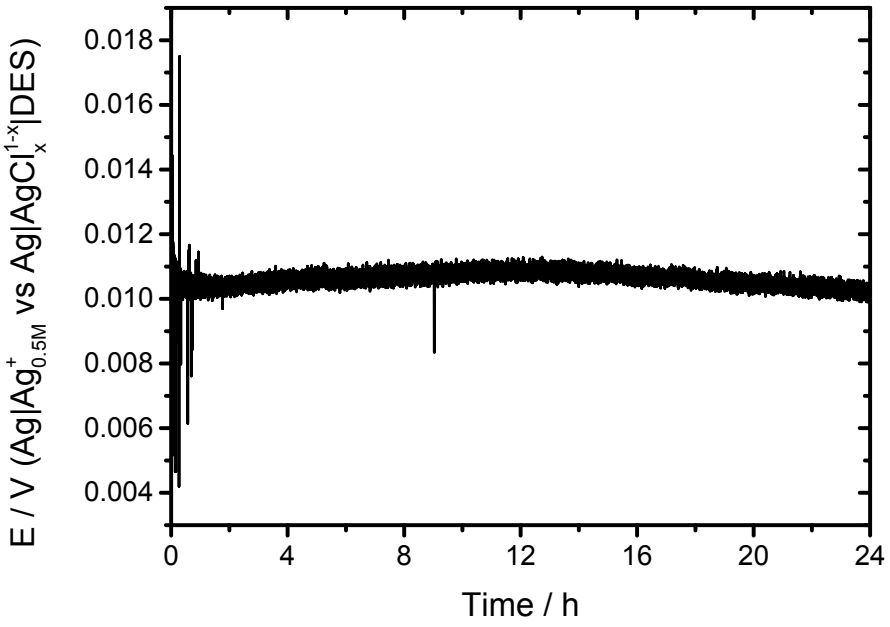

Fig. 1S. Open circuit potential measured after 24 hours using an $Ag|Ag^{+}_{0.5M}$ vs $Ag|AgCl_x^{1-x}|DES$ electrodes.

Fig. 2S shows the CVs of DES in the presence and absence of oxygen.

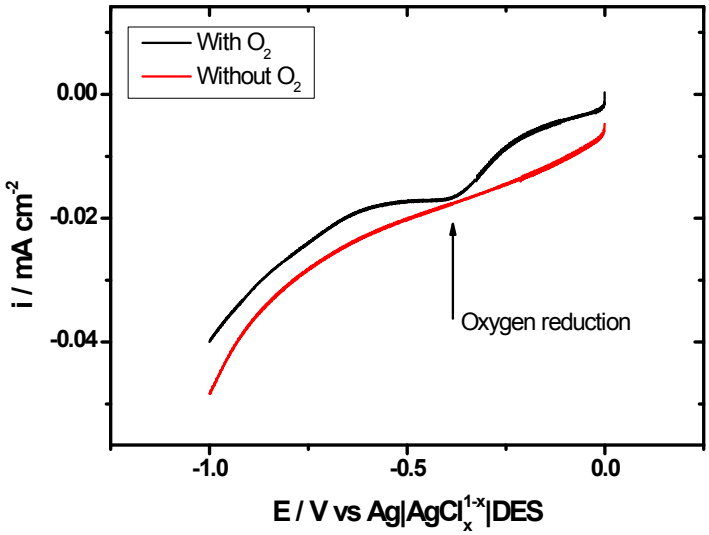

Fig. 2S. Linear sweep voltammogram obtained using DES1 at 100 mV s^{-1} and 343 K in the presence and absence of oxygen (Purged with argon).

Figs 3S and 4S display the cathodic (Fig. 3S) and anodic (Fig. 4S) scans of CVs recorded in 0.05 mol L^{-1} $CoCl_2$ DES solution at different cathodic switching potentials ($E_{\lambda c}$) between -1.15 V and -1.50 V/Ag|$AgCl_x^{1-x}$|DES, and the corresponding anodic charge as a function of $E_{\lambda c}$ (Fig. 5S).

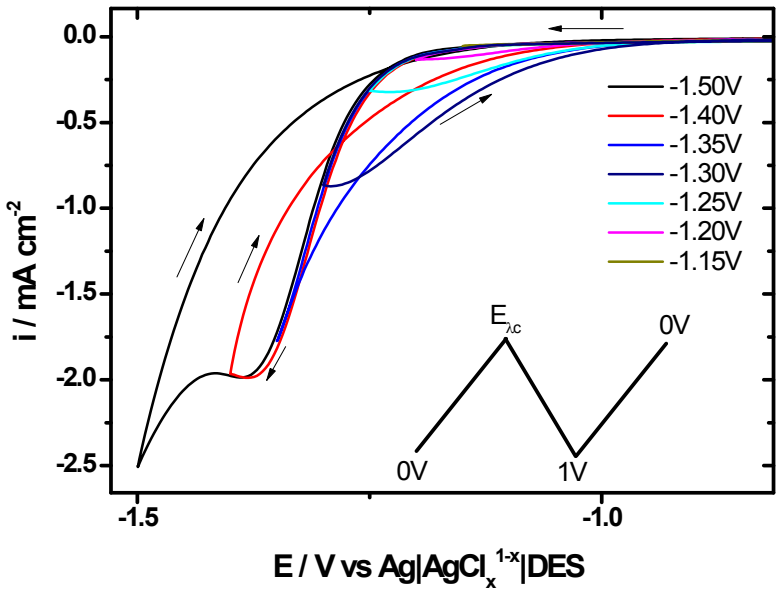

Fig. 3S. Cathodic scans of CVs of 0.05 mol L^{-1} $CoCl_2$ in DES at 50 mV s^{-1} and 343 K with different $E_{\lambda c}$.

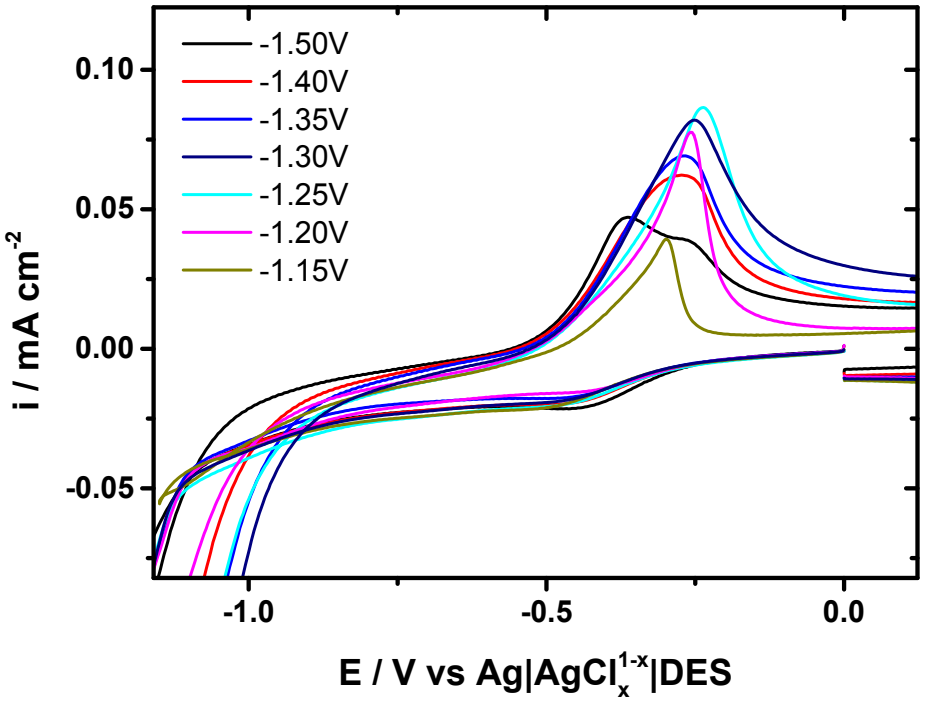

Fig. 4S. Anodic scans of CVs of 0.05 mol L^{-1} $CoCl_2$ in DES at 50 mV s^{-1} and 343 K with different $E_{\lambda c}$

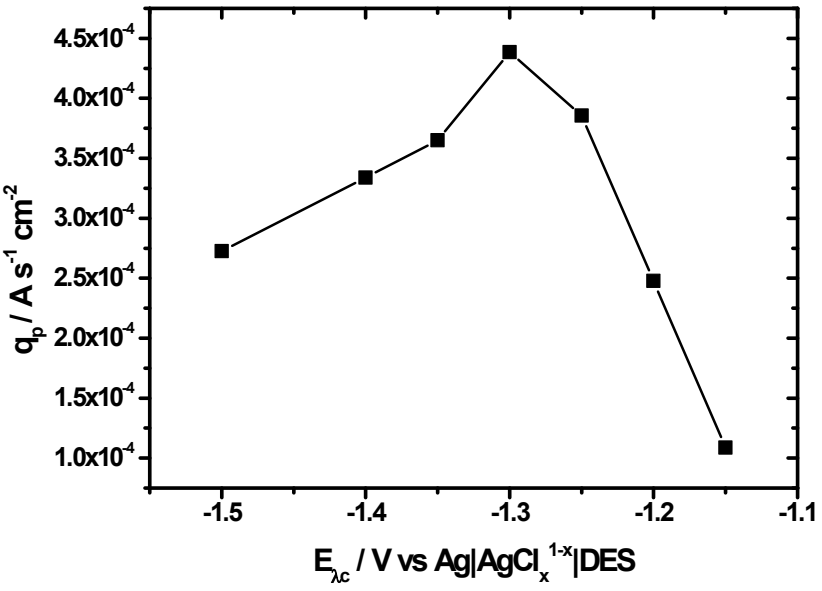

Fig. 5S. Anodic charge (Q_p) as a function of $E_{\lambda c}$ obtained from Fig. 3S.

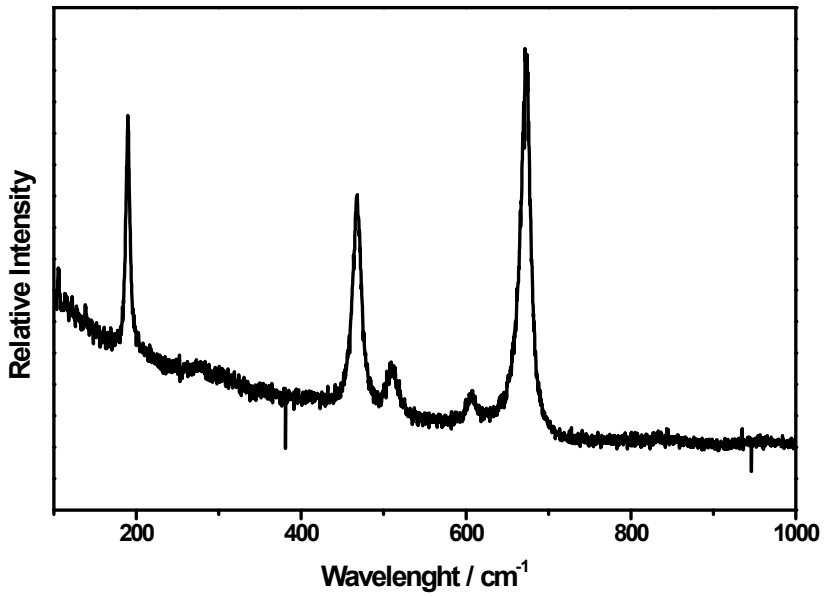

Fig. 6S. Raman spectrum for the deposit obtained using DES + Co^{2+} 0.05 mol L^{-1} at 343K applying -1.4V.