Electronic Supplementary Material (ESI) for Dalton Transactions

Promising hydrogen storage properties and potential applications of Mg-Al-Pd trilayer films under mild conditions

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SEM and TEM images, relative resistance changes at 323K and 343K, and desorption kinetics of different samples at 298K.

Figures

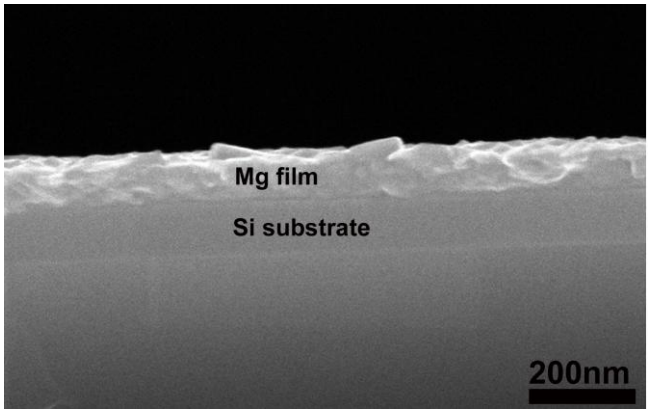

Fig. S1. Cross-section SEM images of 100nm thick Mg films deposited on silicon substrate.

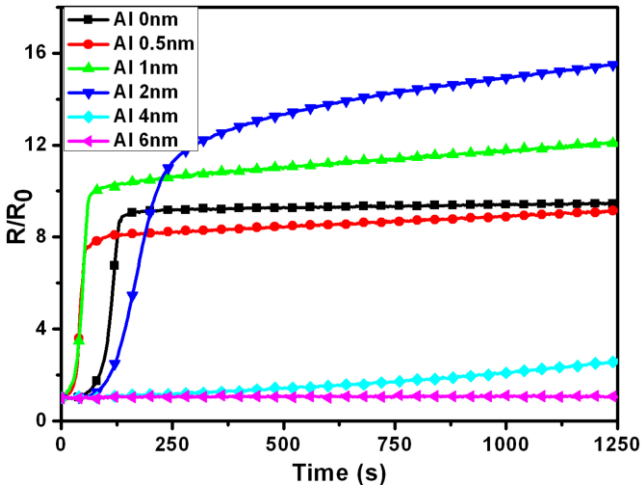

Fig. S2. The relative resistance changes (R/R_0) of Mg-Al-Pd films during hydrogenation in 0.1 MPa H_2 at 323 K.

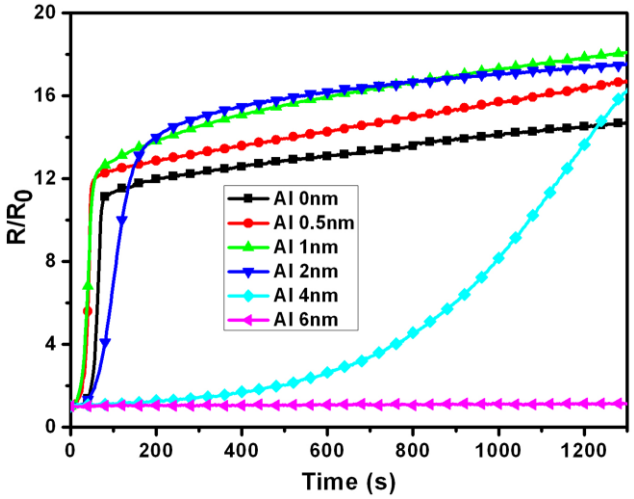

Fig. S3. The relative resistance changes (R/R_0) of Mg-Al-Pd films during hydrogenation in 0.1 MPa H_2 at 353 K.

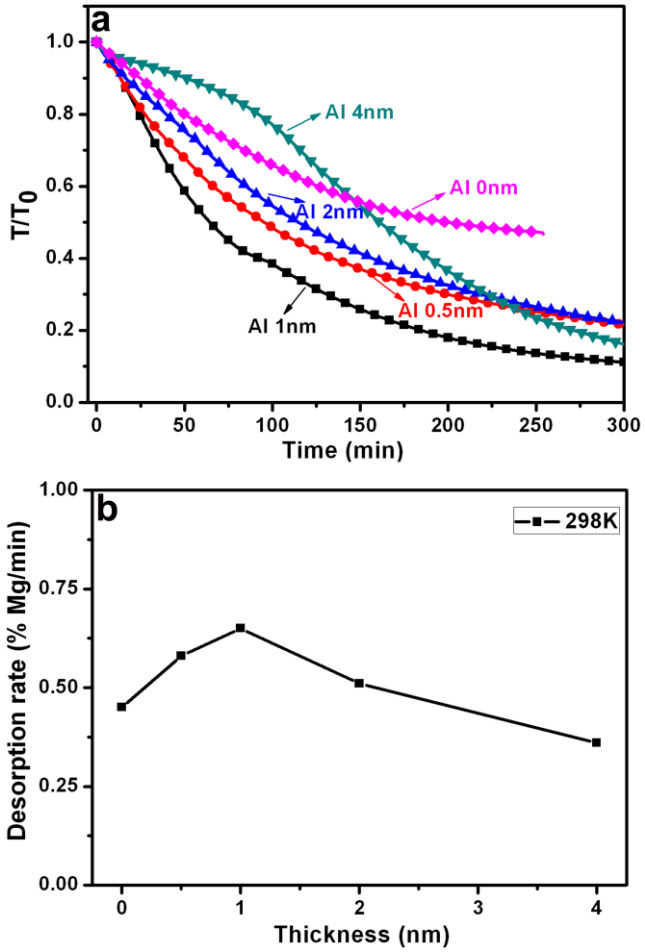

Fig. S4. a: Relative transmittance changes of different Mg-Al-Pd trilayer samples at 500 nm, T/T_0, with respect to desorption time in air at 298K. b: Hydrogen desorption rates of different Mg-Al-Pd trilayer films in air at 298K.

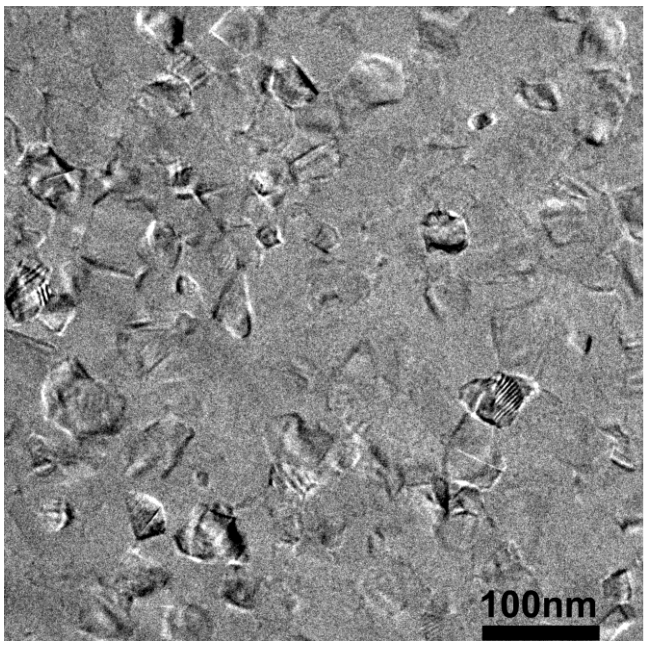

Fig. S5. TEM images of Al 1nm sample.