

Supporting Information

Heterojunctions Generated in SnO₂-CuO Nanocatalysts for Improved Catalytic Property in Rochow Reaction

Shanying Zou,^{a,b} Yongjun Ji,^{b,*} Guangna Wang,^b Yongxia Zhu,^b

Hezhi Liu,^b Lihua Jia,^a Xiangfeng Guo,^{a,*} Ziyi Zhong,^c and Fabing Su^{b,*}

^a *College of Chemistry and Chemical Engineering, Qiqihaer University, Qiqihaer 161006, Heilongjiang Province, China.*

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

^c *School of Chemical & Biomedical Engineering, Nanyang Technological University, 62 Nanyang Drive, Singapore 637459.*

*To whom correspondence should be addressed. E-mail address: yjji@ipe.ac.cn (Y. Ji), xfguo@163.com (X. Guo), fbsu@ipe.ac.cn (F. Su), Tel.: +86-10-82544850, Fax: +86-10-82544851.

Table S1 Comparison of catalytic performances over various Cu-based catalysts in Rochow reaction.

Sample	Catalyst: Si (weight ratio)	Temperature (°C)	Time (h)	M2 selectivity (%)	M2 yield (%)	Ref.
Cu ₂ O microspheres	10%	345	24	66.4	27.1	[10]
Cu	5%	300	24	90.0	9.0	[11]
Cu microparticles	10%	325	24	68.3	22.4	[15]
Flower-like CuO microspheres	10%	325	24	84.2	23.1	[16]
dandelion-like CuO microspheres	10%	325	24	86.7	36.1	[17]
Cu@Cu ₂ O core-shell microspheres	10%	325	24	83.3	23.8	[18]
f-ZnO@u-CuO	5%	325	24	69.6	13.9	[22]
1 wt.% SnO ₂ -CuO	5%	295	24	78.9	44.2	This study
1 wt.% SnO ₂ -CuO	5%	325	24	90.1	45.5	This study

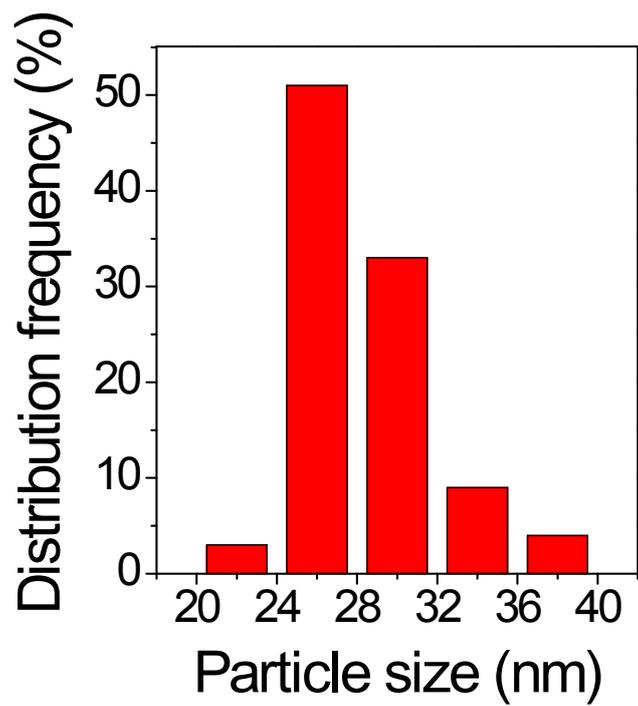


Fig. S1 The size distribution histogram of SnO₂ NPs.

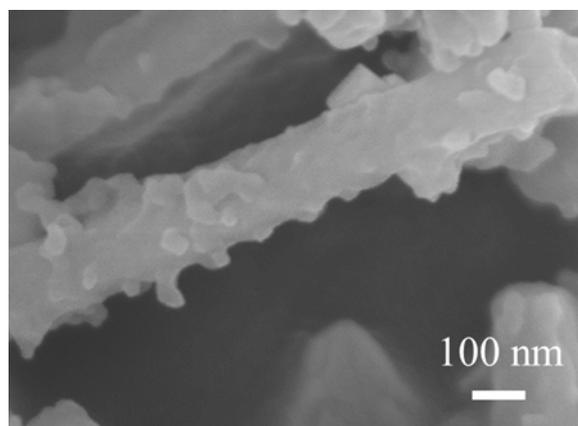


Fig. S2 SEM image of 5.0 wt.% SnO₂-CuO.

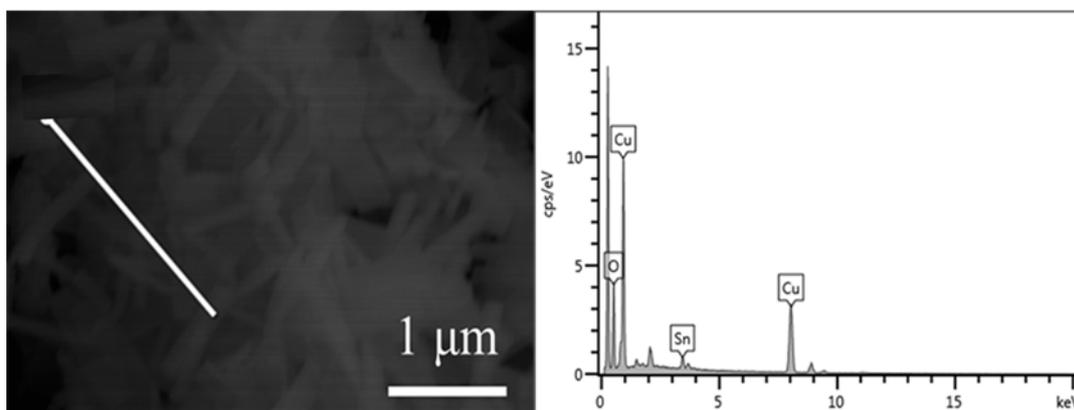


Fig. S3 EDS line-scanning spectrum of 5.0 wt.% SnO₂-CuO.

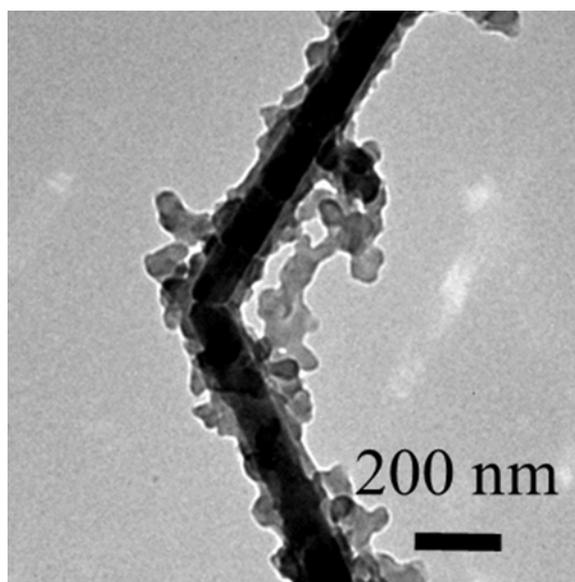


Fig. S4 TEM image of 5.0 wt.% SnO₂-CuO.

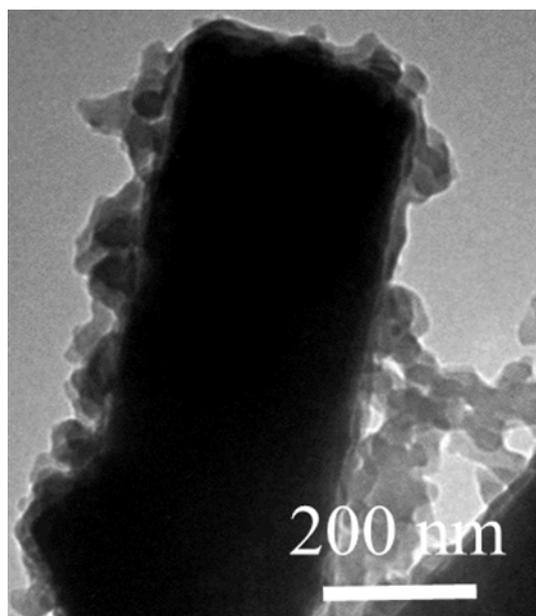


Fig. S5 TEM image of 10.0 wt.% SnO₂-CuO.

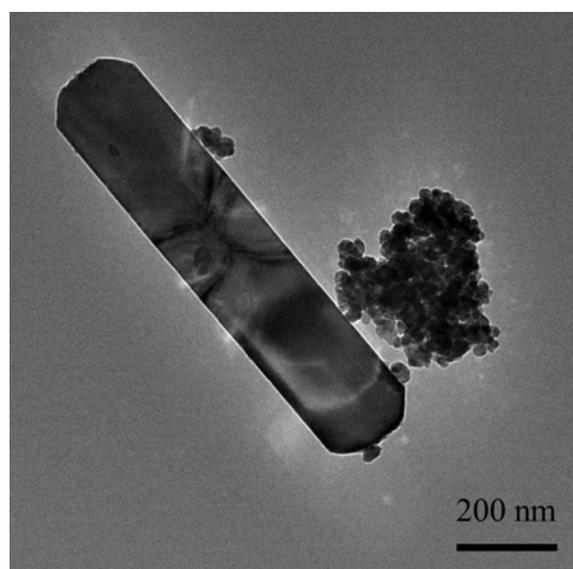


Fig. S6 TEM image of unattached SnO₂ and CuO in the absence of PVP.