Supplementary Material (ESI) for Chemical Communications

Rotor-like ZnO by epitaxial growth under hydrothermal conditions

X. P. Gao,*[a] Z. F. Zheng,[a] H. Y. Zhu,[b] G. L. Pan,[a] J. L. Bao,[a] F. Wu,[a, c] and D. Y. Song[a]

[a] Institute of New Energy Material Chemistry, Nankai University, Tianjin 300071, China. Fax: 86-22-23502604; Tel: 86-22-23500876; E-mail: xpgao@nankai.edu.cn
[b] Electron Microscope Unit and School of Chemistry, The University of Sydney, NSW 2006, Australia Fax: 61 2 9351 7682; Email: h.zhu@emu.usyd.edu.au
[c] School of Chemical Engineering and Environmental, Beijing Institute of Technology, Beijing 100081, China

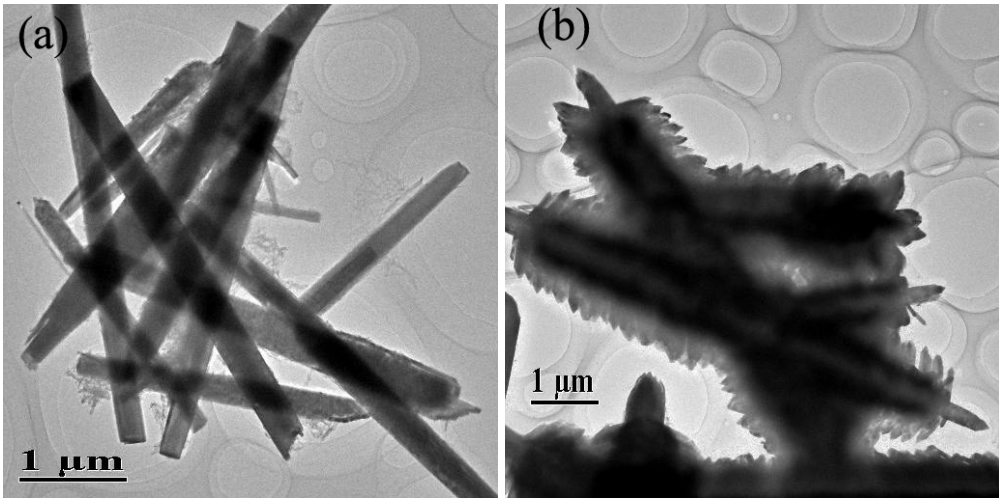

Fig. S1 Bright field TEM images of the rod-like (a) and rotor-like ZnO (b).

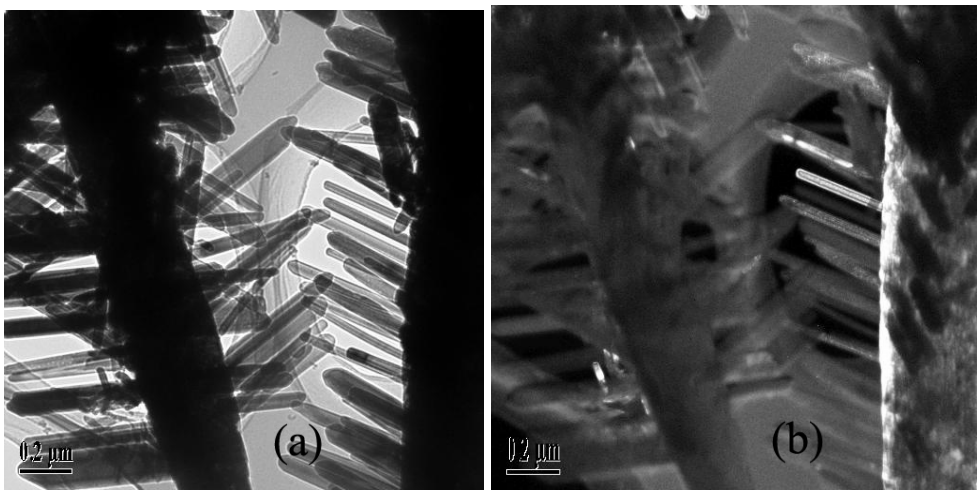

Fig.S2 TEM images of the rotor-like ZnO in the bright field (a) and dark field (b)

Fig.S3 SEM image of the rod-like ZnO mixed with $Zn(OH)_4^{2-}$ solution before the hydrothermal reaction, indicating the fast nucleation on the rod-like ZnO occurs prior to the hydrothermal reaction.