The hyper-enrichment of silver through the aggregation of silver sulfide nanoparticles

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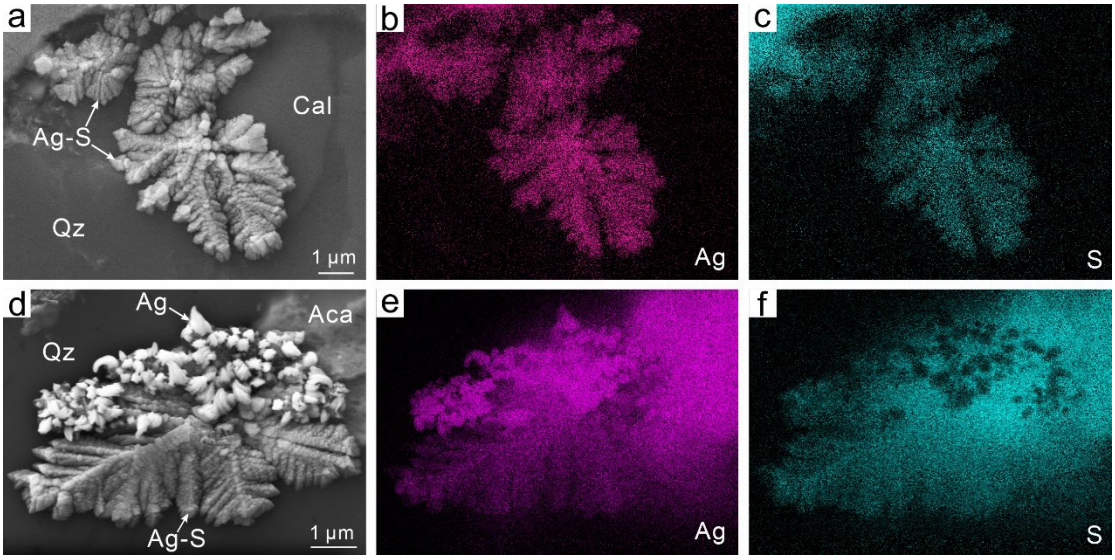
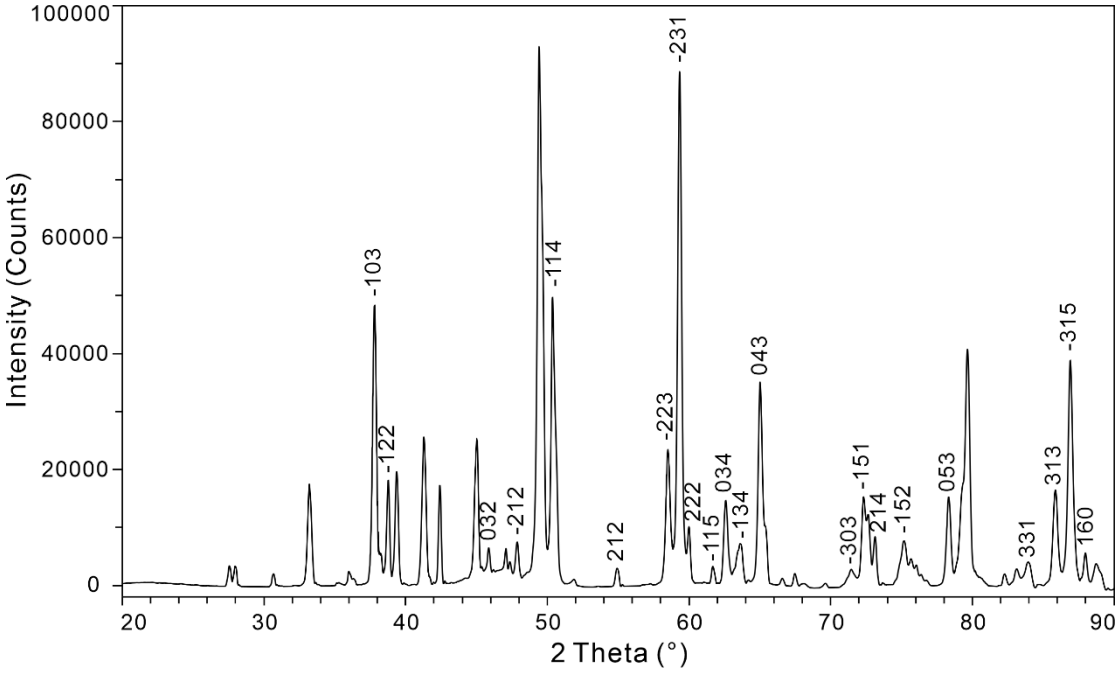
This file contains three Supplementary Figures:

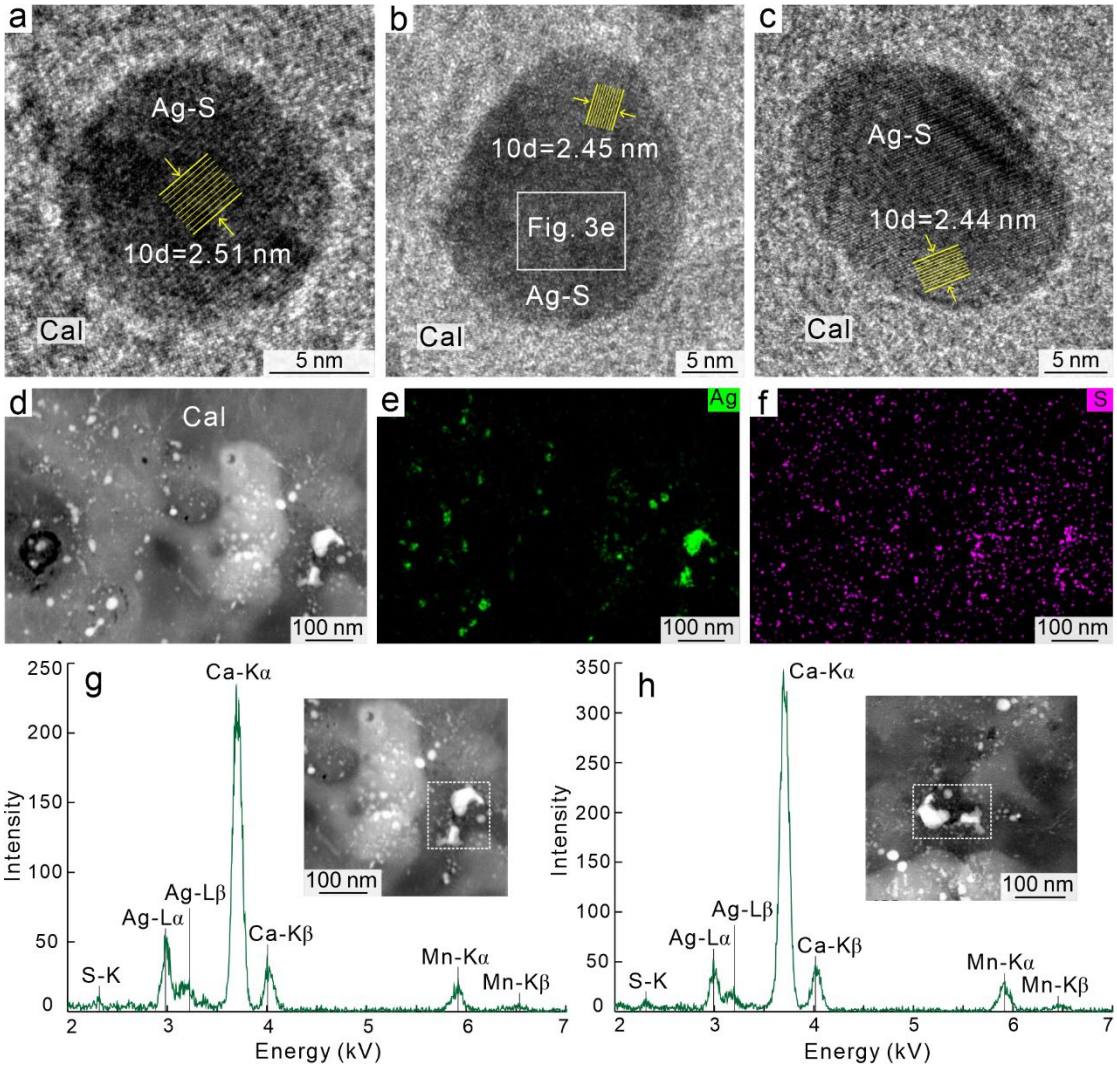
- Supplementary Fig. 1
- Supplementary Fig. 2
- Supplementary Fig. 3



Supplementary Fig. 1. Scanning electron microscopic images and elemental maps of silver sulfide dendrites and native silver. a–c Well-organized silver sulfide dendrites and their compositions. **d–f** The morphology and composition of native silver decorating silver sulfide dendrites. Aca, acanthite; Ag, native silver; Ag-S, silver sulfide dendrite; Cal, calcite; Qz, quartz.



Supplementary Fig. 2. A micro X-ray diffraction spectrum collected in situ for some of the silver sulfide crystals. The spectrum identifies the silver sulfide as the α-phase acanthite. The source data are provided as a Source Data file.



Supplementary Fig. 3. Transmission electron microscopic images illustrating silver sulfide nanoparticles, their crystal lattice fringes, compositions and energy-dispersive spectra. a–c Individual silver sulfide nanoparticles with d-spacings of 0.251 nm, 0.245 nm and 0.244 nm consistent with that of acanthite; **b** illustrates the nanoparticle corresponding to the electron diffraction pattern shown in Fig **3e**. **d–f** A high-angle annular dark-field scanning transmission electron micrograph (**d**) and corresponding elemental maps (**e** and **f**). **g, h** Energy-dispersive spectra showing the composition of silver sulfide nanoparticles in calcite. Ag-S, silver sulfide nanoparticle; Cal, calcite. The source data are provided as a Source Data file.