Supporting Information Fabrication of Conductive Silver Microtubes Using Natural Catkin as Template

Dongdong Li,^{†,‡} Heng Shen,[‡] Chao Cai,[‡] Tongbing Sun,[‡] Yiping Zhao, *[†] Li Chen,[†] Ning Zhao, *[‡] and Jian Xu *[‡]

[†] State Key Laboratory of Separation Membranes and Membrane Processes, School of Materials Science and Engineering, Tianjin Polytechnic University, West Binshui Road No. 399, Xiqing District, Tianjin 300387, P. R. China.

[‡] Beijing National Laboratory for Molecular Sciences, Laboratory of Polymer Physics and Chemistry, Institute of Chemistry, Chinese Academy of Sciences, Zhongguancun North First Street 2, Haidian District, Beijing 100190, P. R. China.



Figure S1. Molecular structure of tannic acid and schematic illustration of the TA-Fe coordination complexes.



Figure S2. The SEM images of Catkins@Ag NPs seed layer at different growing stages: a, a'; b, b'; c, c' and d, d' are corresponding to the reaction time of 4, 7, 12 and 18 h, respectively.



Figure S3. Thermogravimetric curves of Catkins@TA-Fe and Catkins@Ag

microtubes.



Figure S4. (a) and (b) TEM images of organic stabilizers capped on the particle surface after electroless plating.



Figure S5. UV-vis absorption spectra of Catkins, Catkins@Ag NPs seed layer and

Catkins@Ag microtubes.