Supporting information

Facile synthesis of Co/Pd supported by few-walled carbon nanotubes as an efficient bidirectional catalyst for low temperature hydrogen storage properties of magnesium hydride

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Table S1. The hydrogen desorbed and absorbed capacity of MgH_2-10 wt.% Co/Pd@B-CNTs during cycling test.

Cycle	Desorbed capacity (wt.%)	absorbed capacity (wt.%)
1	6.35	6.43
2	6.35	6.42
3	6.33	6.43
4	6.33	6.43
5	6.34	6.42
6	6.33	6.41
7	6.32	6.42
8	6.32	6.41
9	6.33	6.40
10	6.33	6.41

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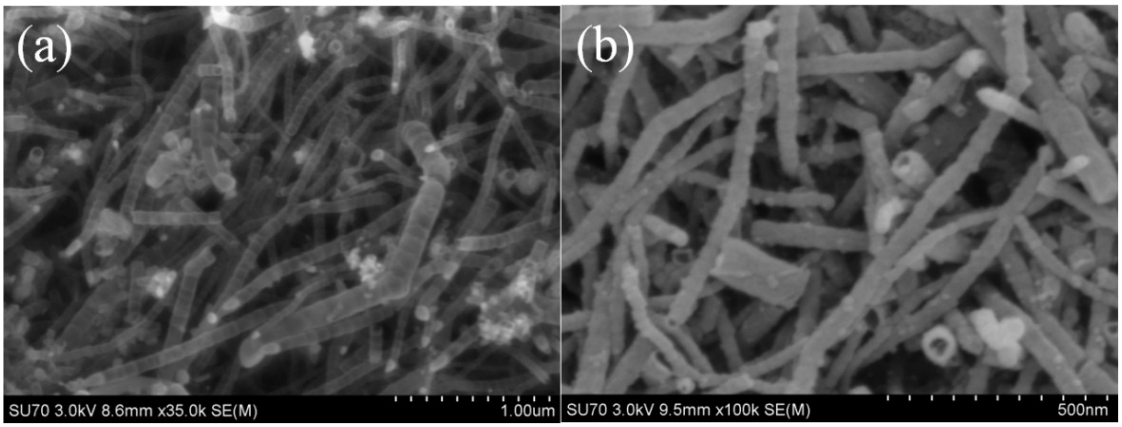

Figure S1. Typical SEM images of the obtained (a) Co@B-CNTs and (b) Co/Pd@B-CNTs.

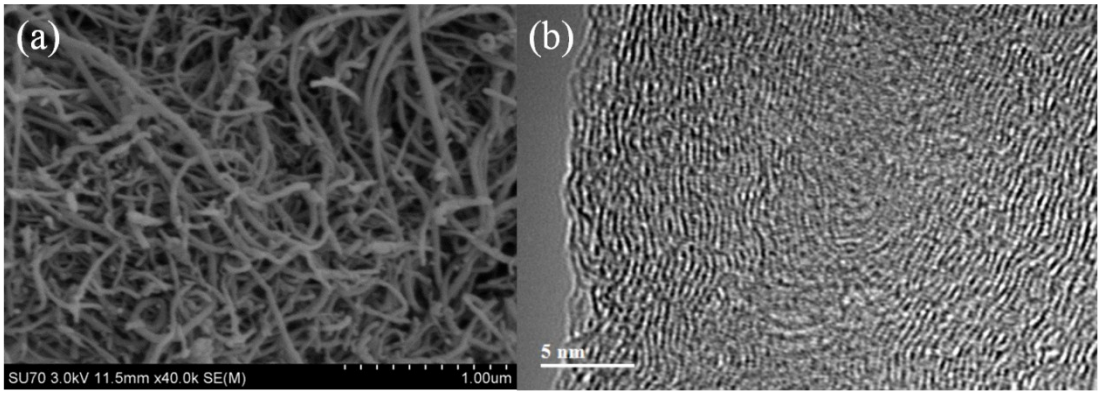

Figure S2. Typical SEM and TEM images of the commercial CNTs.

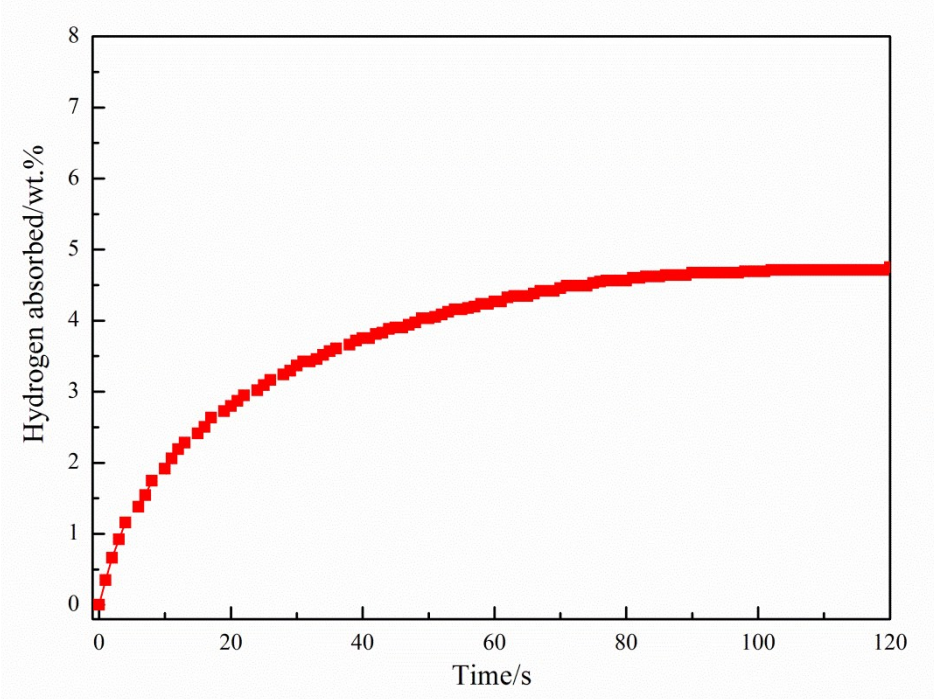

Figure S3. Isothermal rehydrogenation curve of as-milled MgH_2 at 250 °C under 80 bar hydrogen back pressure.

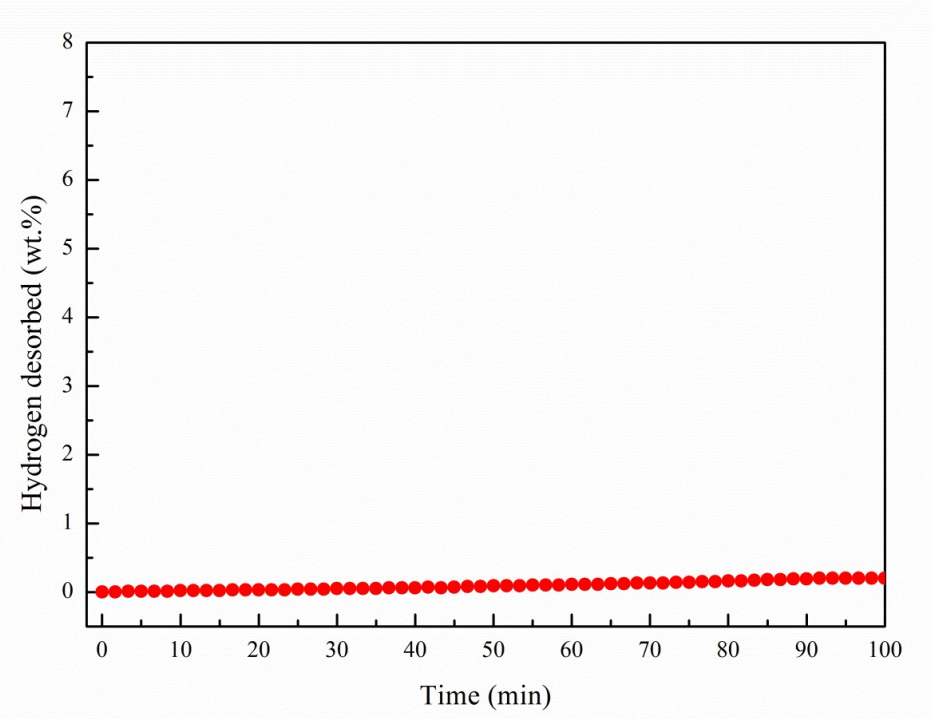

Figure S4. Isothermal dehydrogenation curve of as-milled MgH_2 at 275 °C under 0.02 bar hydrogen back pressure.

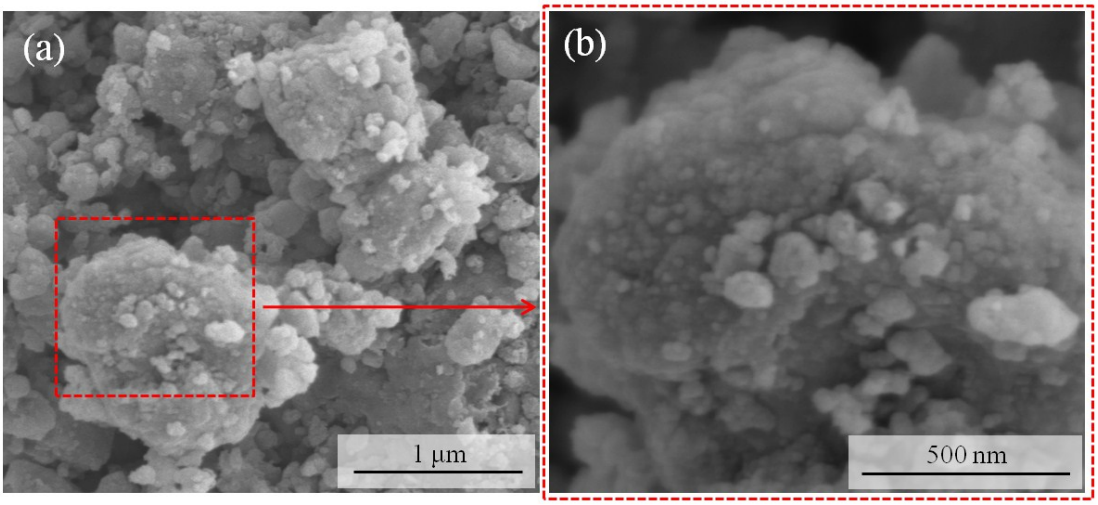

Figure S5. Typical SEM images of as-milled MgH_2 after ten cycles.

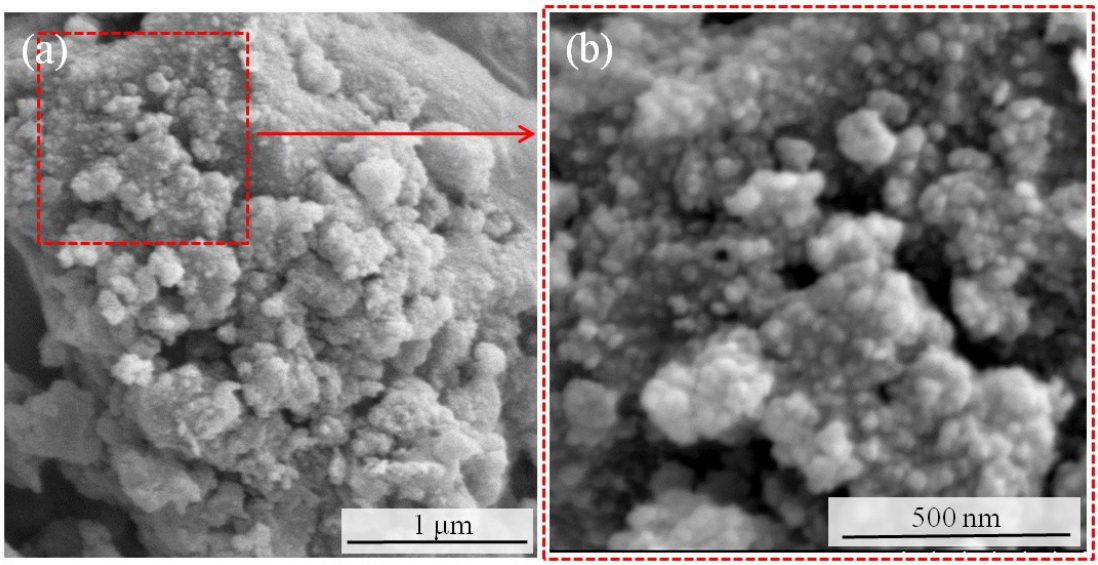

Figure S6. Typical SEM images of MgH_2-10 wt.% Co/Pd@B-CNTs after ten cycles.

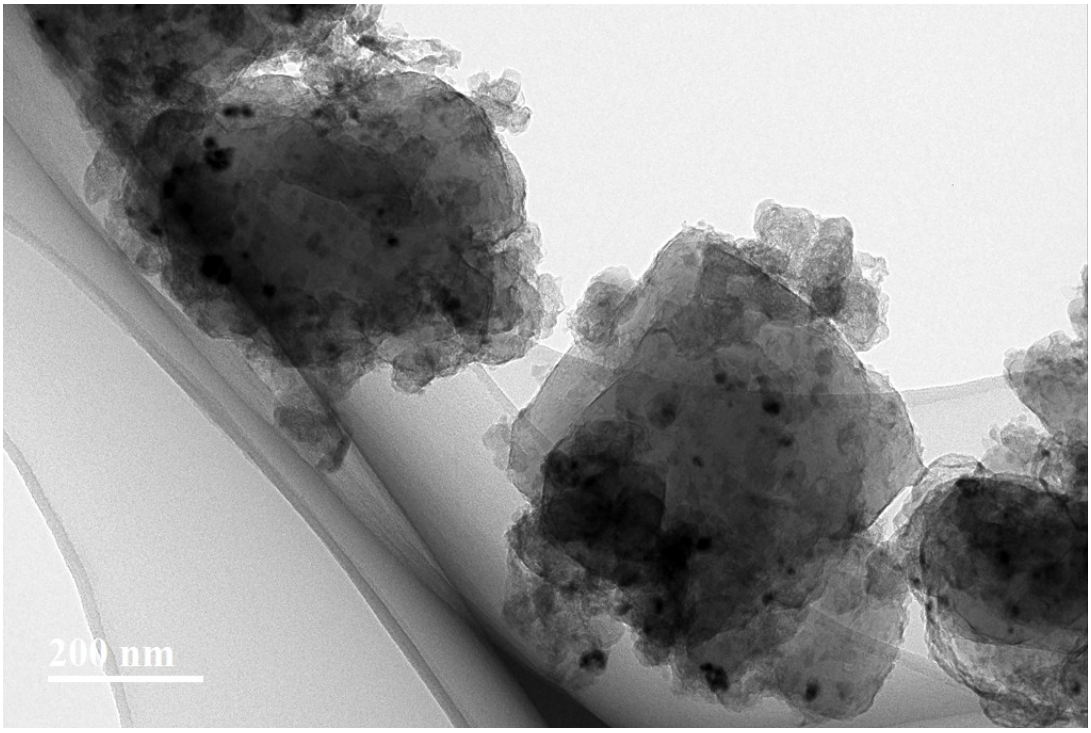

Figure S7. Typical TEM image of as-milled MgH_2 after ten cycles.

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