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Research paper

Effect of carbon dioxide additive on the characteristics of a deep eutectic solvent (DES) electrolyte for non-aqueous redox flow batteries

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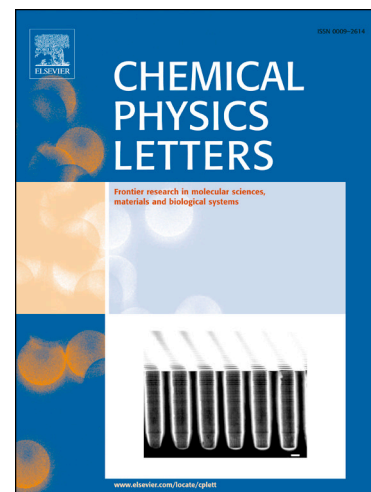
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**Effect of carbon dioxide additive on the characteristics of a  
deep eutectic solvent (DES) electrolyte for non-aqueous  
redox flow batteries**

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**Abstract**

The effects of CO<sub>2</sub> on physical and electrochemical properties of deep eutectic solvent (DES) containing Fe(II)/Fe(III) redox couple were studied. At 25°C, the viscosity of the DES decreased from 690.4 cP to 620 cP (10.1% decrease), and the ohmic resistance reduced from 1867 ohm to 1409 ohm (24.5% decrease) with saturated CO<sub>2</sub>. The magnitude of the changes reduces with the increase of temperature.

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