

Supporting information:

**A Concentration Dependent Electrochemical Properties and Structural
Analysis of a Simple Magnesium Electrolyte: Magnesium
bis(trifluoromethane sulfonyl)imide in Diglyme**

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Mg anode, mass transport property, transference number*

Supporting Figures:

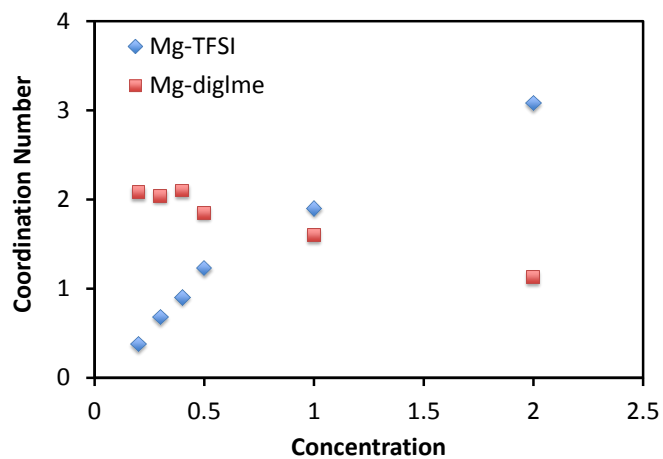


Figure S1. MD simulation of a concentration dependent coordination number of Mg-TFSI (blue diamond) and Mg-diglme (red square).

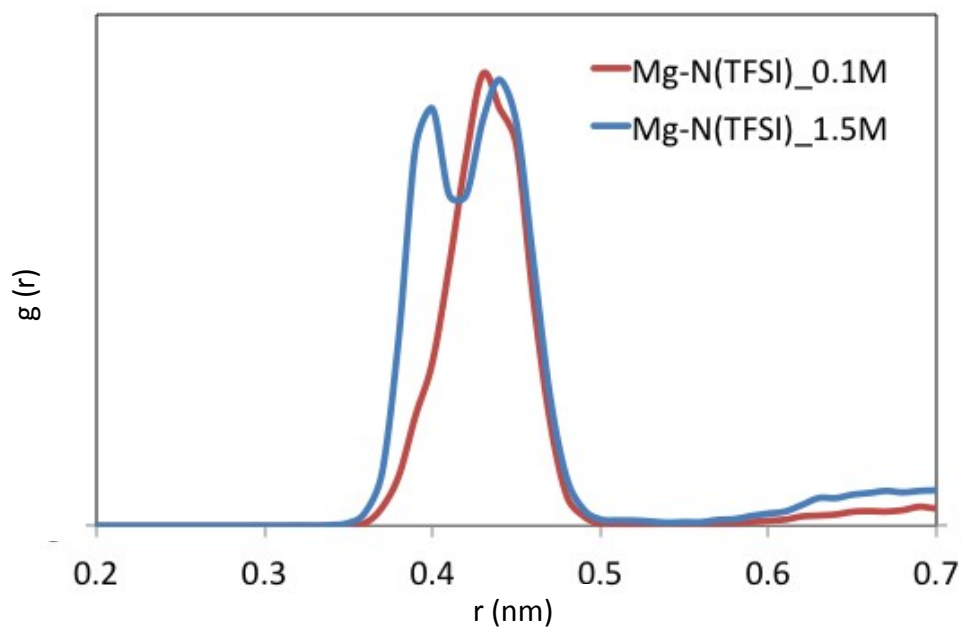


Figure S2. Radial distribution function of Mg and nitrogen atom of TFSI in 0.1 M and 1.5 M $\text{Mg}(\text{TFSI})_2/\text{G2}$.

