## Supporting Information for

## 1 Part per trillion level detection of disinfection byproducts in drinking water using miniaturized sensor

Zhuo Li,<sup>a</sup> Mingbo Yu,<sup>a</sup> Yingli Chu,<sup>b</sup> Xiaohan Wu,\*<sup>b</sup> Jia Huang\*<sup>b</sup> and Wenquan Tao<sup>a</sup>

<sup>a</sup>State Key Laboratory of Pollution Control and Resource Reuse, School of Environmental Science and Engineering, Tongji University, Shanghai 200092, P.R. China

<sup>b</sup>School of Materials Science and Engineering, Tongji University, Shanghai, 201804, P.R. China.

E-mail: xiaohanwu@tongji.edu.cn, huangjia@tongji.edu.cn

**Figure S1.** a) Diagram of halogenated DBPs categories and composition; b) the maximal safe concentrations of THMs regulated by different countries or organizations; and c) the maximal safe concentrations of common DBPs regulated by WHO. (Data from Ref. 1-6)

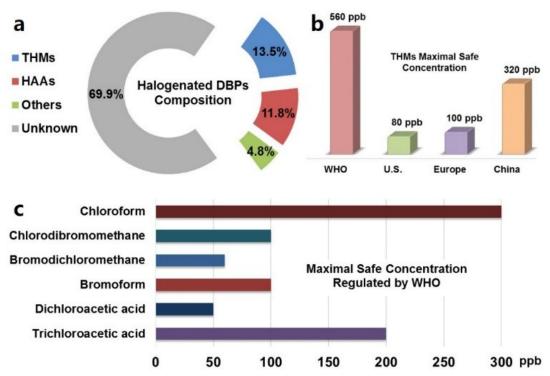
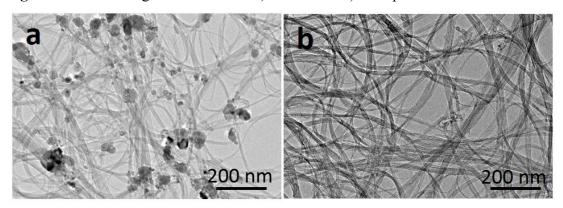


Figure S2. TEM images of DWCNTs a) before and b) after purified.



**Figure S3.** Schematic of DWCNT modification. The functional groups used in this work include butyl amine (top) and butyric acid (bottom).

