

## Supplementary Information

# Release of Ag/ZnO Nanomaterials and Associated Risks of a Novel Water Sterilization Technology

Chengfang Pang<sup>a</sup>, Aiga Mackevica<sup>a,b</sup>, Jingjing Tian<sup>c,d</sup>, Hongqing Feng<sup>c</sup>, Zhou Li<sup>c,e\*</sup>, and Anders Baun<sup>a\*</sup>

<sup>a</sup>Department of Environmental Engineering, Technical University of Denmark, 2800-Kgs. Lyngby, Denmark.

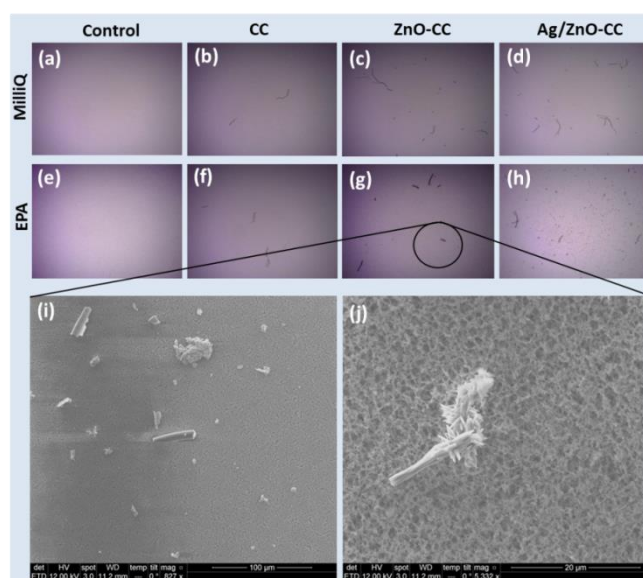
<sup>b</sup>Centre for Microbiology and Environmental Systems Science, University of Vienna, Althanstraße 14, UZA 2, room 2C475 A-1090 Vienna, Austria.

<sup>c</sup>CAS Center for Excellence in Nanoscience, Beijing Key Laboratory of Micro-nano Energy and Sensor, Beijing Institute of Nanoenergy and Nanosystems, Chinese Academy of Sciences, Beijing 100083, P. R. China.

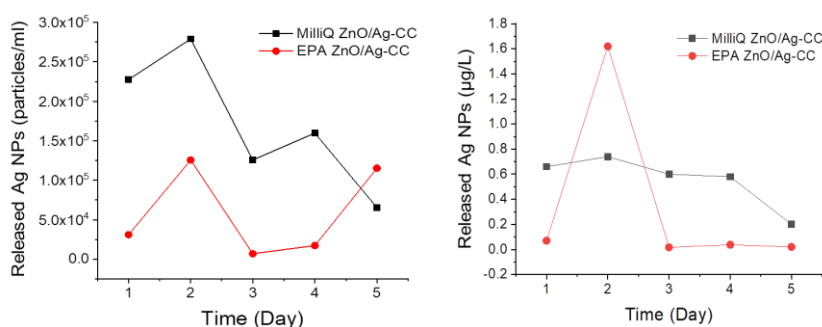
<sup>d</sup>Central Laboratory, Peking Union Medical College Hospital, Peking Union Medical College and Chinese Academy of Medical Sciences, Beijing 100730, P. R. China.

<sup>e</sup>Center on Nanoenergy Research, School of Physical Science and Technology, Guangxi University, Nanning, 530004, P. R. China.

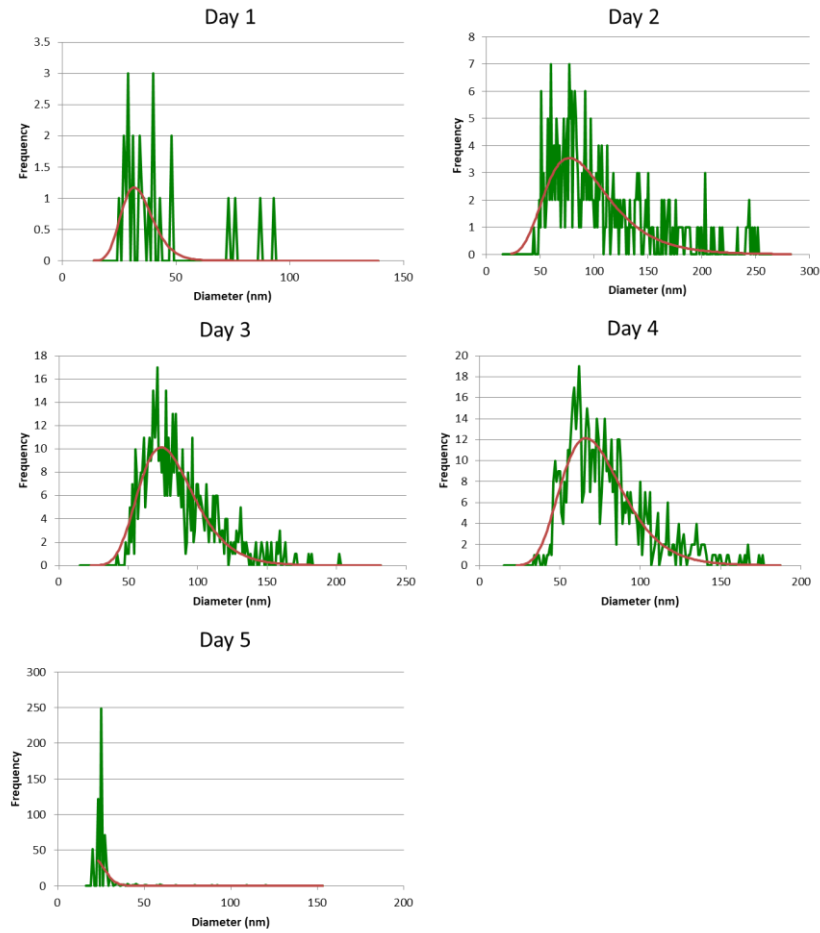
Corresponding authors: Anders Baun. Email: abau@env.dtu.dk, Tel: 0045-45252164, Address: Department of Environmental Engineering, Technical University of Denmark, 2800-Kgs. Lyngby, Denmark; Zhou Li. Email: zli@binn.cas.cn. Tel: 86-010-82854762, Address: Tower-C, Techart Plaza, No. 30 Xueyuan Road, Haidian District, Beijing, China.



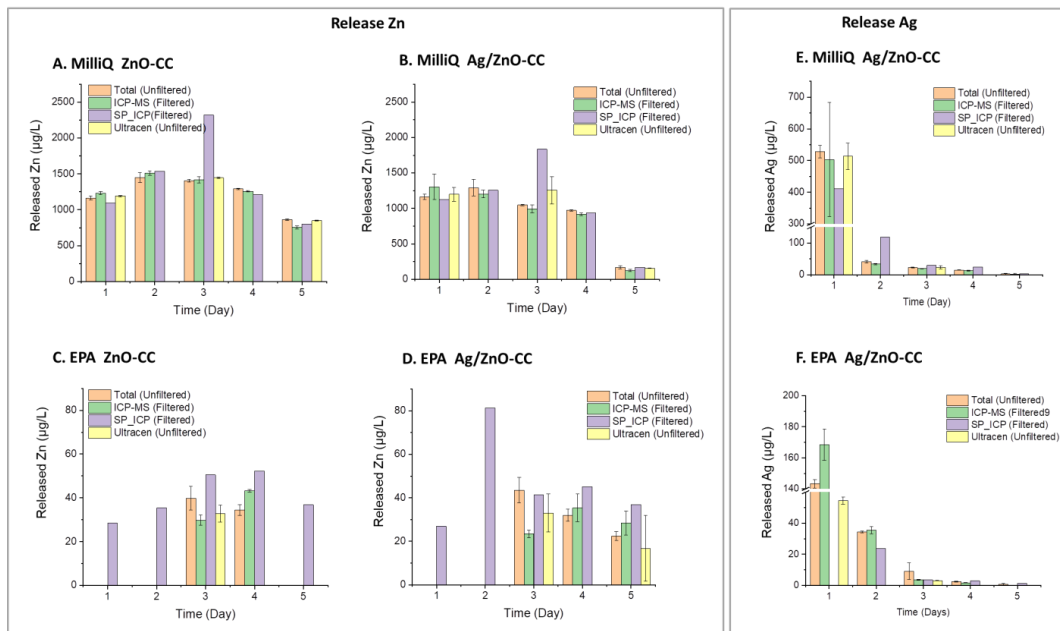
**Figure S1.** Image analysis of filtered fragments by the light microscopy (a–h) and the SEM (i–j). The released fragments of carbon cloth were found in all treatments both in MilliQ water and EPA medium (a–h).



**Figure S2.** Released Ag nanoparticles from carbon clothes.

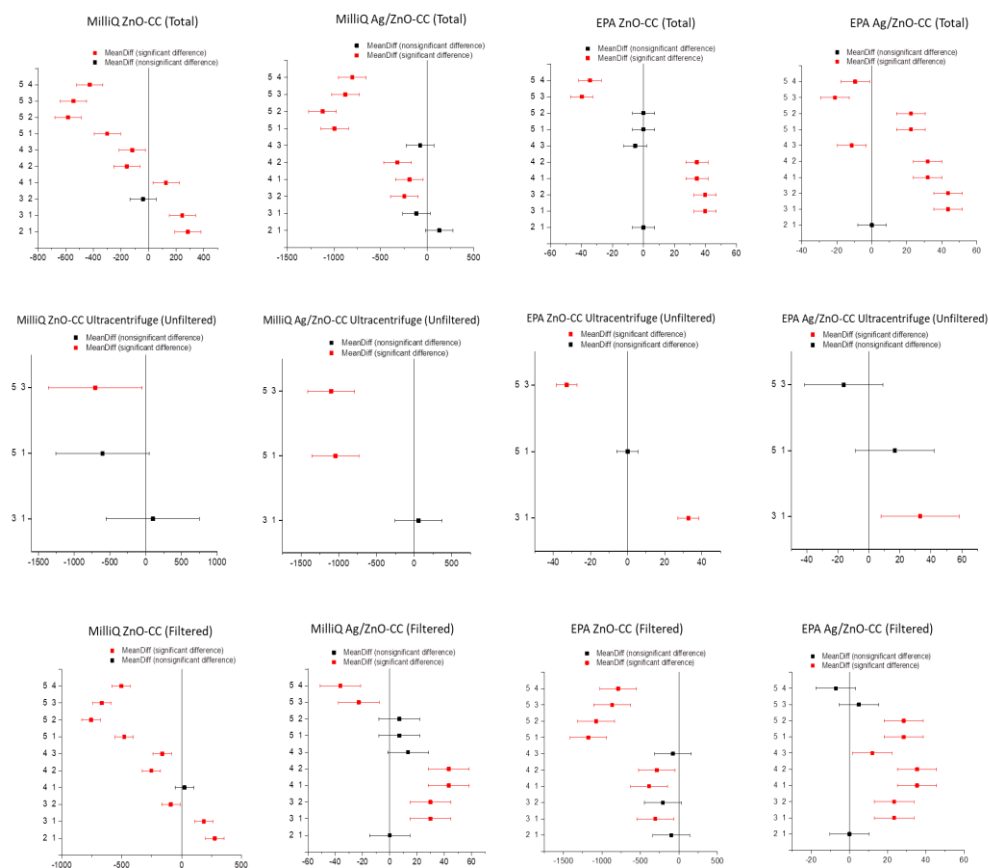


**Figure S3.** Size distribution of released Ag nanoparticles from carbon cloth in 5 days' simulation of release.

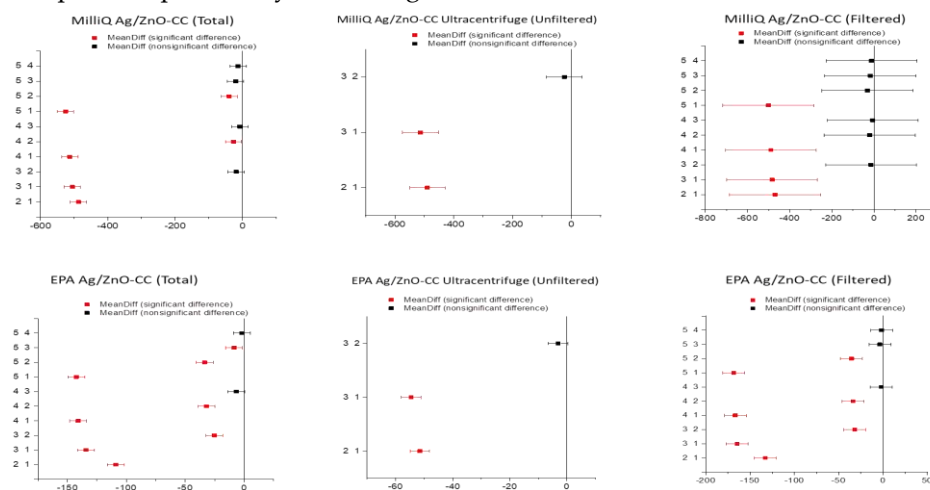


**Figure S4.** Compare different analysis methods to analyse the released ZnO-NW/dissolved Zn and/or AgNP/dissolved Ag from the carbon cloth in a 5 day simulation.

## Mean comparison plot Tukey test for Zn Release



## Mean comparison plot Tukey test for Ag Release



**Figure S5.** The output of statistical analysis to released metals. .