Electronic Supplementary Information for

Boron-based electrolyte solutions with wide electrochemical windows for Rechargeable Magnesium Batteries

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Fig.S1 Electrochemical performance in different boron based electrolytes

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Fig.S2 ¹H-NMR spectra of Mes₃B in CDCl₃



Fig.S3 Aromatic region of the ¹³C-NMR spectra measured with boron based electrolyte solutions of the following solutions: (red) PhMgCl/THF, (green) Mes₃B/THF, (blue) Mes₃B-PhMgCl/THF, (black) Mes₃B-(PhMgCl)₂/THF.



Fig. S4 Raman spectra of (a) THF solvent, (b) 0.5 M PhMgCl in THF, (c) 0.5 M Mes₃B in THF, (d) 0.5 M Mes₃B-PhMgCl/THF, (e) 0.5 M Mes₃B-(PhMgCl)₂/THF.