Supporting Information

Metal/graphene nanocomposites synthesized with aid of supercritical fluid for promoting hydrogen release from complex hydrides

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Figure S1. TEM bright-field images of Ni/GNS composites synthesized (a) without and (b) with SCCO$_2$. 
Figure S2. TPD signals of LiAlH$_4$ without and with 2.5 wt.% of various additives.
**Figure S3.** TEM micrographs of (a) Pd/GNS and (b) Au/GNS composites synthesized with SCCO$_2$. 
**Figure S4.** TPD signals of LiAlH$_4$ without and with 2.5 wt.% of micron-scale Fe, Ni, Pd, and Au powder.
**Figure S5.** Pore size distribution of AC calculated from the nitrogen adsorption isotherm using a Barrett–Joyner–Halenda (BJH) method.
Figure S6. SEM micrographs of (a) AC, (b) CB, (c) CNTs, and (d) GNSs.