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CORRECTION

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Correction: High-temperature X-ray diffraction and thermal expansion of nanocrystalline and coarse-crystalline acanthite α-Ag_2S and argentite β-Ag_2S

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Correction for 'High-temperature X-ray diffraction and thermal expansion of nanocrystalline and coarse-crystalline acanthite α-Ag_2S and argentite β-Ag_2S' by S. I. Sadovnikov *et al.*, *Phys. Chem. Chem. Phys.*, 2016, **18**, 4617–4626.

The authors wish to draw the readers' attention to their previous related study, published in *Physics of the Solid State*,[1] which should have been cited in this *Physical Chemistry Chemical Physics* paper.

The study published in this *Physical Chemistry Chemical Physics* paper contains new experimental X-ray diffraction data, differential thermal and thermogravimetric analysis (DTA-DTG) results and data on the acanthite–argentite phase transformation enthalpy. This *Physical Chemistry Chemical Physics* paper was accepted before the publication of ref. 1 but published after ref. 1. Therefore ref. 1 should have been cited in this *Physical Chemistry Chemical Physics* paper.

The authors regret not giving the correct attribution for Fig. 4, 6, 7, 8 and 9 in the paper, which were reproduced for the readers' information. The figures are reproduced below with the correct copyright permission text.

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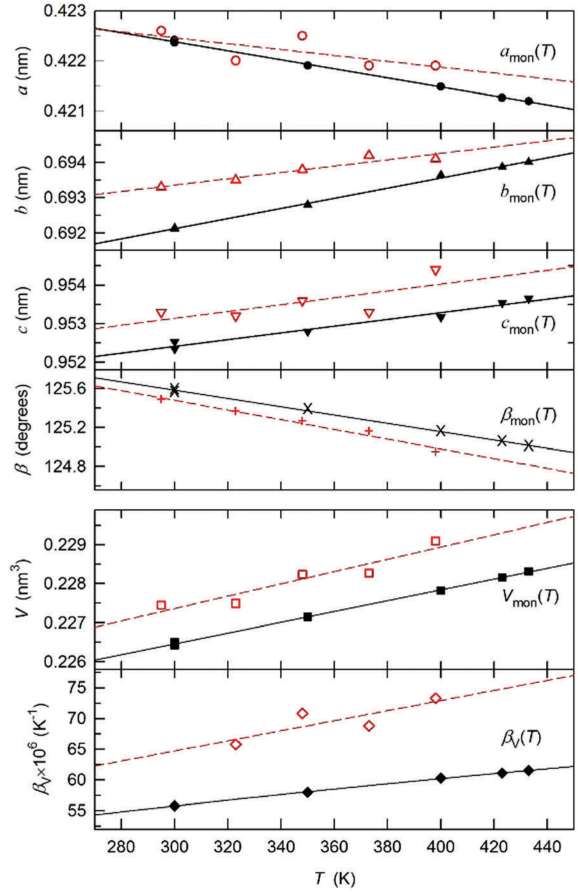

Fig. 4 The effect of temperature T on the unit cell parameters a, b, c, β, and volume V, and on the volumetric thermal expansion coefficient β_V of coarse- and nanocrystalline acanthite. The approximation of the experimental data by the solid line and the closed symbols (●), (▲), (▼), (×), (■), and (♦) corresponds to coarse-crystalline acanthite and the approximation by the dotted line and the open symbols (○), (△), (▽), (+), (□), and (◊) corresponds to nanocrystalline acanthite. Reproduced from ref. 1 with permission from Springer.

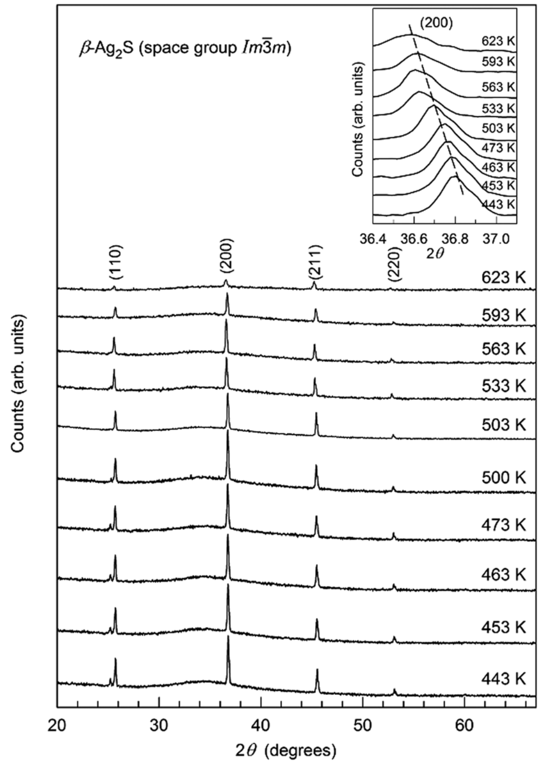

Fig. 6 Evolution of XRD patterns of coarse-crystalline argentite β-Ag_2S in the temperature range of 446–623 K. The inset shows a systematic displacement of the (200) diffraction reflection of bcc argentite with increase of measuring temperature. Reproduced from ref. 1 with permission from Springer.

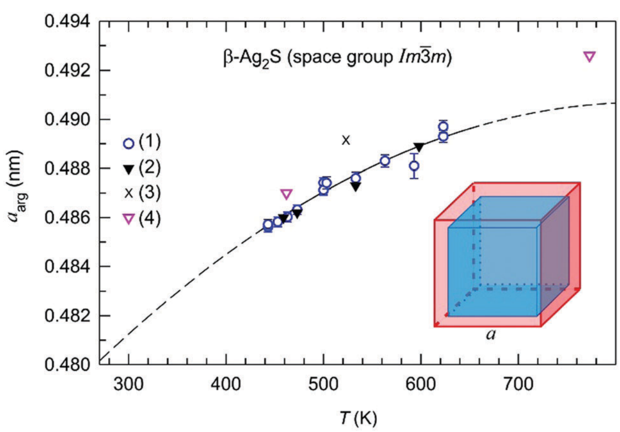

Fig. 7 Dependence of the lattice constant a_{arg} of argentite β-Ag_2S on the temperature T: (1) data of present work; (2), (3), and (4) data,[22,24,27] respectively. The approximations of measured lattice constant a_{arg} by the function (10) in the temperature range of 440–660 K is shown by solid lines. Reproduced with some changes from ref. 1 with permission from Springer.

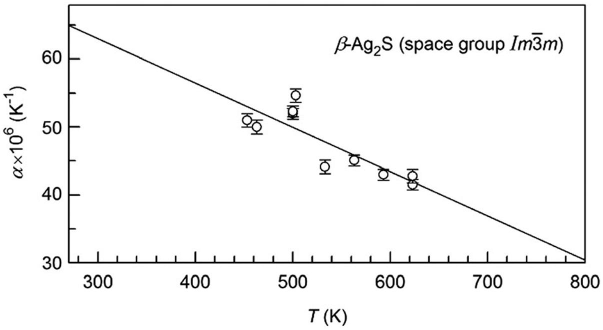

Fig. 8 Temperature dependence of linear thermal expansion coefficient α_{arg} of argentite β-Ag_2S and its approximation by the function (12). Reproduced from ref. 1 with permission from Springer.

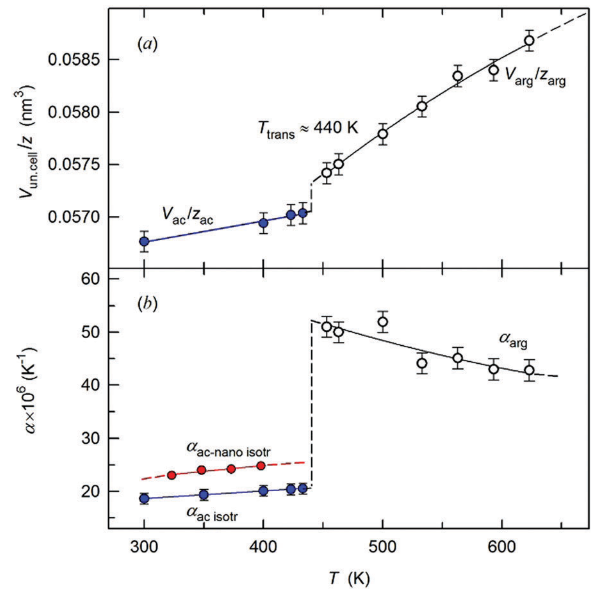

Fig. 9 The temperature dependencies of reduced volume $V_{un.cell}/z$ (a) and isotropic linear thermal expansion coefficient α (b) of silver sulfide in the of range 300–623 K. At ~440 K, there take place jumps of the reduced volume and the thermal expansion coefficient α attributed to the first-order acanthite–argentite phase transformation. Isotropic linear thermal expansion coefficient $\alpha_{ac\text{-}nano\,isotr}$ of nanocrystalline acanthite α-Ag_2S is larger than $\alpha_{ac\,isotr}$ of coarse-crystalline acanthite. Reproduced with changes from ref. 1 with permission from Springer.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

References

1 A. I. Gusev, S. I. Sadovnikov, A. V. Chukin and A. A. Rempel, *Phys. Solid State*, 2016, **58**, 251–257.