Electronic supplementary information for

Monodisperse embedded nanoparticles derived from an atomic metal-dispersed precursor of layered double hydroxide for architectured carbon nanotube formation

Gui-Li Tian^{a,e}, Meng-Qiang Zhao^{a,e}, Bingsen Zhang^b, Qiang Zhang^{a,*}, Wei Zhang^{c,d},

Jia-Qi Huang^a, Tian-Chi Chen^a, Wei-Zhong Qian^a, Dang Sheng Su^{*,b,c}, and Fei Wei^{*,a}

^a Beijing Key Laboratory of Green Chemical Reaction Engineering and Technology,

Department of Chemical Engineering, Tsinghua University, Beijing 100084, China

^b Shenyang National Laboratory for Materials Science, Institute of Metal Research,

Chinese Academy of Sciences, 72 Wenhua Road, Shenyang 110016, China

^c Department of Inorganic Chemistry, Fritz Haber Institute of the Max Planck Society,

Faradayweg 4-6, 14195 Berlin, Germany

^d Department of Energy Conversion and Storage, Technical University of Denmark,

Risøcampus, Frederiksborgvej 399, 4000 Roskilde, Denmark

Corresponding Authors

^e These authors contributed equally.

* Correspondence should be addressed to: zhang-qiang@mails.tsinghua.edu.cn (Q. Zhang); dangsheng@fhi-berlin.mpg.de (D. S. Su); wf-dce@tsinghua.edu.cn (F. Wei)

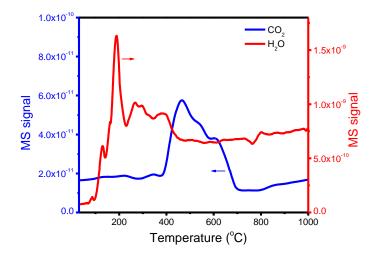


Fig. S1. MS spectra of H_2O and CO_2 as a function of temperature during the *in situ* calcination of FeMgAl LDH-IV.

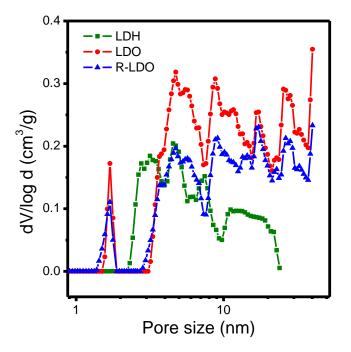


Fig. S2. The pore size distribution of LDH-IV, the corresponding LDOs, and the reduced LDOs. The calcination and reduction were carried out at 750 $^{\circ}$ C for 30 min under Ar and H₂ atmosphere respectively.