

## **Grain size effect on magnetic and phase transition features in one-dimensional $S = 1/2$ Heisenberg spin chain molecular crystals**

Guo-Jun Yuan,<sup>a,b</sup> Yun-Xia Sui,<sup>\*c</sup> Jian-Lan Liu<sup>a,b</sup> Xiao-Ming Ren<sup>\*a,b,d</sup>

<sup>a</sup> State Key Laboratory of Materials-Oriented Chemical Engineering and College of Science, Nanjing Tech University, Nanjing 210009, P. R. China

<sup>b</sup> College of Materials Science & Engineering, Nanjing Tech University, Nanjing 210009, P. R. China

<sup>c</sup> Centre of Modern Analysis, Nanjing University, Nanjing 210093, P. R. China

<sup>d</sup> Coordination Chemistry Institute & State Key Laboratory, Nanjing University, Nanjing 210093, P. R. China

Tel.: +86 25 58130476

Fax: +86 25 58130481

Email: [suiyx@163.com](mailto:suiyx@163.com) (YXS); [xmren@njtech.edu.cn](mailto:xmren@njtech.edu.cn) (XMR)

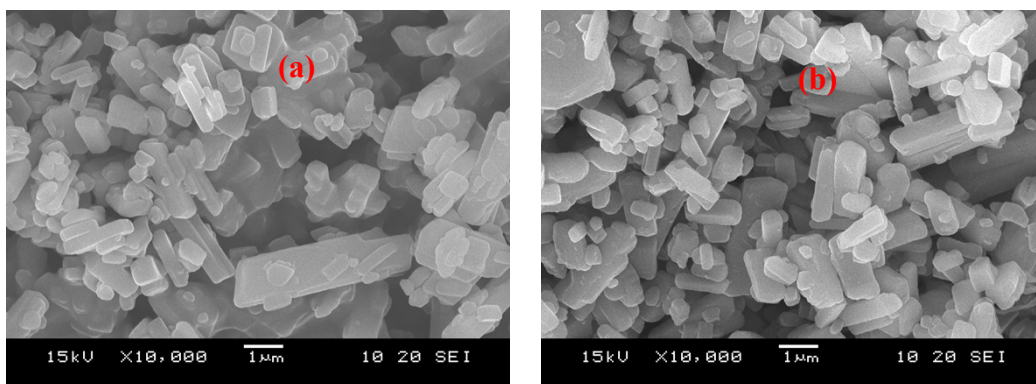
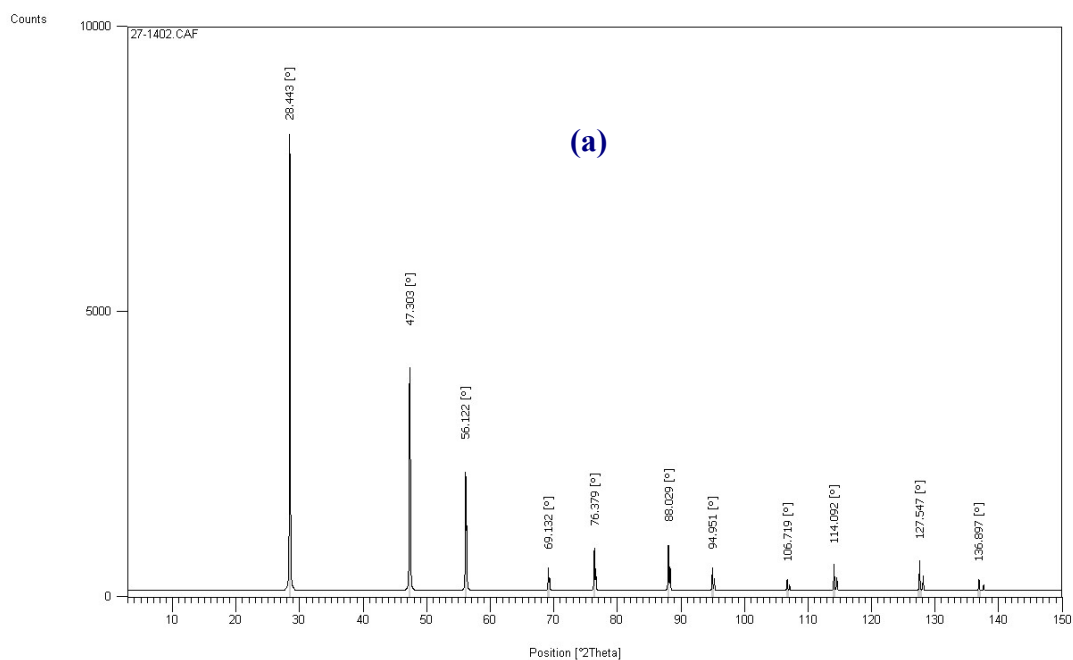


Figure S1 SEM images of (a) **Br-2** (b) and **Cl-2** in the second batch which were prepared using the same condition and process as those in the first batch (ref. Figure 1).



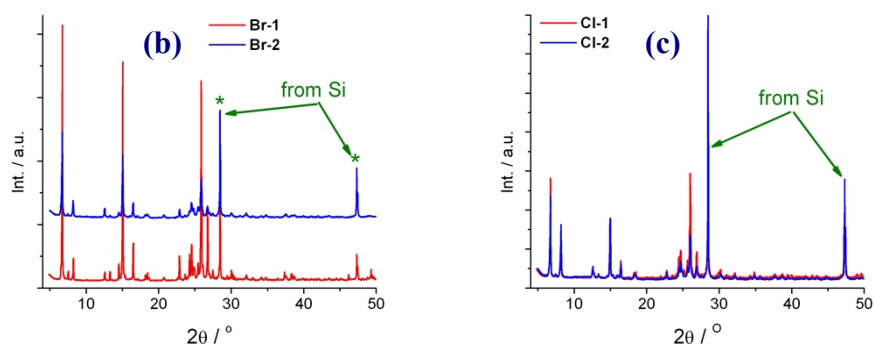


Figure S2 X-ray powder diffraction profiles (a) Si standard sample (b, c) the corrected **Br-1**, **Br-2**, **Cl-1** and **Cl-2**, respectively.

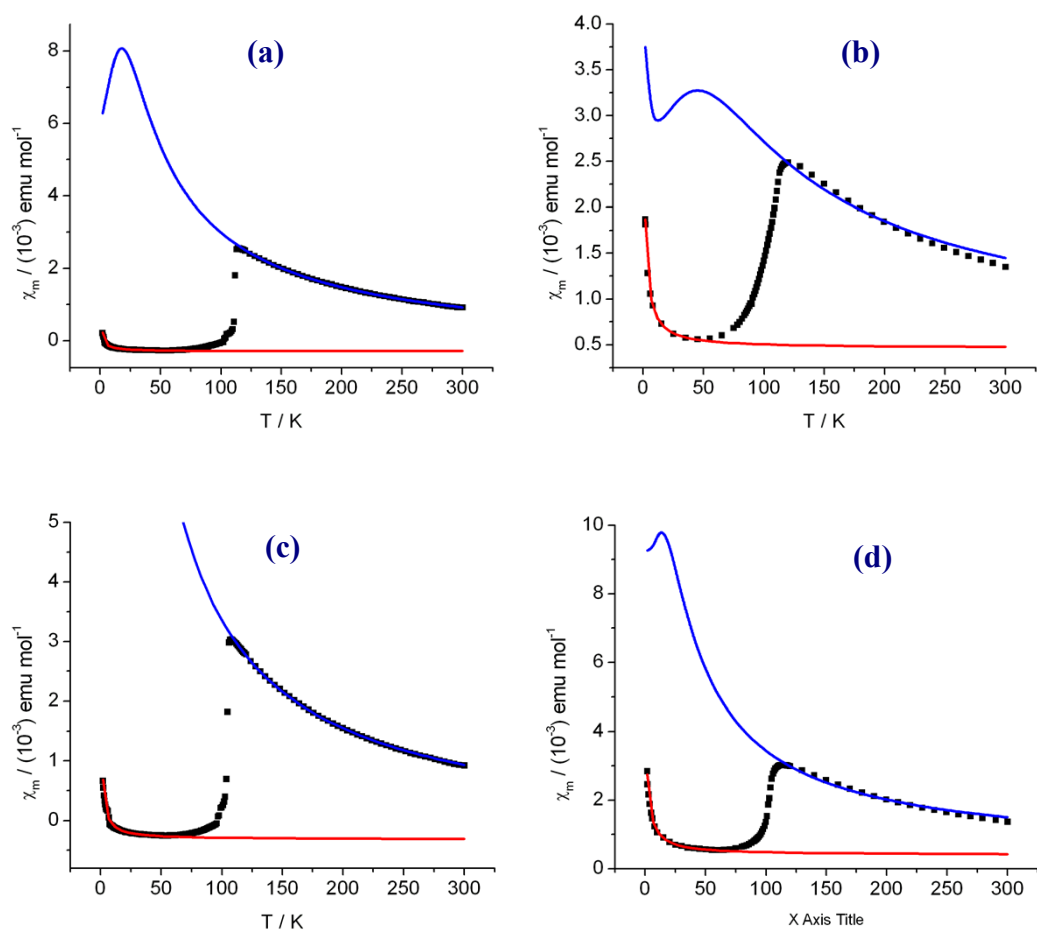


Figure S3 Plots of  $\chi_m$ - $T$  of (a, b) **Br-1** and **Br-2** (c, d) **Cl-1** and **Cl-2** (solid squares: experimental data; lines: fits and details see the main text).