

MgH₂-TiH₂ Mixture as Anode for Lithium-ion Batteries: Synergic Enhancement of the Conversion Electrode Electrochemical Performance

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Supporting Information:

Table S1: EDS analysis of 0.7 Mg+0.3Ti mixture ground for 4 hours under 60 bars of hydrogen pressure at three different sample positions.

Mg (at.%)	Ti (at.%)
67.23	32.77
72.47	27.53
70.56	29.44

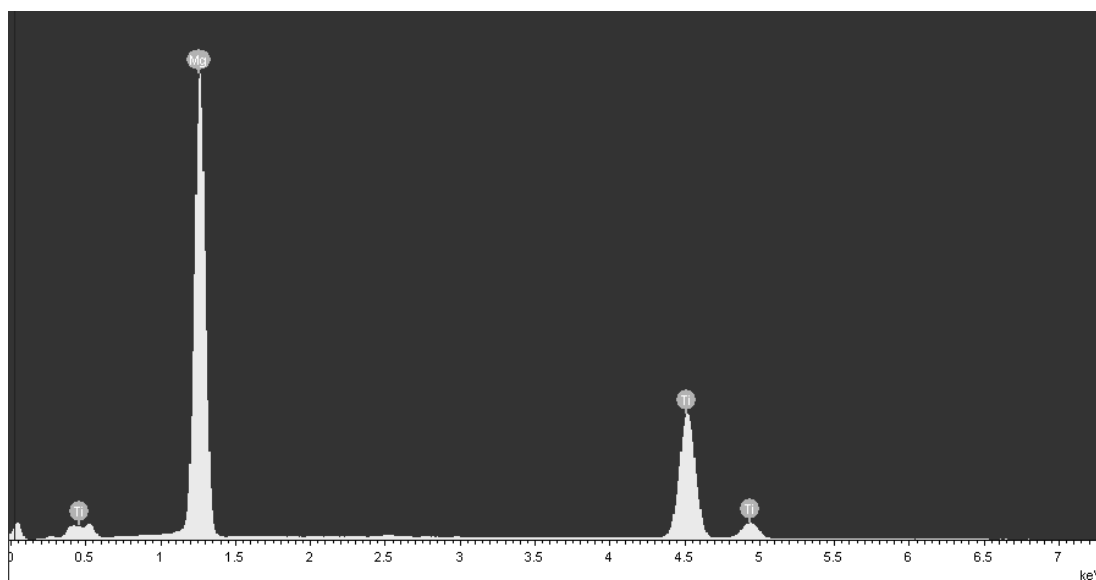


Figure S1: EDS Spectrum 2 of 0.7Mg+0.3Ti (72.47/27.53 %) mixture ground for 4 hours under 60 bars of hydrogen pressure.

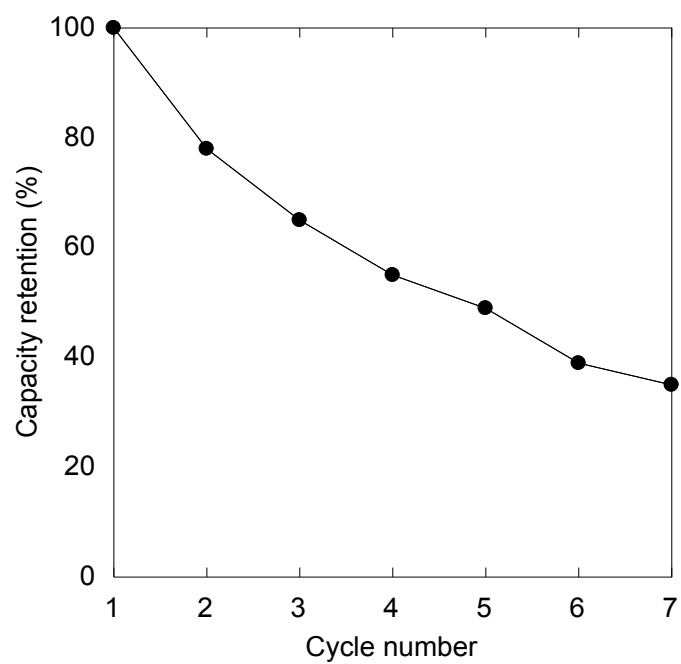


Figure S2: Capacity retention (%) as a function of the cycle number for 0.7MgH₂-0.3TiH₂/Li cell discharged at a current rate of 0.1 lithium per hour between 3.000 V and 0.005 V.

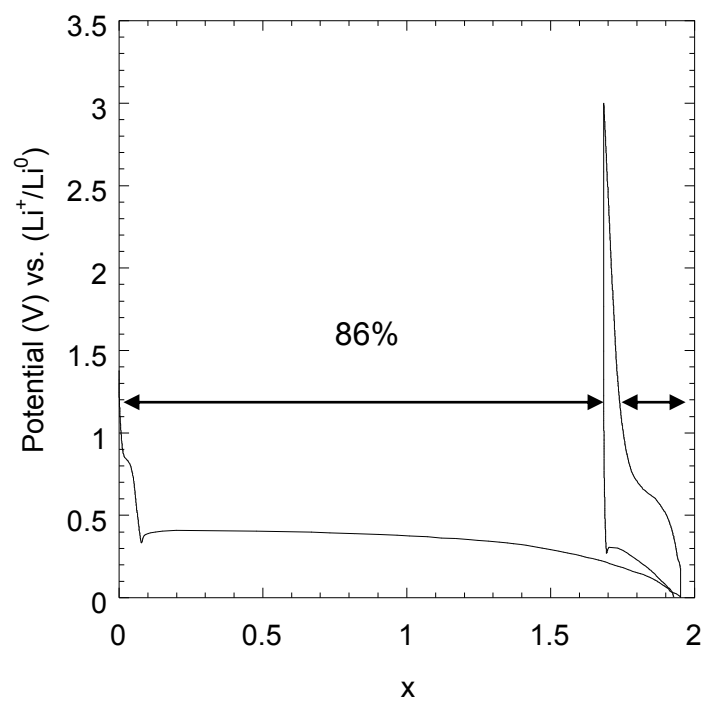


Figure S3: Potential-capacity curve of MgH₂ electrode, at a current rate of one lithium in 10 hours and with 30% of added super p carbon.

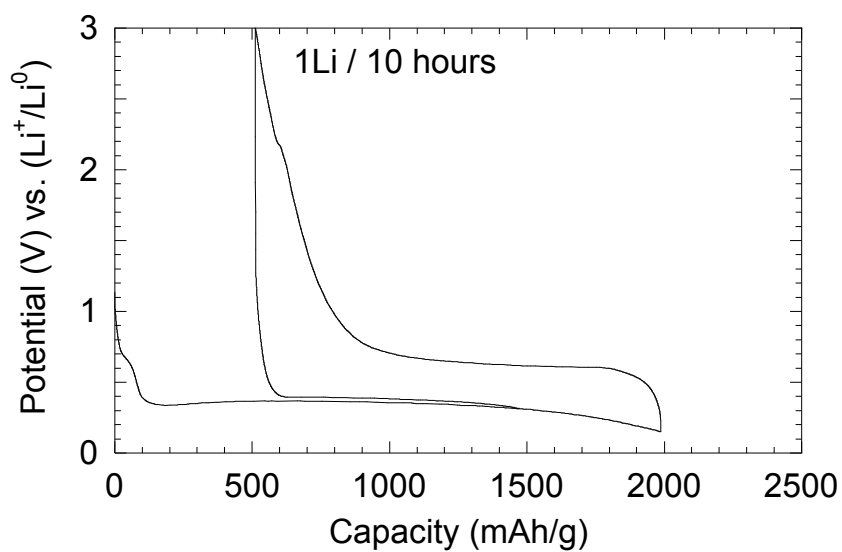


Figure S4: Potential capacity curve for MgH_2 electrode (Capacity in mAh/g) (corresponding to Figure 5(a)).

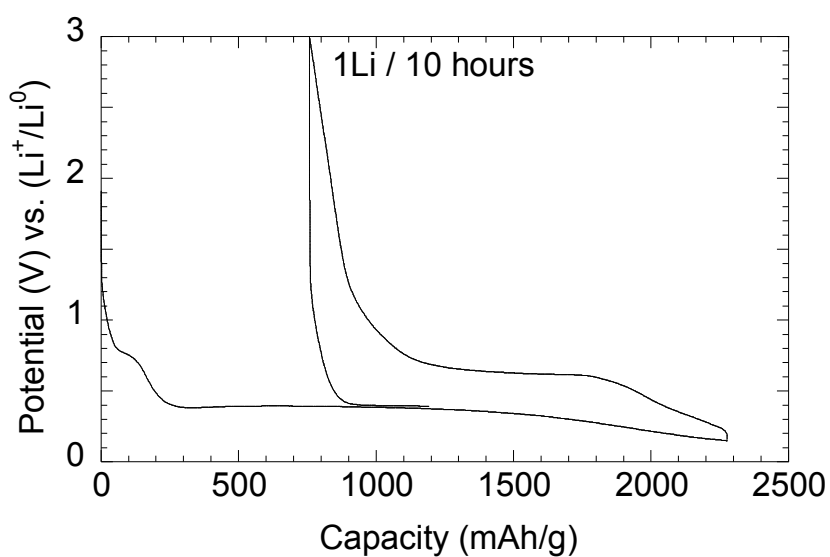


Figure S5: Potential capacity curve for $0.7\text{MgH}_2 + 0.3\text{TiH}_2$ mixture electrode (Capacity in mAh/g) (corresponding to Figure 5(b)).

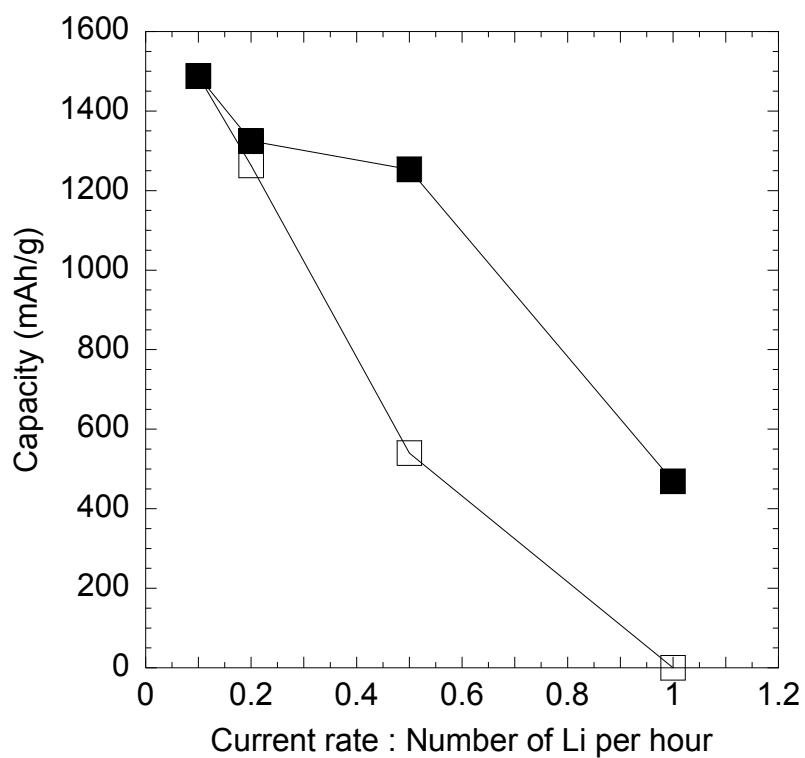


Figure S6: Reversible electrochemical capacity (capacity in mAh/g) for 0.7MgH₂ + 0.3TiH₂ mixture (black squares) and MgH₂ (white squares) electrodes at 0.1, 0.2, 0.5 and 1 Li per hour (Corresponding to Figure 5(c)).