

Supporting Information

Flower-like ZnO Grown on Urchin-like CuO Microspheres for Catalytic Synthesis of Dimethyldichlorosilane

Yongxia Zhu,^{1,2} Yingli Wang,^{*,2} Lianying Song,² Xin Chen,² Wuyuan Liu,²

Jin Sun,¹ Xilin She,^{*,1} Ziyi Zhong,³ and Fabing Su^{*,2}

¹ *College of Chemical and Environmental Engineering, Qingdao University, Qingdao, China
266071.*

² *State Key Laboratory of Multiphase Complex Systems, Institute of Process Engineering, Chinese
Academy of Sciences, Beijing, China 100190.*

³ *Institute of Chemical Engineering and Sciences, A*star, 1 Pesek Road, Jurong Island, Singapore
627833*

*To whom correspondence should be addressed. E-mail address: wangyl@mail.ipe.ac.cn (Y. Wang), xlshe@126.com (X. She), fbsu@mail.ipe.ac.cn (F. Su), Tel.: +86-10-82544850, Fax: +86-10-82544851.

Table S1. The impurity level of other elements in the raw Si material

impurity	Content (wt.%)
Fe	0.21
Al	0.15
Ca	0.12
Mg	0.003
Cu	0.004
Pb	0.001
Ti	0.002
Mn	0.001

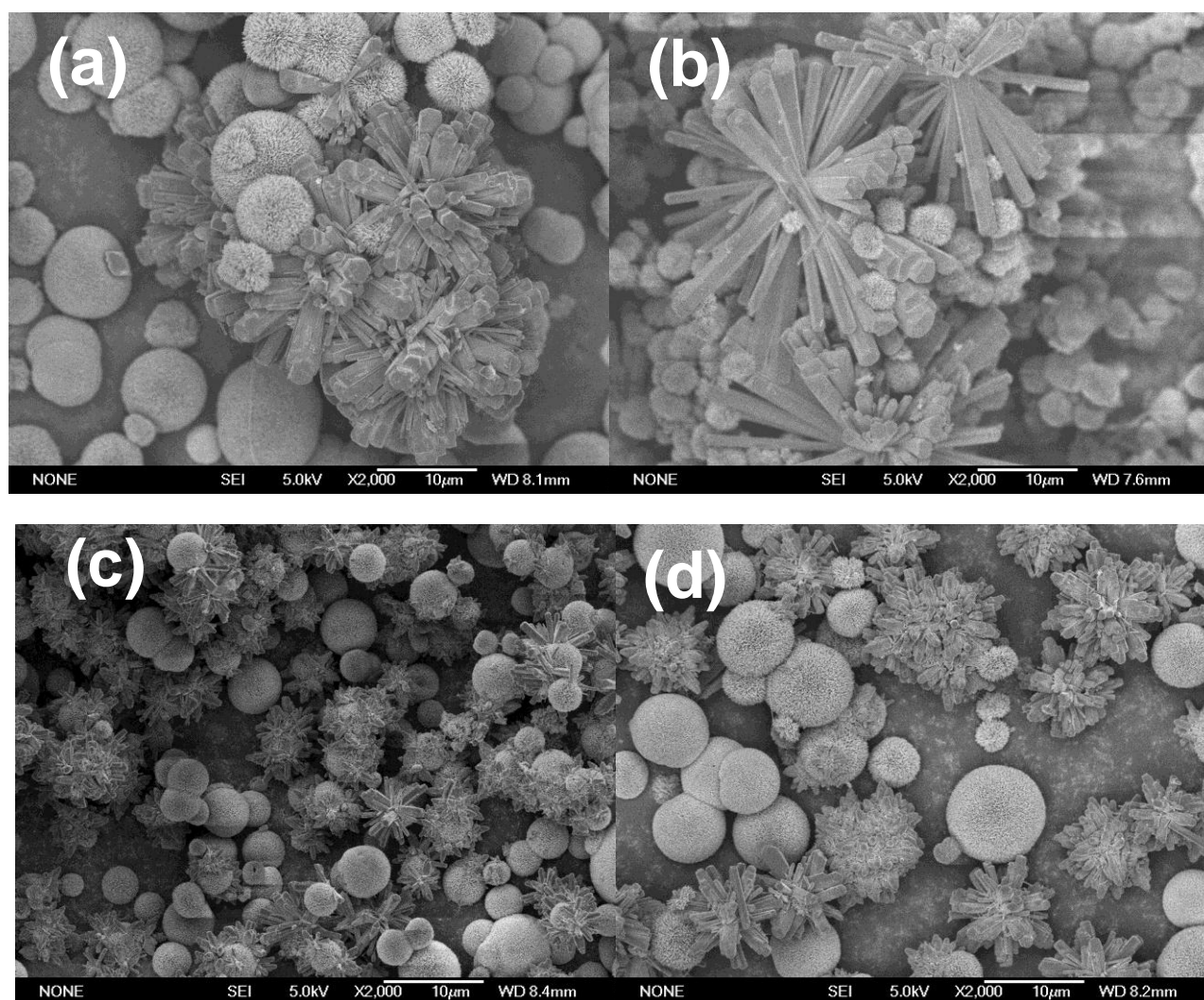


Figure S1. SEM images of the products prepared with different hydrothermal temperatures: (a) 80 °C (Z1), (b) 100 °C (Z2), (c) 130 °C (Z3), (d) 150 °C (Z4)

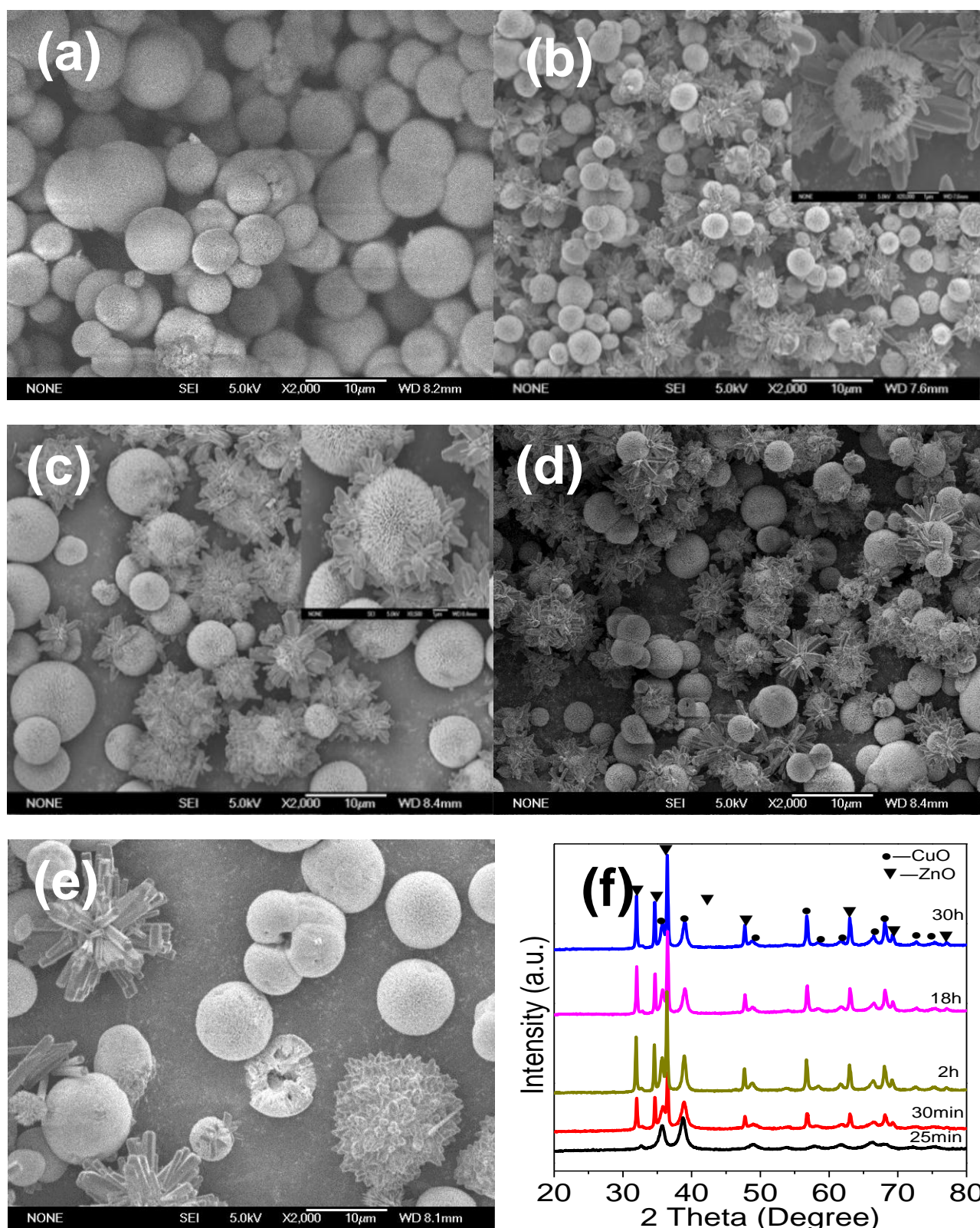


Figure S2. SEM images of the CuO-ZnO samples prepared with different reaction times: (a) 25 min (Z5), (b) 30 min (Z6), (c) 2 h (Z7), (d) 18 h (Z3), (e) 30 h (Z8), (f) XRD pattern of the products.

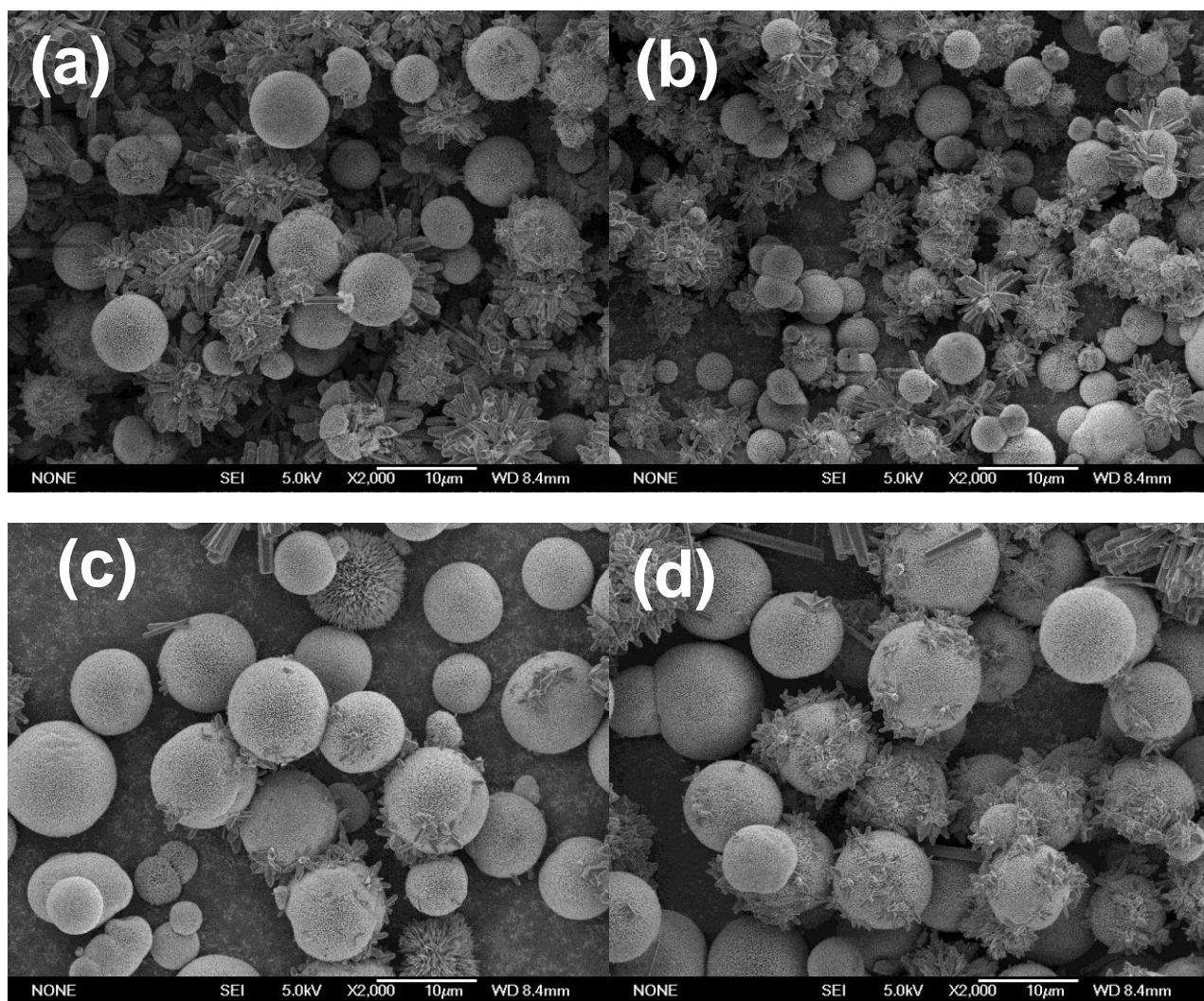


Figure S3. SEM images of the CuO-ZnO samples prepared with different amounts of mineralization agent: (a) 1 g (Z9), (b) 2 g (Z3), (c) 3 g (Z10), (d) 4 g (Z11)

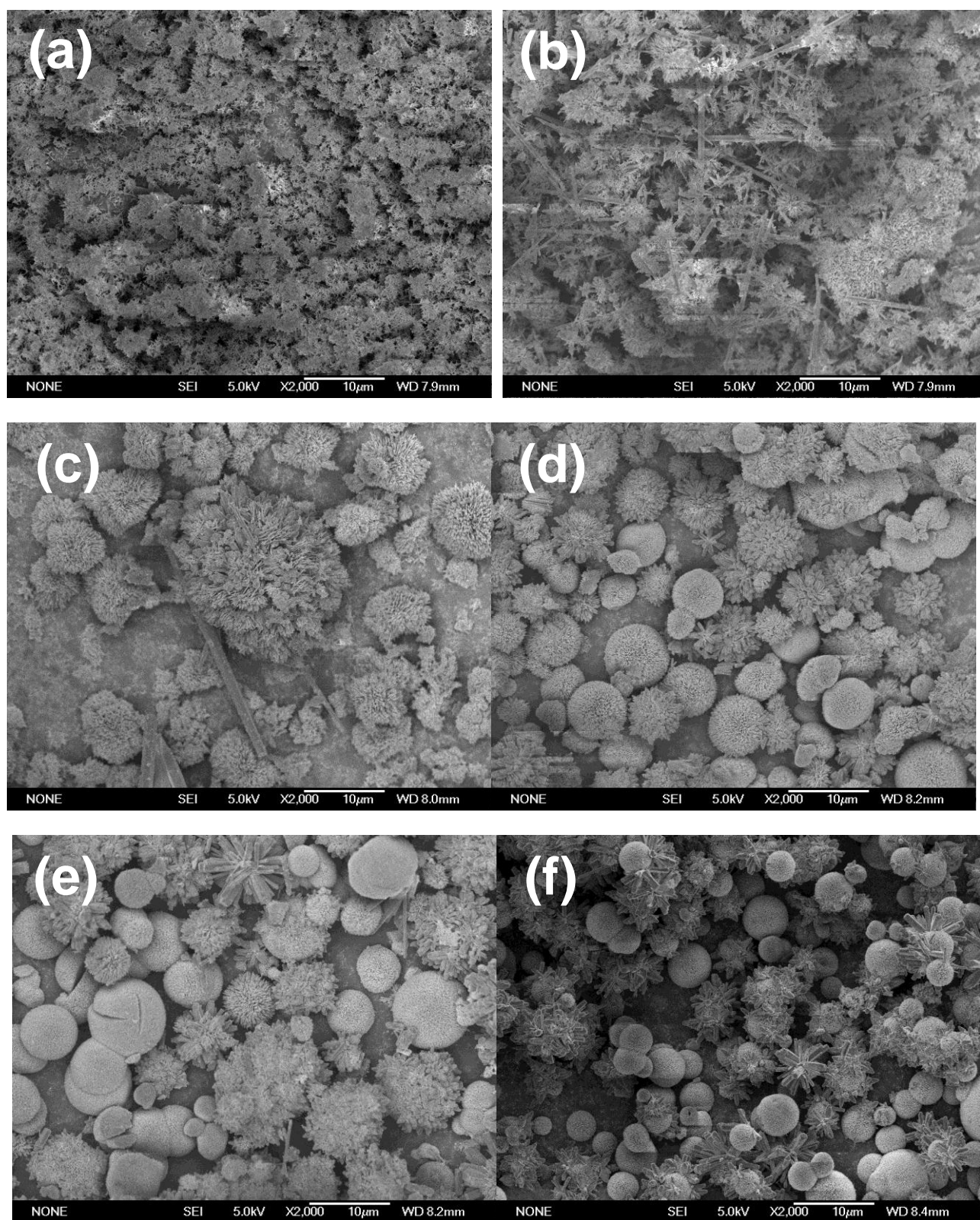


Figure S4. SEM images of the CuO-ZnO samples prepared with the different amounts of ammonia added: (a) 5 mL (Z12), (b) 10 mL (Z13), (c) 15 mL (Z14), (d) 20 mL (Z15), (e) 25 mL (Z16), and (f) 30 mL (Z17)

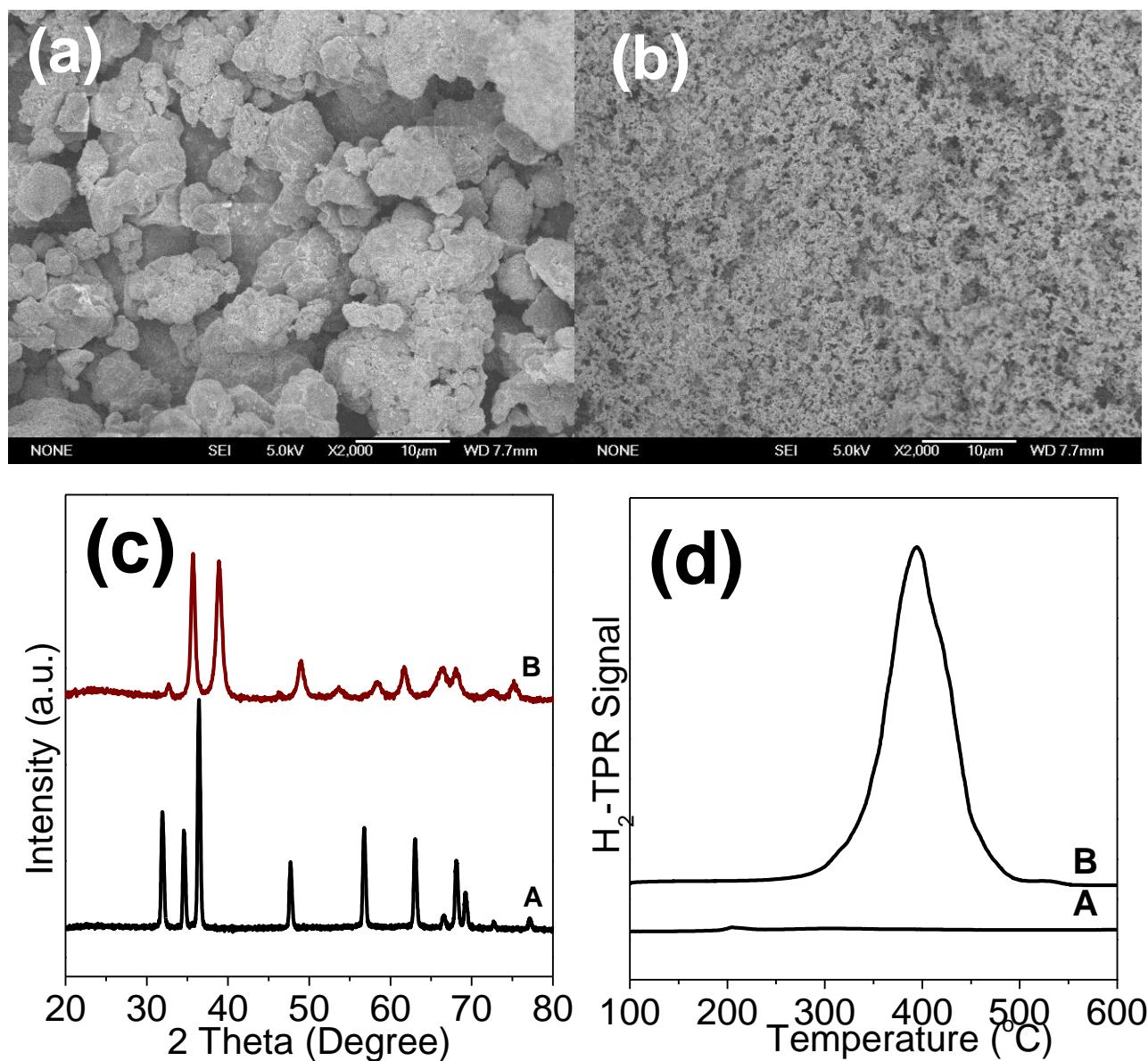


Figure S5. SEM images of (a) c-CuO, (b) c-ZnO, (c) XRD patterns, and (d) H₂-TPR curves (A: c-ZnO and B: c-CuO)