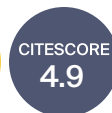




metals



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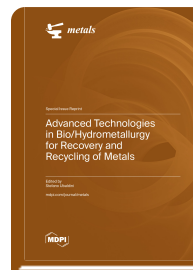
Advanced Technologies in Bio/Hydrometallurgy for Recovery and Recycling of Metals

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The study of innovative and sustainable technologies for the recovery and reuse of raw materials (RMs) from primary and secondary resources is fundamental for economic and industrial development, in compliance with environmental protection and in the context of a circular economy. Bio/hydrometallurgy consists of leaching and recovery unit operations. Leaching is the solubilization of metals from a solid phase using chemicals or biological agents, whereas recovery is the extraction of metals from polymetallic leachate using physicochemical processes, electrowinning or biological processes. Bio/hydrometallurgical processes are new solutions and represent environmentally sustainable practices, not only in the mining and environmental sectors for the extraction of base, precious and toxic metals and rare earth elements (REE), but also for secondary resource valorization with a high content of critical raw materials (CRMs), which are fundamental in modern technological applications. The economics of the processes, which are closely linked to the choice and optimization of the experimental parameters, are of great importance. For publication in this Special Issue, we have considered those articles that contribute to the improvement of innovative bio- and/or hydrometallurgical processes applied for the recovery of valuable and critical metals.



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