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Application of Ionic Liquids in Hydrometallurgy

Guest Editors:

Dr. Esteban Quijada-Maldonado

Chemical and Bioprocess Engineering Department, University of Santiago de Chile, Santiago 71783-5, Chile

Prof. Dr. Julio Romero

Chemical and Bioprocess Engineering Department, University of Santiago de Chile, Santiago 71783-5, Chile

Deadline for manuscript submissions: closed (12 November 2021)

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Message from the Guest Editors

Dear Colleagues,

Ionic liquids (ILs) are novel and outstanding solvents in many applications like extractive distillation, biomass dissolution, reaction media, and catalysis, due to their excellent properties, such as negligible vapor pressure, non-flammability, high solvating power, wide а electrochemical window, and tunable properties. However, hydrometallurgy could end up being one of the most explored processes because ILs could provide high performance, sustainability, and safety to a mining industry that has various and serious environmental impacts. This may become of even greater importance due to an increasing interest in using hydrometallurgy for the selective recovery of valuable metal ions from electronic wastes or refractory minerals. Examples include the use ILs in preferential leaching; the selective solvent extraction of metal ions from pregnant leach liquors; and studies on how the viscosity of these solvents affects the performance of electrowinning despite the large electrochemical window. Thus, these solvents could be used in the entire hydrometallurgical metal recovery process in order to promote a more sustainable mining industry.







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Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth, Germany

Message from the Editor-in-Chief

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Minerals Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/minerals minerals@mdpi.com X@Minerals_MDPI/