

Supplementary Materials for:

Maco-to-nanoscale investigation unlocks gold and silver enrichment by lead-bismuth metallic melts in the Switchback epithermal deposit, southern Mexico

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SUPPLEMENTARY FIGURES

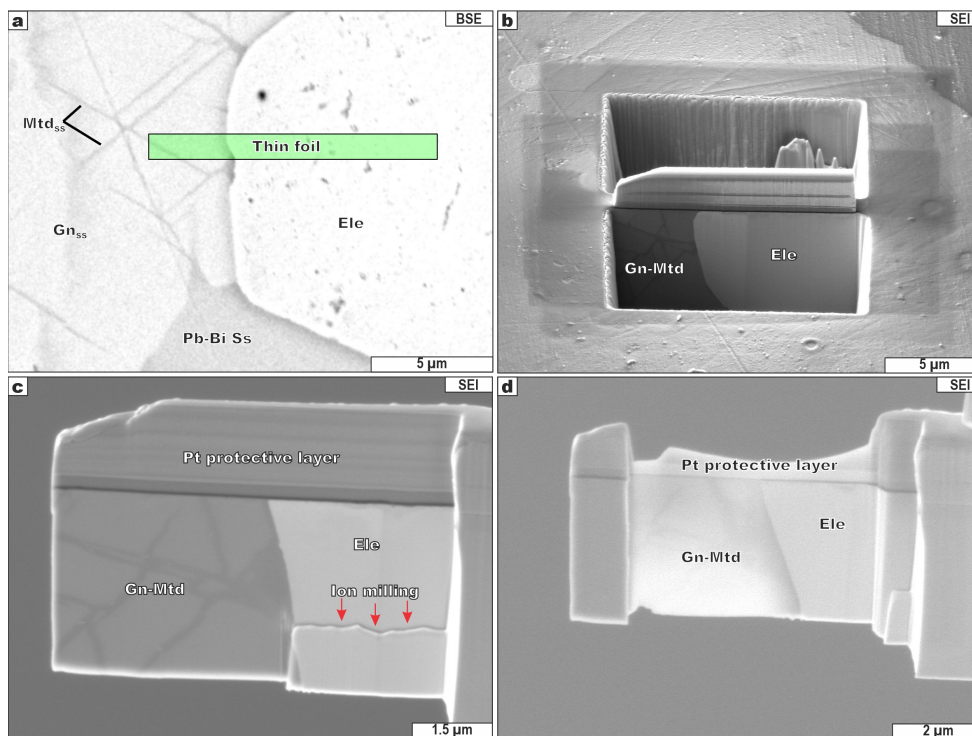


Figure S1. Thin foil preparation using focused-ion beam scanning electron microscopy (FIB-SEM). (a) Back-scattered electron (BSE) image of the sampled area (green area), comprising electrum, galena-matildite, and Pb-Bi sulfosalt (ourayite). (b). Secondary-electron image (SEI) showing a pre-milled cross-section of the thin foil. (c) SEI image of the milling processes. (d) SEI image of the sampled foil. Mineral abbreviations: Ele = electrum, Gn_{ss} = galena_{ss}, Mtd_{ss} = matildite_{ss}, Ss = Pb-Bi sulfosalt.

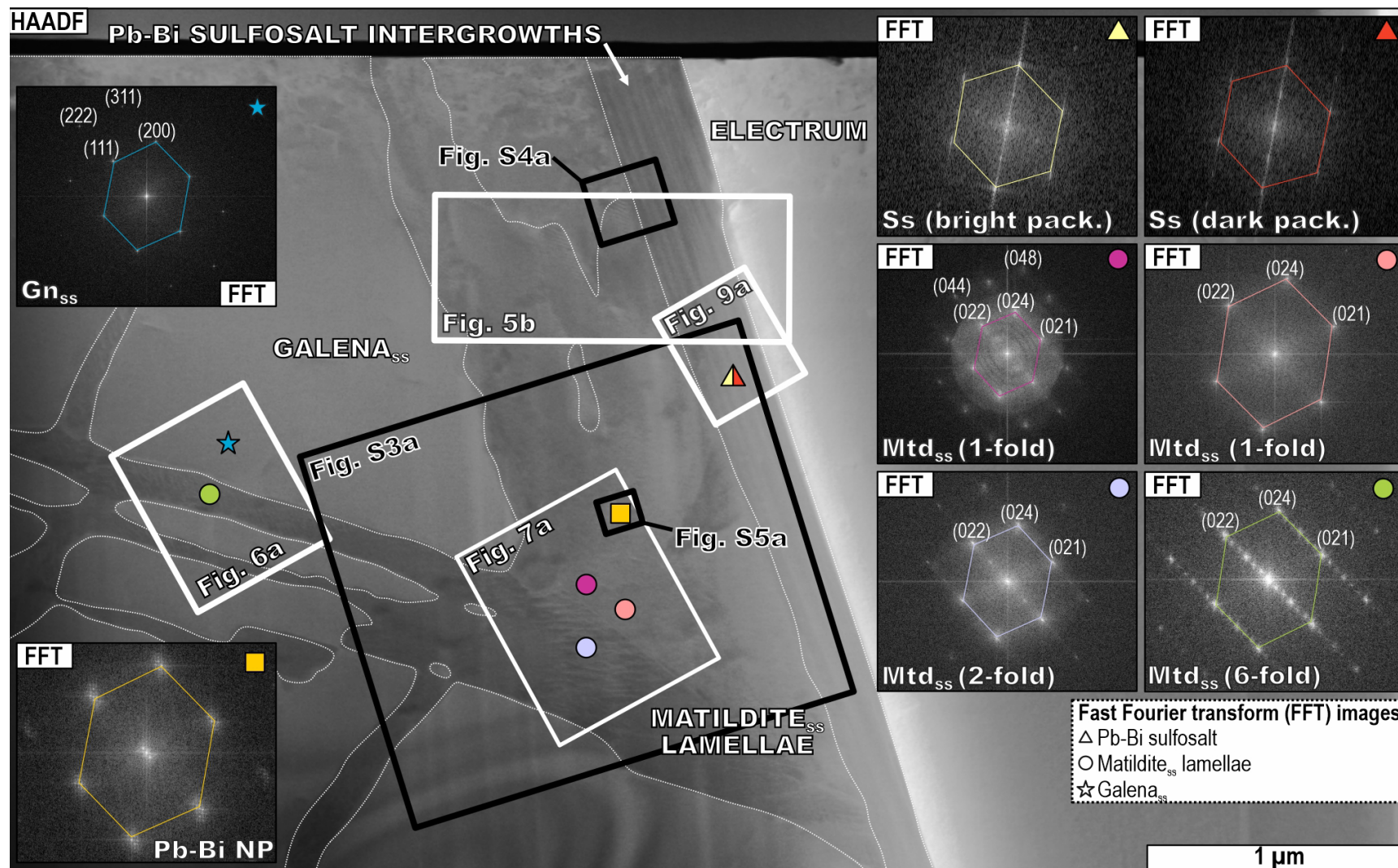


Figure S2. High-angle annular dark field (HAADF) image showing the location of the zoomed areas of Figs. 5–9 (main text) and S3–S5 (Supplementary Material) in the thin foil. Fast Fourier transform images are also included. Mineral abbreviations: Ele = electrum, Gn_{ss} = galena_{ss}, Mtd_{ss} = matildite_{ss}, Ss = Pb-Bi sulfosalt, Wid = Widmanstätten texture.

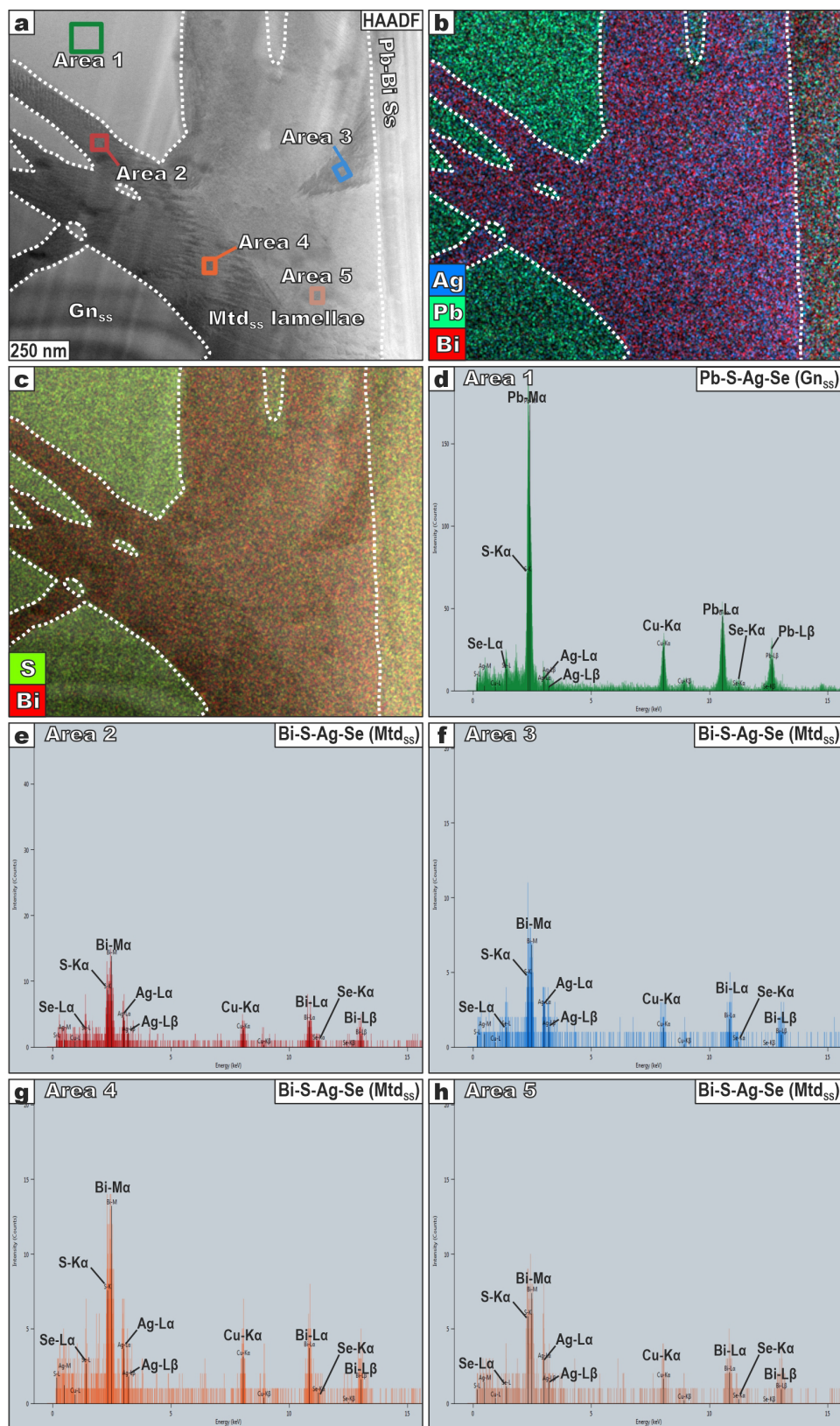


Figure S3. HAAFD image (a), elemental maps (b–c), and EDS (d–h) spectra of galena_{ss}, matildite_{ss}, and Pb-Bi sulfosalts. Mineral abbreviations as in Fig. S2.

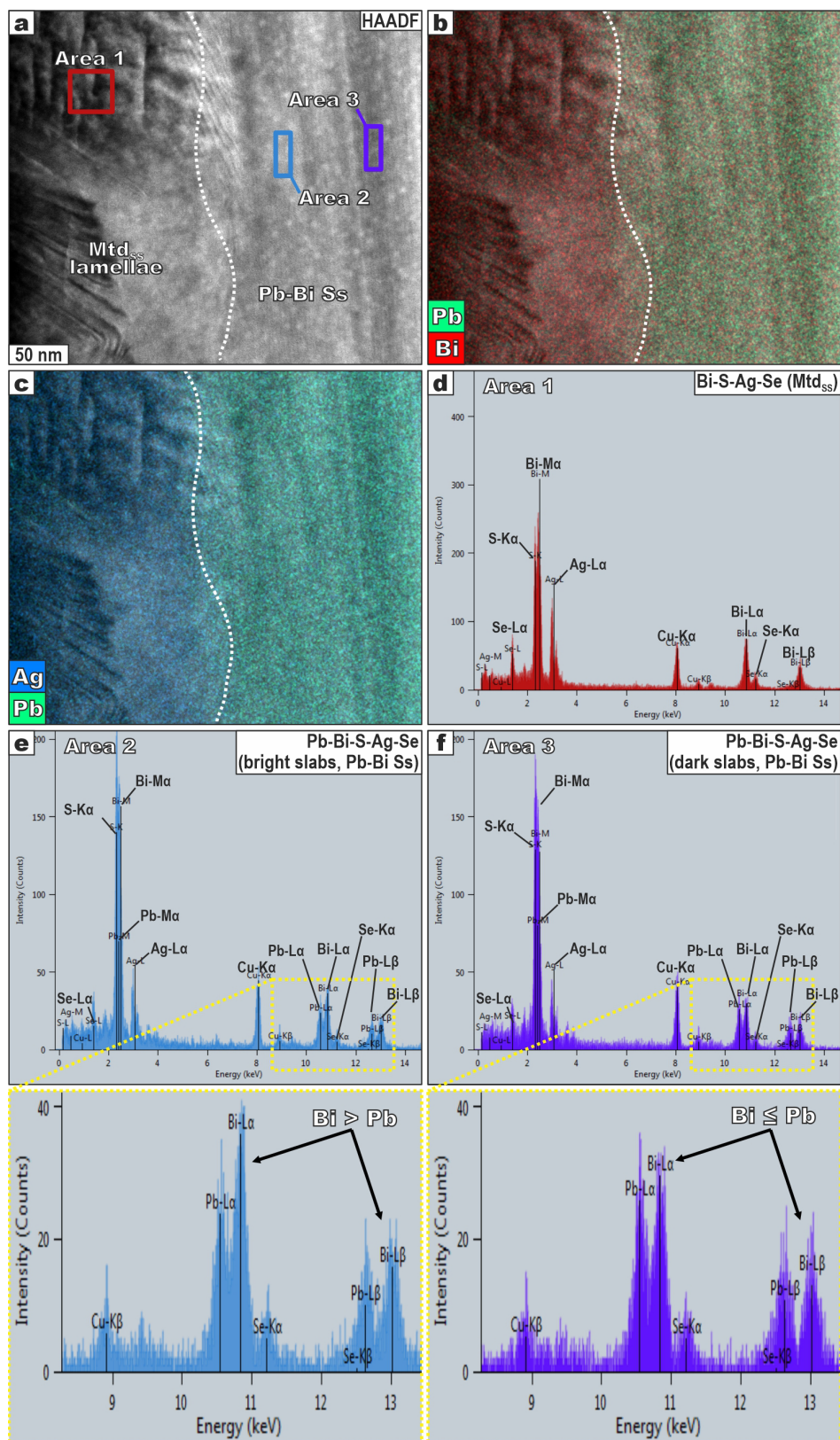


Figure S4. HAAFD image (a), elemental maps (b–c), and EDS (d–f) spectra of galena_{ss}, matildite_{ss}, and Pb-Bi sulfosalts. Mineral abbreviations as in Fig. S2.

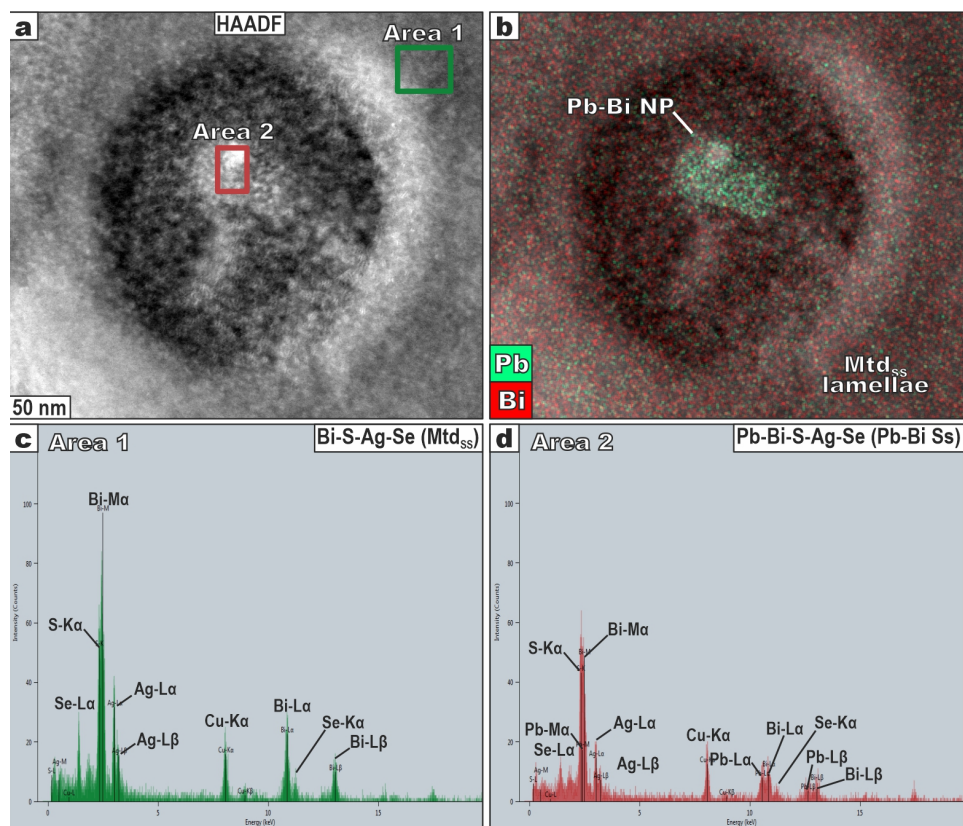


Figure S5. HAAFD image (a), Pb-Bi elemental map (b), and EDS (c–d) spectra of Pb-Bi-rich nanoparticle (NP) enclosed in matildite_{ss}. Mineral abbreviations as in Fig. S2.