

**Electronic Supplementary Information**  
**for paper “Nonstoichiometry of nanocrystalline monoclinic silver sulfide”**  
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**Supplementary table 1**

Crystal data, experimental conditions and characteristics of the refinement  
for the nanocrystalline Ag<sub>1.93</sub>S phase with acanthite-type structure

Formula sum	Ag <sub>7.72</sub> S <sub>4.00</sub>
Formula weight	960.98
Crystal system	monoclinic
Space group	<i>P</i> 12 <sub>1</sub> /c1 (No. 14)
<i>a</i> (nm)	0.4234(3)
<i>b</i> (nm)	0.6949(3)
<i>c</i> (nm)	0.9549(5)
$\alpha$ (°)	90
$\beta$ (°)	125.43(6)
$\gamma$ (°)	90
<i>Z</i>	4
<i>V</i> (nm <sup>3</sup> )	0.22891
<i>D</i> <sub>calc</sub> (g·cm <sup>-3</sup> )	6.97
Coefficients for peak FWHM	
U	0.000
V	-0.3(2)
W	0.47(6)
Diffractometer	Shimadzu XRD-7000
Radiation type	X-ray CuK $\alpha$ <sub>1</sub>
Wavelength (nm)	0.154056
Temperature (K)	300
2θ Range (°)	20-95
Step-scan (°)	0.02
Counting time (s)	10
Preferred orientation	(101)
Number of reflections measured	122
<i>R</i> <sub>I</sub> ( <i>R</i> <sub>Bragg</sub> ) (%)	5.551
<i>R</i> <sub>p</sub> (%)	11.649
$\omega R$ <sub>p</sub> (%)	14.305
<i>R</i> <sub>expect</sub> (%)	4.209