Supporting Information

Synthesis of Oxygen Functionalized Carbon Nanotubes and Their

Application for Selective Catalytic Reduction of NOx with NH₃

Bora Ye^a, Sun-I Kim^a, Minwoo Lee^b, Mohammadamin Ezazi^c, Hong-Dae Kim^a, Gibum Kwon^{c*}, Duck Hyun Lee^{a*}

^a Green Materials & Processes Group, Korea Institute of Industrial Technology, Ulsan 44413, Republic of Korea.
^b Small & Medium Class Vessel Convergence Technology Team, Korea Marine Equipment Research Institute, Gunsan 54001, Republic of Korea
^c Department of Mechanical Engineering, University of Kansas, Lawrence, Kansas 66045, USA

* Address correspondence to: <u>dulee@kitech.re.kr</u>, <u>gbkwon@ku.edu</u>

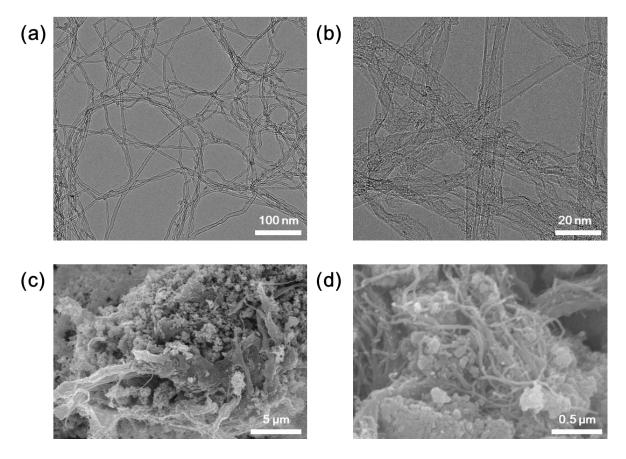


Figure S1. TEM (a, b) images of synthesized Vanadium and Tungsten co-impregnated commercial CNTs and SEM (c, d) images of synthesized Vanadium, Tungsten, and TiO₂ co-impregnated commercial CNTs.

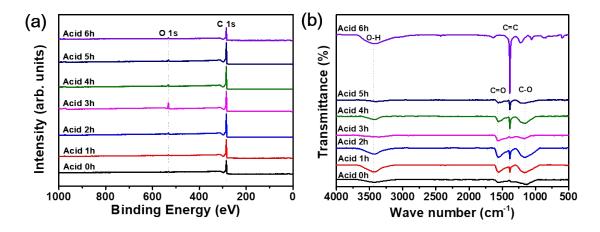


Figure S2. (a) XPS survey scan and (b) FT-IR spectra results of oxygen functionalized CNTs with varied acid treatment time.

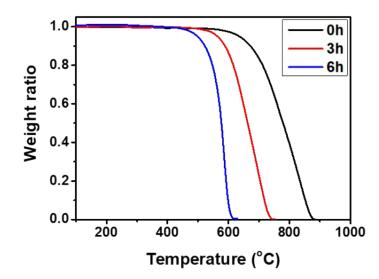


Figure S3. Measured Thermogravimetric analysis (TGA) of oxygen functionalized CNTs with varied acid treatment time