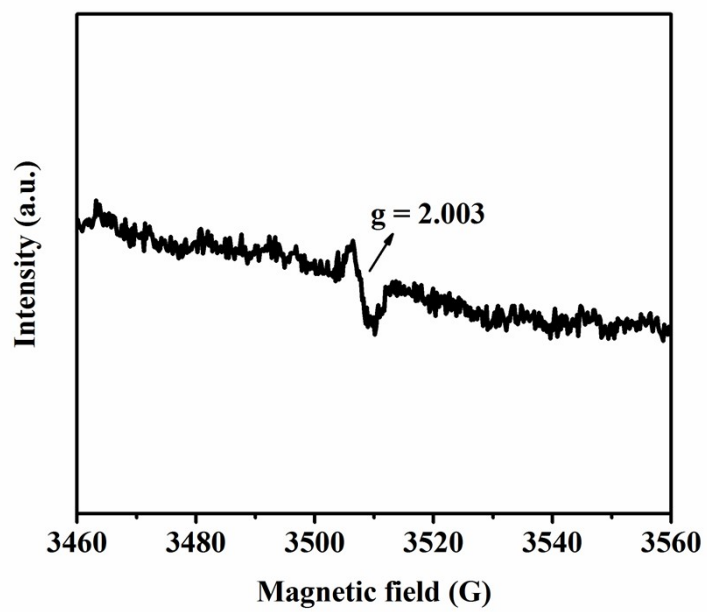
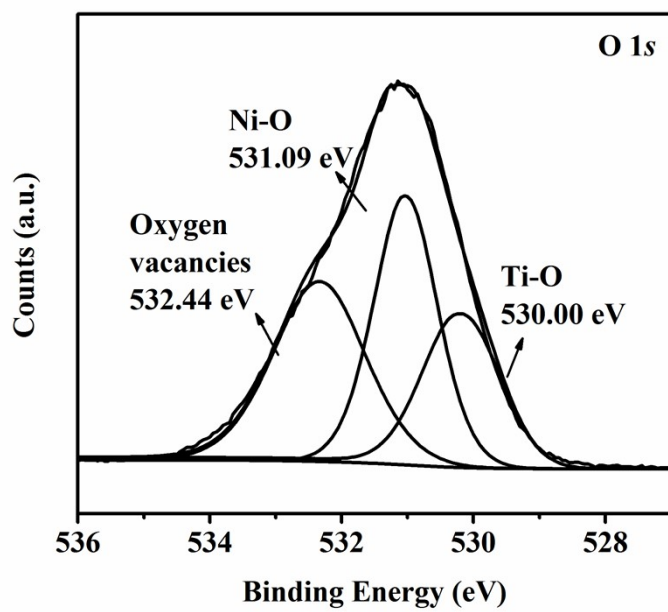


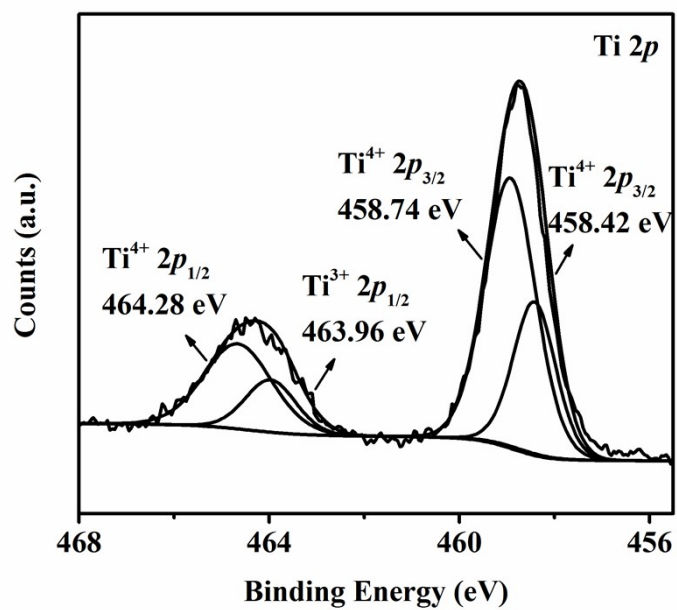
**Fig. S1** ESR spectrum of 2.0 wt% NiTi-LDH.



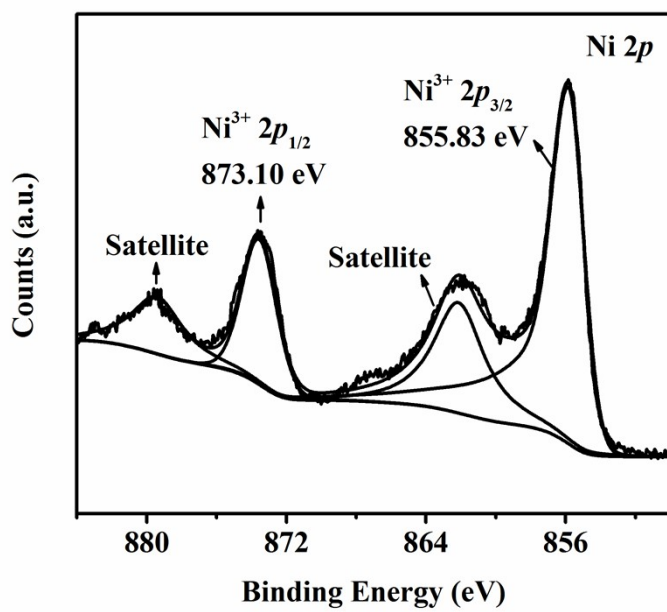
**Fig. S2** XPS spectrum of NiTi-LDH in O 1s region.



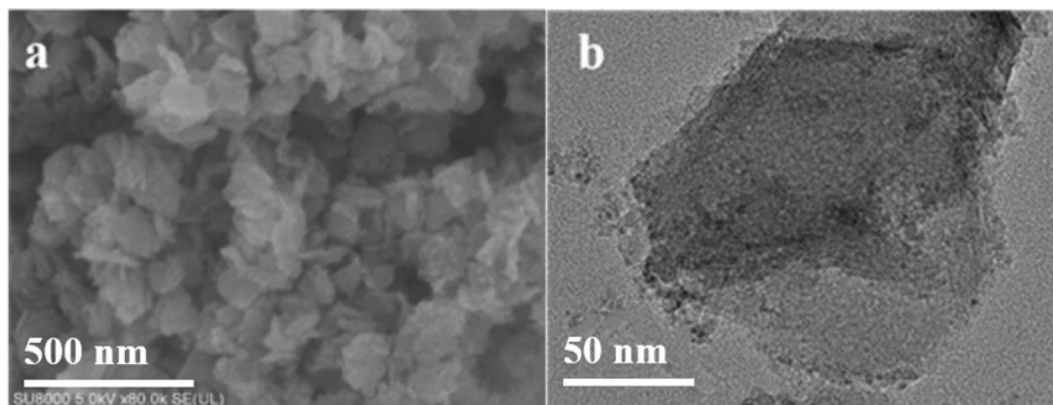
**Fig. S3** XPS spectrum of NiTi-LDH in Ti 2p region.



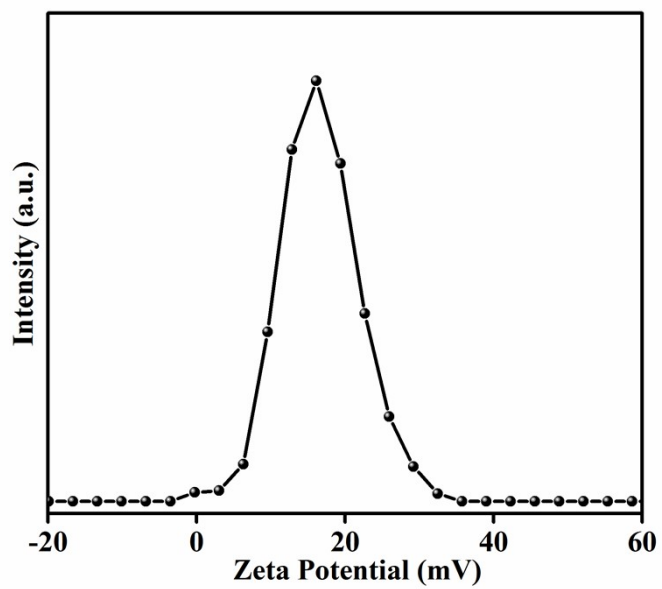
**Fig. S4** XPS spectrum of NiTi-LDH in Ni 2p region.



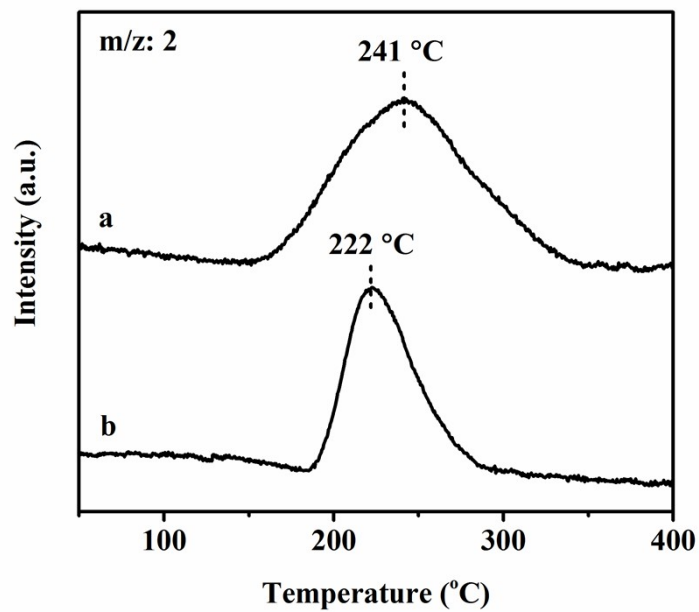
**Fig. S5** (a) SEM and (b) TEM images of 2.0 wt% Pd/NiTi-LDH.



**Fig. S6** Zeta potentials of NiTi-LDH.



**Fig. S7** Post-mortem TPD spectra revealing the desorption of active H from the used 2.0 wt% Pd/NiTi-LDH recovered from the reaction system using (a) bare benzyl alcohol and (b) a mixed solvent of benzyl alcohol/acetonitrile (5:1) as the solvent.



**Fig. S8** FT-IR spectra of NiTi-LDH and urea.

