

Na₂SO₄ monocrystal nanowires—aspect ratio control and electron beam radiolysis

Ruiting Zheng, Jinwei Gao, Tengfei Yang, Yucheng Lan, Guoan Cheng, Dezhi Wang, Zhifeng Ren, and Gang Chen*

*To whom correspondence should be addressed. E-mail: gchen2@mit.edu

includes:

Table S1 The synthesis conditions and the products
Fig. S1-S3

Table S1 The synthesis conditions and the products					
No.	Reactants	pH	Products	Diameter(nm)	Aspect ratio
1	0.005M CuSO ₄ +0.02MNaBH ₄ +1 mmol PVP	7	Nanorods	20-50	9-15
2	0.01M CuSO ₄ +0.04MNaBH ₄ +1 mmol PVP	7	Nanowiskers	70-120	19-33
3	0.01M CuSO ₄ +0.04MNaBH ₄ +1 mmol PVP	3	Nanowires	100-300	Exceed 100
4	0.01M CuSO ₄ +0.04MNaBH ₄ +1 mmol PVP + two drops of 0.1M NaCl solution	7	Nanowires	150-400	Exceed 100
5	0.01M H ₂ SO ₄ +0.02M NaOH	7	Nanorods	15-40	Less than 10
6	0.01M CuSO ₄ +0.04MNaBH ₄	7	Nanorods	30-65	10-20
7	0.02M CuSO ₄ +0.08MNaBH ₄ +4 mmol PVP	7	Sub-microrods	150-600	6-15

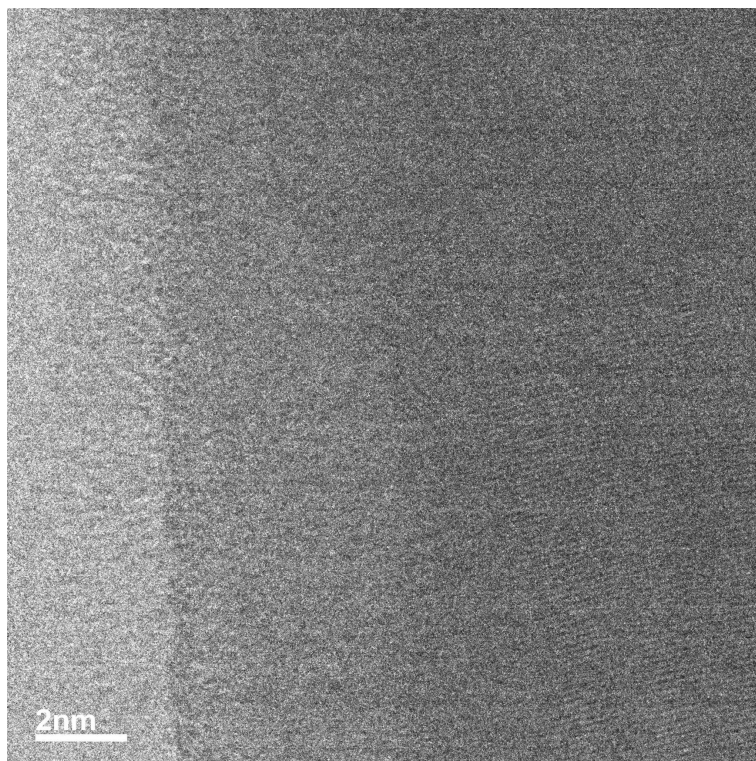


Figure S1 HRTEM image of the shell structure of a Na_2SO_4 sub-microrod. It could be observed that the shell of Na_2SO_4 sub-microrod is crystalline Na_2SO_4 coated with 2~5nm amorphous PVP.

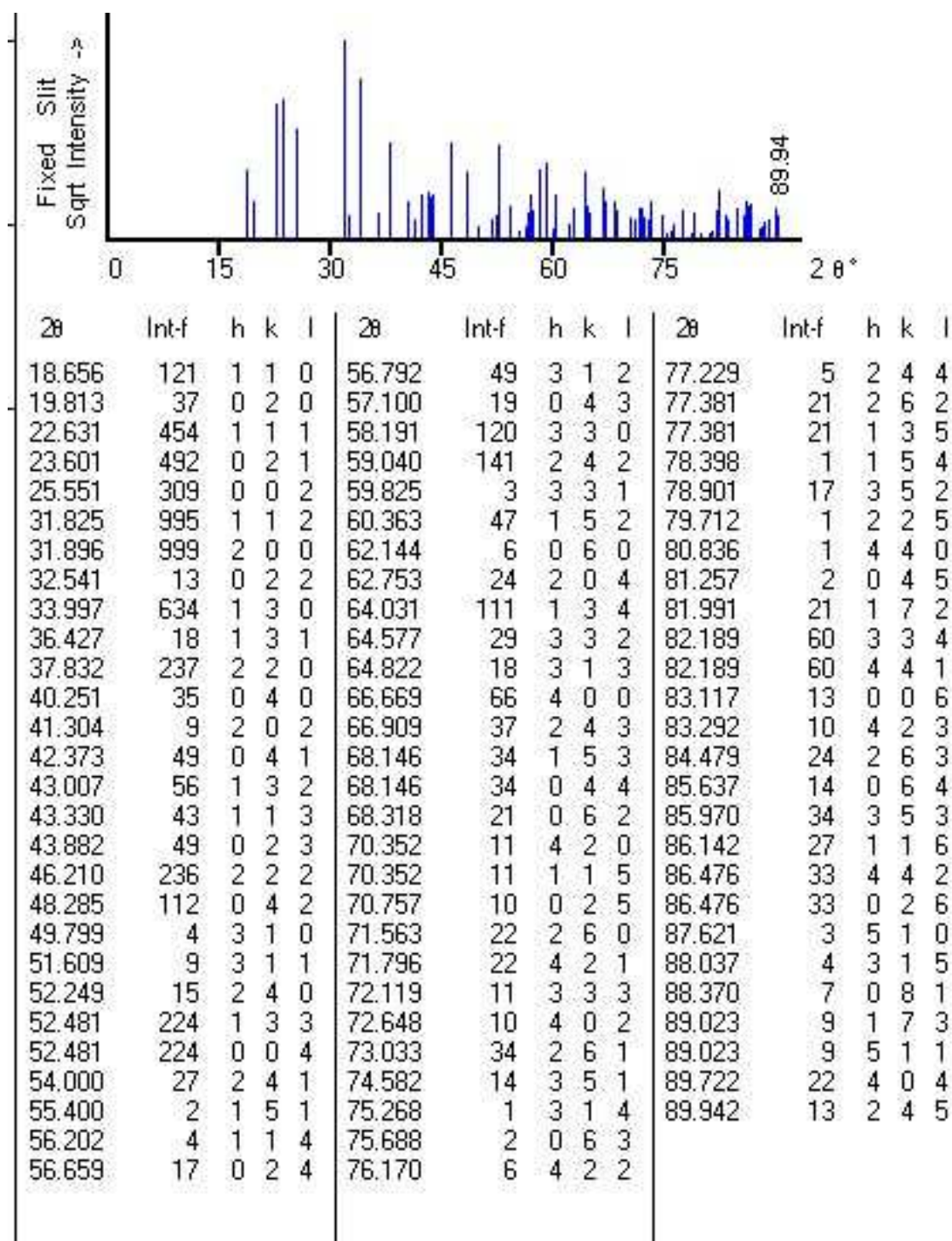


Figure S2. The JCPDS patterns and diffraction data of Na_2SO_4

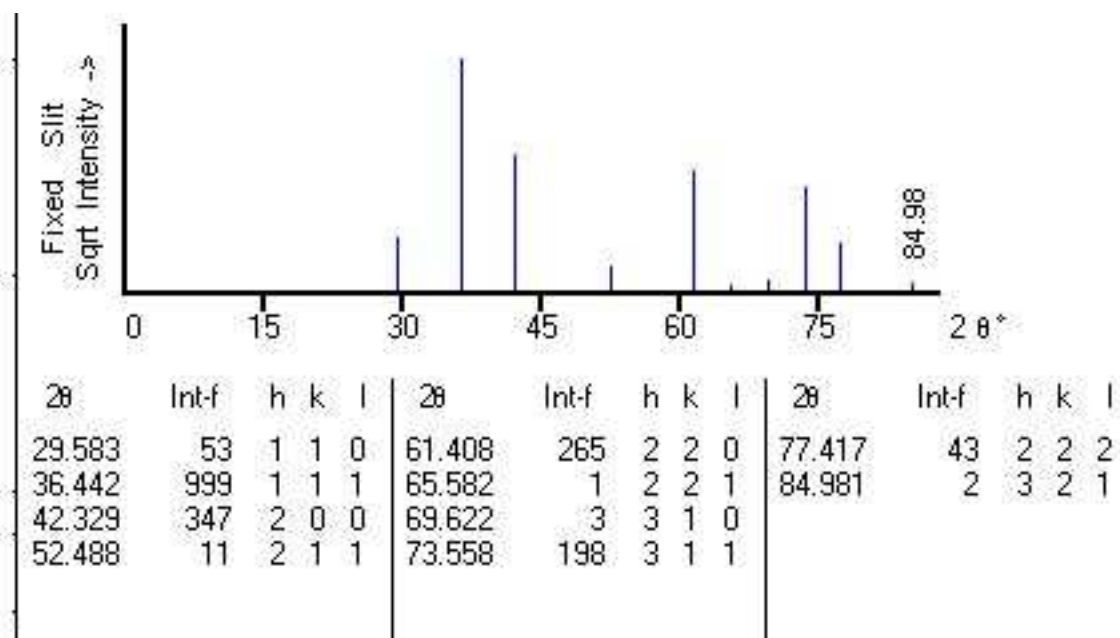


Figure S3. The JCPDS patterns and diffraction data of Cu_2O