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Article

Rapid Electrodeposition and Corrosion Behavior of Zn Coating from a Designed Deep Eutectic Solvent

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Supporting Information

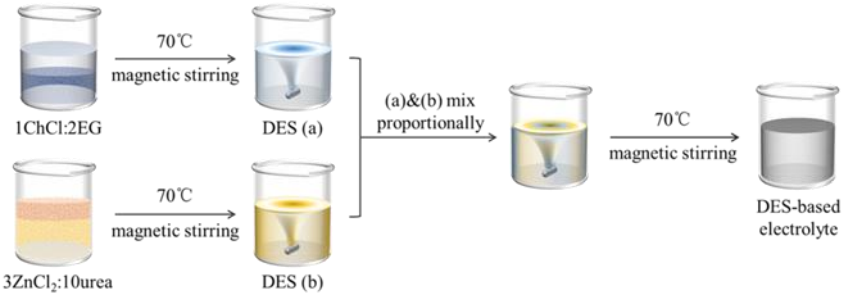

Figure S1. The schematic diagram of the electrolyte preparation process.

Table S1. A comparison of electrodeposition rates of ChCl-based DES in previously published work.

Composition of DES Electrolyte	Electrodeposition Parameters		Electrodeposition Rate (μm/h)	Ref.
1ChCl: 2EG, 800 mM sulfamic acid	40 mM $RuCl_3$	no stirring	0.75	[17]
	20 mM $RuCl_3$	80 °C, 10 mA/cm² no stirring	0.25	
	40 mM $RuCl_3$	800 rpm	1	
ChCl:EG:$FeCl_2{\cdot}4H_2O$ = 10 g:10 g:15 g	100 °C	133 mA/cm²	119	[24]
		67 mA/cm²	57	
1ChCl: 2EG, 0.4 M $ZnCl_2$	80 °C, 3.3 mA/cm²		5.5	[33]
1ChCl: 2EG, 1 M $NiCl_2{\cdot}6H_2O$	25 ± 3 °C, 1 V		1.1	[34]
1ChCl: 2urea, 0.1 M $NiCl_2$, 0.4 M $ZnCl_2$	70 °C, 0.6 V		1.26	[35]
1ChCl: 2urea, 0.5 M $ZnCl_2$	60 °C, 5 mA/cm²		5.7	[36]
[1ChCl: 2EG + 3$ZnCl_2$: 10urea] Containing 2 M $ZnCl_2$	28 °C, 4 mA/cm²		58.8	This work