Supplementary material for

# Bioleaching of Industrial Metallic Steel Waste by Mixed Cultures of Thermoacidophilic Archaea

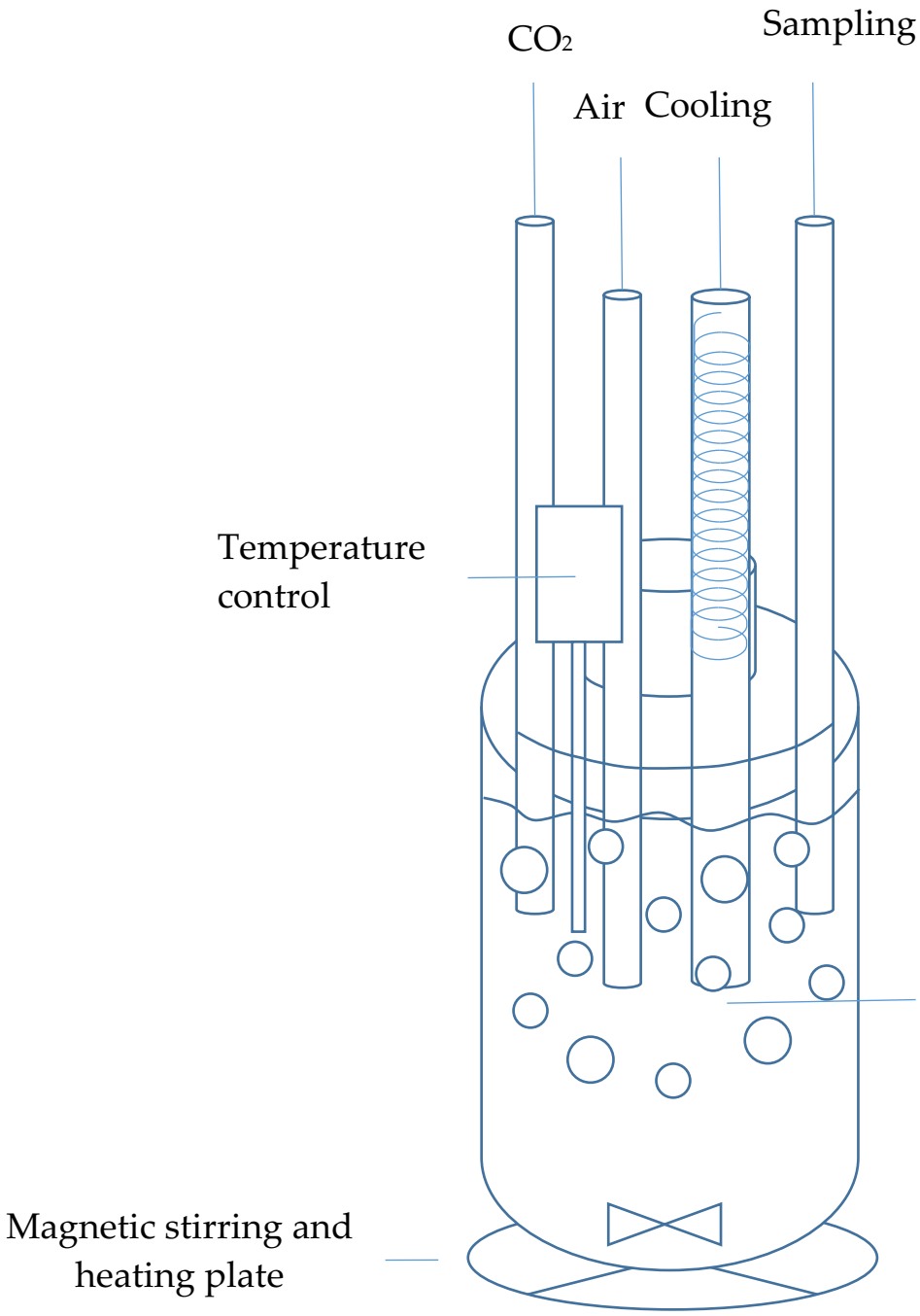
Alma Memic[1], Artem Mashchenko[1], Denise Kölbl[1], Holger Schnideritsch[2], Dominik Wohlmuth[2], Gerald Klösch[2], Tetyana Milojevic[1*]

*Correspondence to: tetyana.milojevic@cnrs-orleans.fr

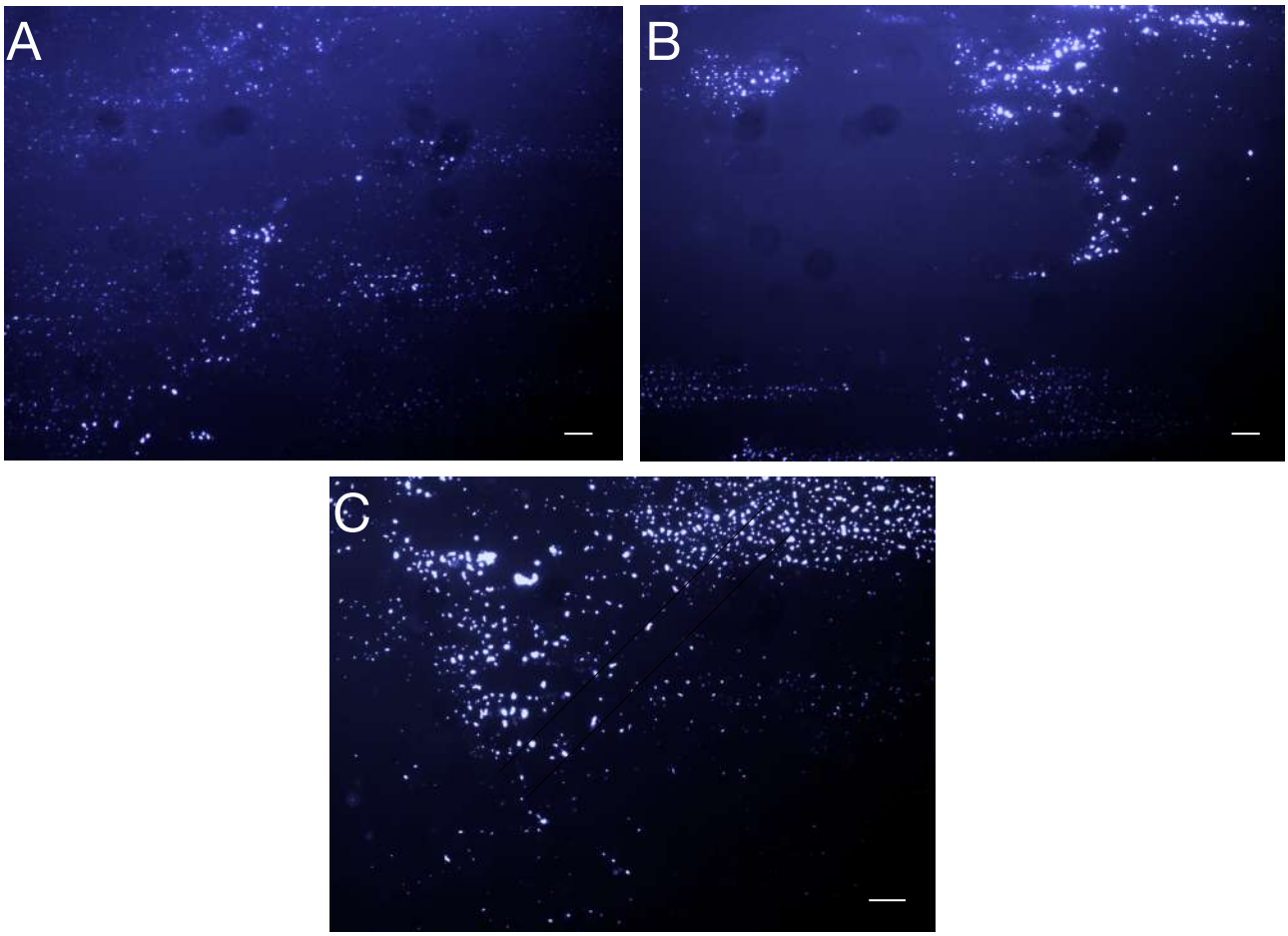
This file contains: Supplementary Figures S1 to S6



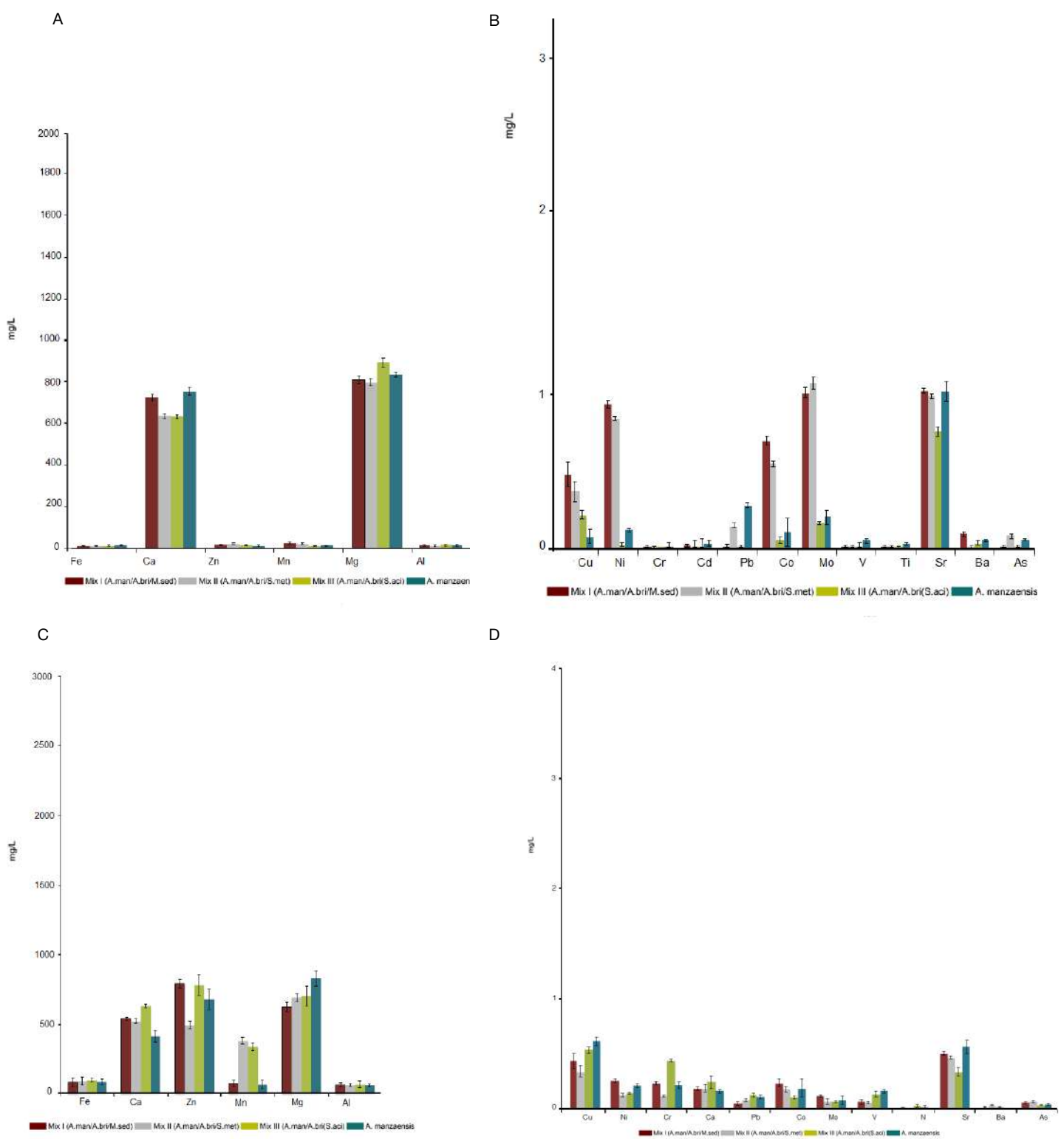

**Supplementary Figure S1.** Fermentation set up used for cultivation of thermoacidophiles supplemented with metalliferous waste materials in 1L glassblower modified bioreactors.



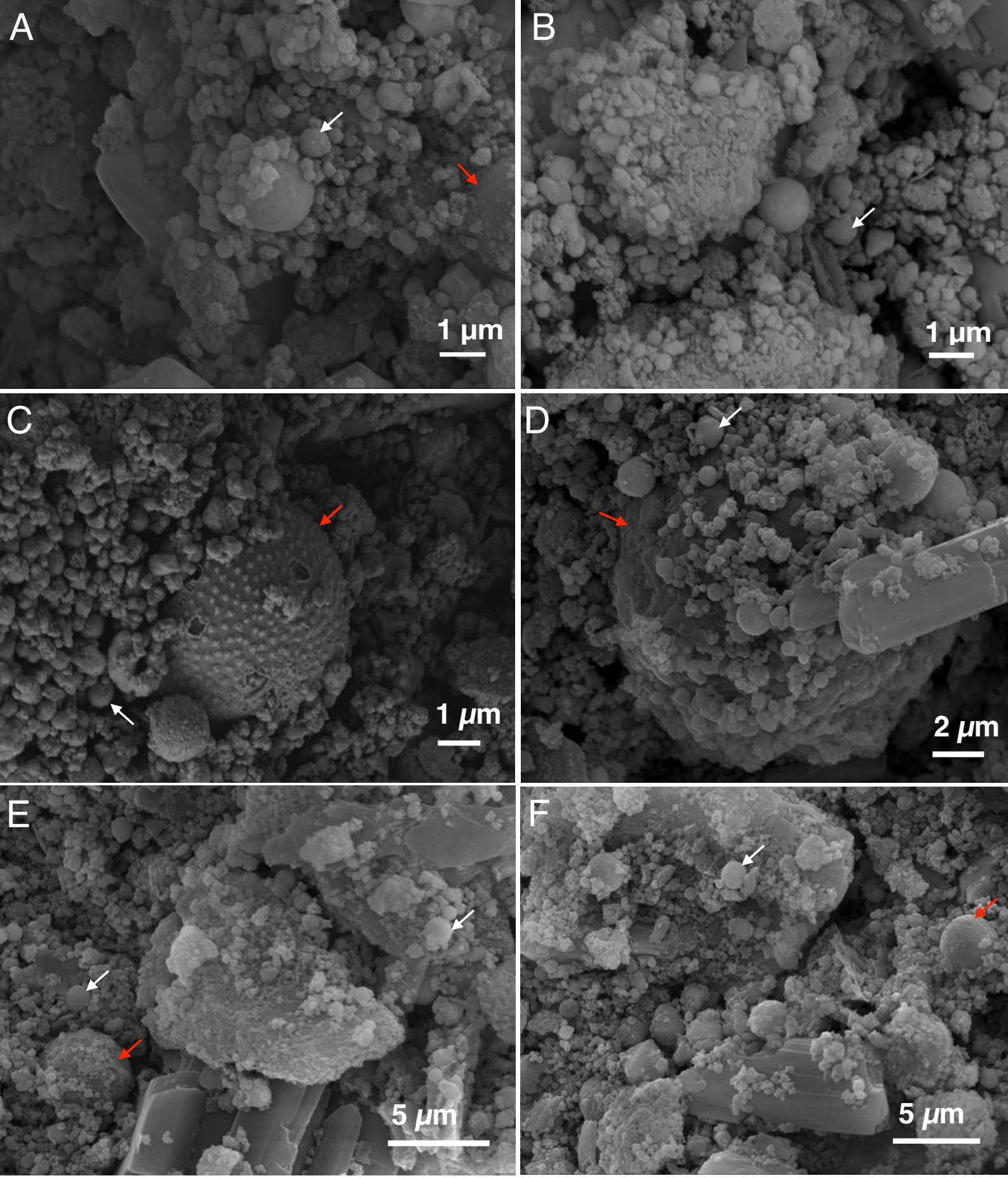

**Supplementary Figure S2**. Schematic representation of the fermentation set up used for cultivation of thermoacidophiles supplemented with metalliferous waste materials in 1L glassblower modified bioreactors.



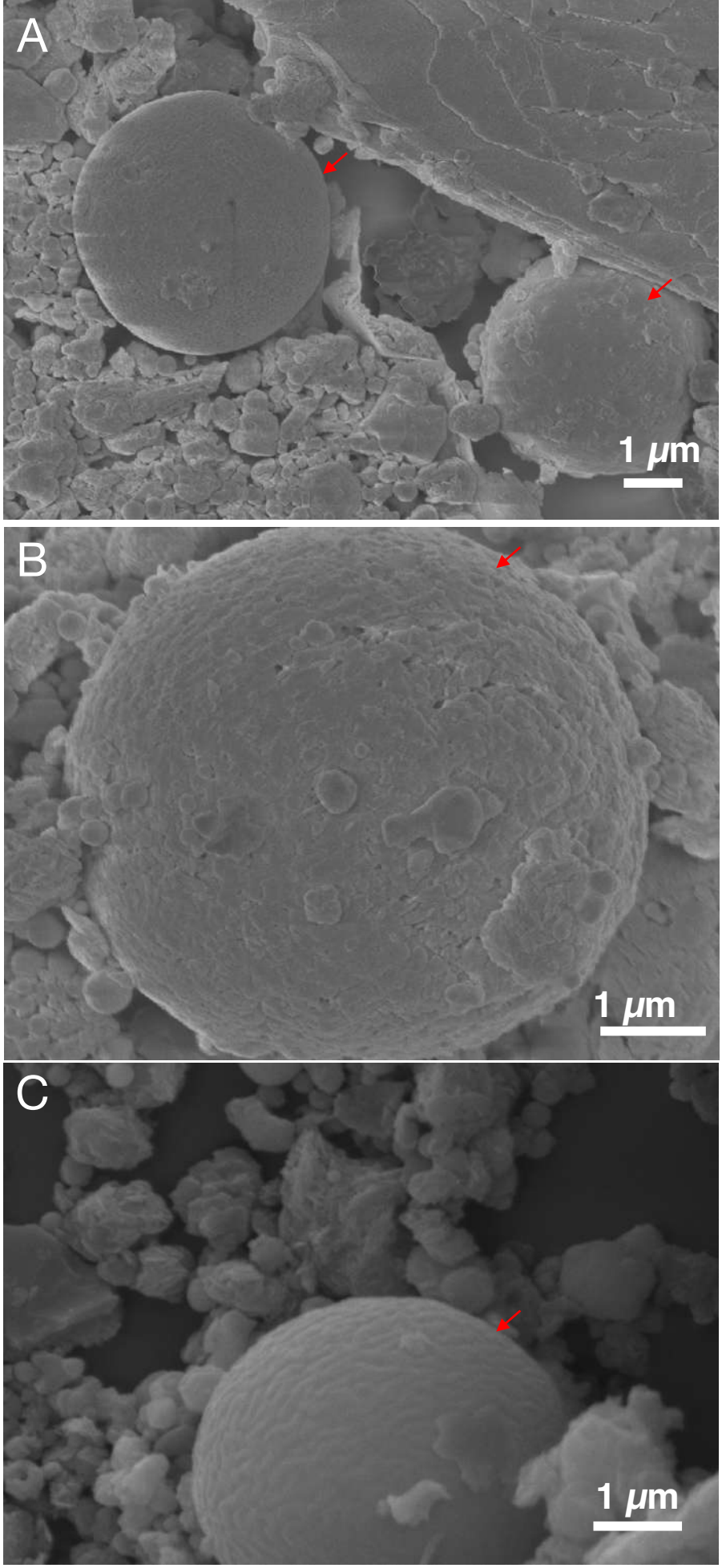

**Supplementary Figure S3.** Fluorescence micrographs (DAPI stained) of thermoacidophilic cells grown on BOF-dust at 70°C. Scale bar, 10 μm.




**Supplementary Figure S4.** ICP-MS analysis of metal ions in abiotic samples (A,B) and at zero time point cultivation (C,D) of BOF-dust with mixed thermoacidophilic cultures.




**Supplementary Figure S5.** Additional scanning electron microscopy (SEM) images of BOF-dust particles processed by mixed thermoacidophiles.
White arrows indicate cells (~1 µm size). Microbially processed grains of BOF-dust are bigger (up to 5–20 µm) and are depicted with red arrows.




**Supplementary Figure 6. Scanning electron microscopy (SEM) images of BOF-dust particles (red arrows) inoculated with thermoacidophiles of Mix I (A), Mix II (B), and Mix III (C) at zero timepoints of cultivation.**