

Synthesis of Mg@Mg₁₇Al₁₂ ultrafine particles with superior hydrogen storage properties by hydrogen plasma-metal reaction

Fig. S1 High resolution TEM images of the as-prepared Mg-Al UFPs: (a) Mg-7 at.% Al, (b) Mg-22 at.% Al and (c) Mg-27 at.% Al. It can be seen apparently in Fig. S1 that these Mg-Al UFPs possess the core/shell structure.

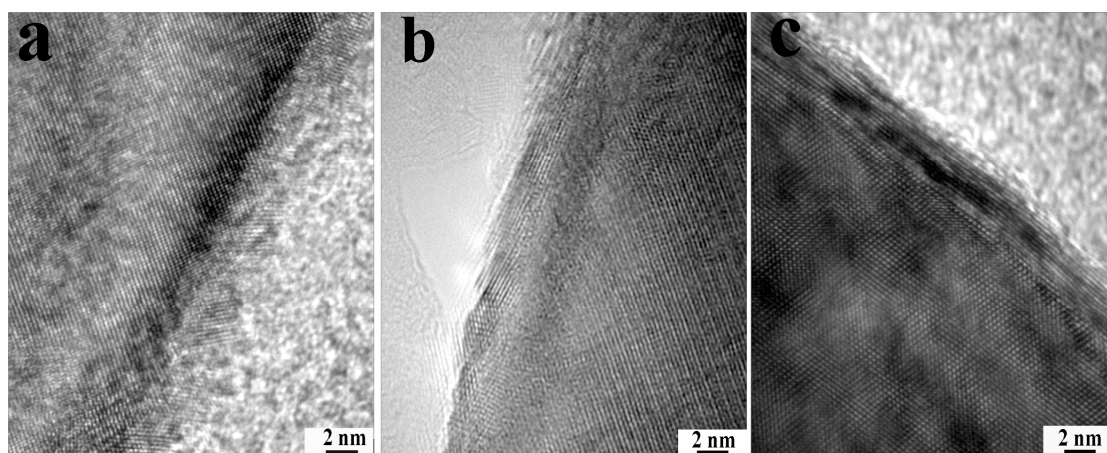


Fig. S2 Plots $\ln[-\ln(1-\alpha)]$ vs. $\ln(t)$ for hydrogen absorption (a) and desorption (b) of Mg-7 at.% Al UFPs. Fig. S2 (a) and (b) detail how to obtain the rate constants k of both hydrogen absorption and desorption.

