Electronic Supplementary Material (ESI) for Analyst.

STEM-in-SEM high resolution imaging of gold nanoparticles and bivalve tissues in bioaccumulation experiments

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Fig. S1 Micrographs of semithin sections (toluidine blue staining) of the gills of control clams (A, B) and clams exposed to Au NPs (C-E). (A) Regular arrangement of filaments. (B) Detail of the distal zone with frontal cilia and ciliary plates between adjacent lamellae. (C) Ciliary plates are nearly absent between lamellae (*) and basal lamina is enfolded and thickened (#). (D) Lamellae fusion and increased hemocytes (square) in the proximal zone. (E) Detail of the proximal zone with fused lamellae and swollen hemocytes. DZ, distal zone; cp, ciliary plates; hv, haemolymphatic sinuses. Scale bars: A, C, D: 50 µm; B,E: 10 µm.

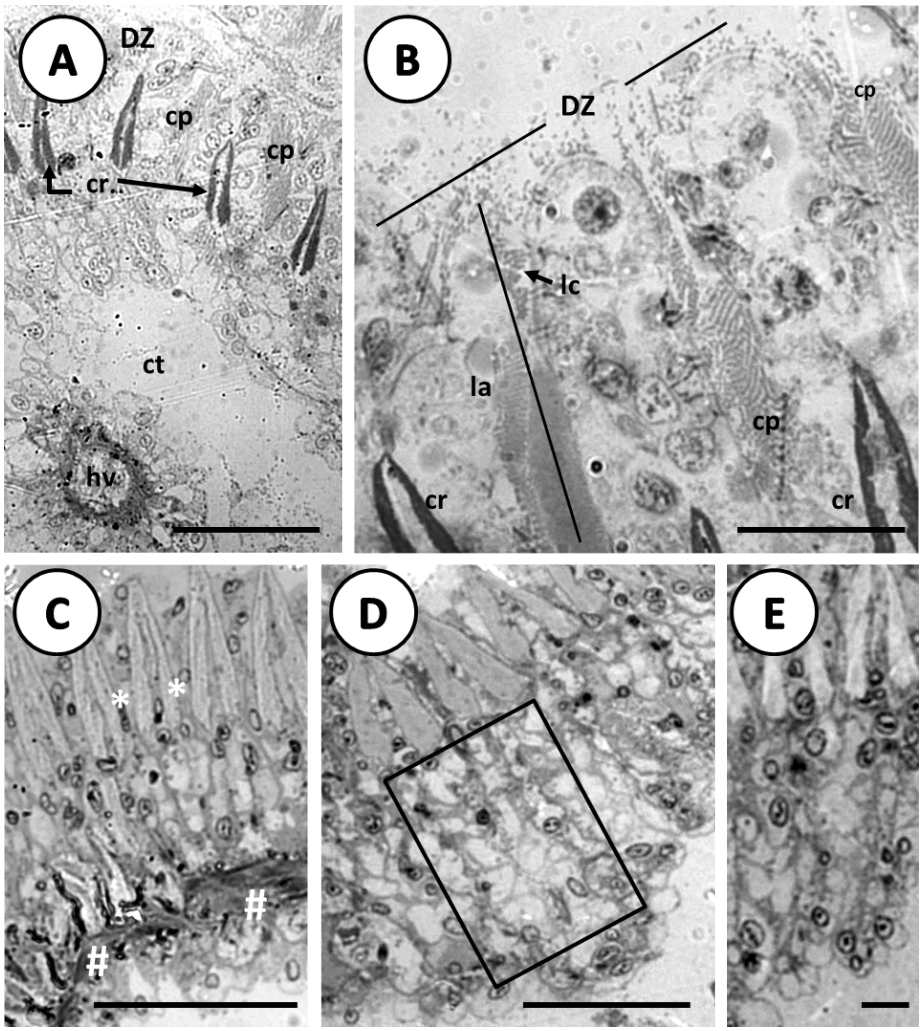


Fig. S2 Representative STEM image along with its corresponding EDX spectra of the electron-dense contrasts region (marked area in the left side panel).

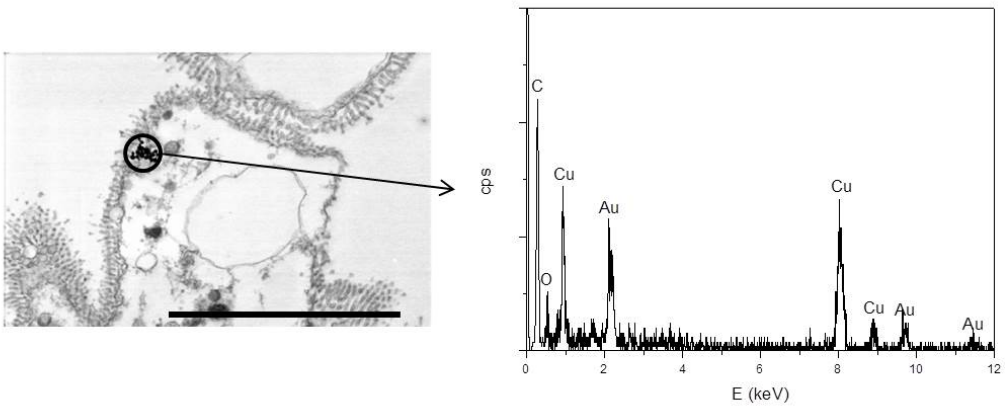
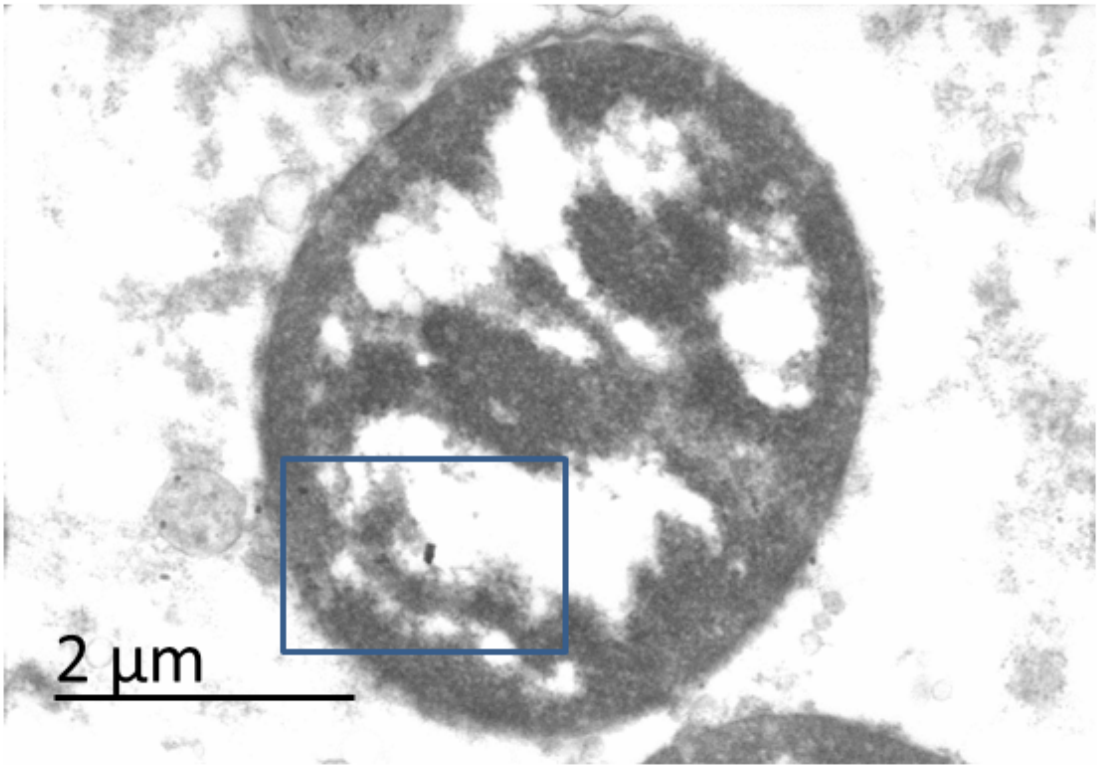


Fig. S3. STEM-in-SEM image of a control bivalve tissue along with an EDX spectra revealing the presence of Fe in a selected area containing an electrodense contrast (red inset).



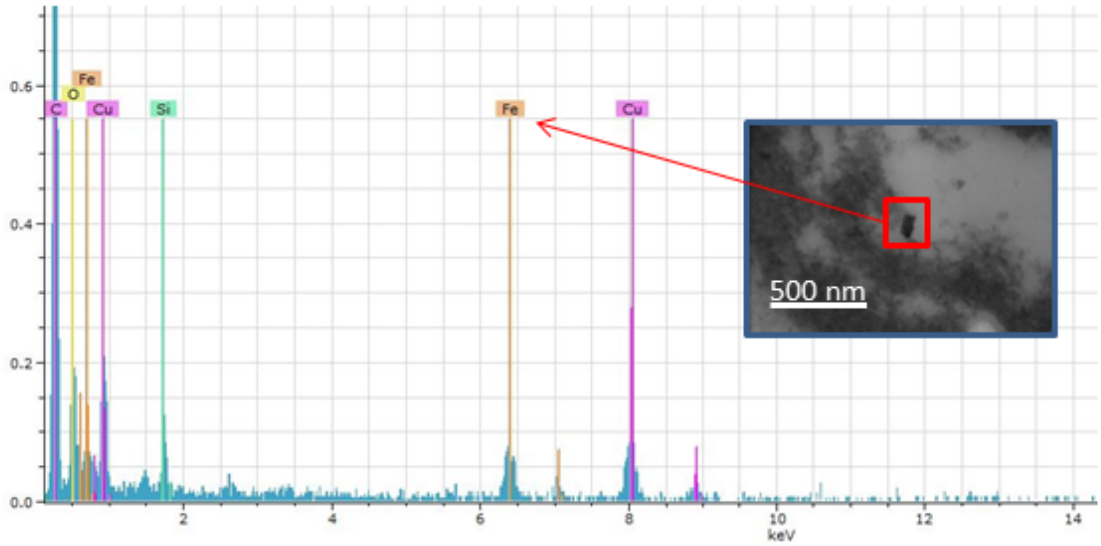


Fig. S4. STEM-in-SEM image of a control bivalve tissue along with an EDX spectra revealing the presence of Ti in a selected area containing an electrodense contrast (red inset).