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Recent progress in biohydrometallurgy and microbial characterisation

Anna H Kaksonen[1,2*], Naomi J Boxall[1], Yosephine Gumulya[1], Himel Nahreen Khaleque[1], Christina Morris[1], Tsing Bohu[3], Ka Yu Cheng[1,4], Kayley Usher[1], and Aino-Maija Lakaniemi[1,5]

[1]CSIRO Land and Water, 147 Underwood Avenue, Floreat WA 6014, Australia

[2]School of Pathology and Laboratory Medicine, and Oceans Institute, University of Western Australia, Nedlands, Western Australia 6009, Australia

[3]CSIRO Mineral Resources, Kensington WA 6151, Australia

[4]School of Engineering and Information Technology, Murdoch University, Murdoch, Western Australia 6150, Australia

[5]Tampere University of Technology, Faculty of Natural Sciences, Laboratory of Chemistry and Bioengineering, P.O. Box 541, FI-33101 Tampere, Finland

*Corresponding author: anna.kaksonen@csiro.au

Abstract. Since the discovery of microbiological metal dissolution, numerous biohydrometallurgical approaches have been developed to use microbially assisted aqueous extractive metallurgy for the recovery of metals from ores, concentrates, and recycled or residual materials. Biohydrometallurgy has helped to alleviate the challenges related to continually declining ore grades by transforming uneconomic ore resources to reserves. Engineering techniques used for biohydrometallurgy span from above ground reactor, vat, pond, heap and dump leaching to underground *in situ* leaching. Traditionally biohydrometallurgy has been applied to the bioleaching of base metals and uranium from sulfides and biooxidation of sulfidic refractory gold ores and concentrates before cyanidation.

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