

Special Issue

Recent Trends in Phosphate Mining and Beneficiation and Related Waste Management

Message from the Guest Editors

Phosphate extraction and beneficiation is one of the vital mining industries in the world, especially for the agriculture and food industries. Phosphorus derived from phosphate rock is a vital element of life and an exceptional component in fertilizers. However, high-grade phosphate reserves are known to decrease and the need to explore low-grade ores including waste rocks and tailings to extract apatite minerals is becoming more and more crucial. Also, many streams of waste are continuously produced by the phosphate industry: calcareous and siliceous waste rocks, clayey sludge and phosphogypsum. [...] The recovery of these vital elements from phosphate wastes may help to develop the needs of the green energy of the future and contribute to the achievement of the sustainable development goals. Insights related to the following aspects will be included in this Special Issue:

- Phosphate extraction and beneficiation,
- Novel phosphate ores
- Fine characterization of phosphate ores and waste
- Phosphoric acid production
- CRM recovery from phosphate ores and wastes,
- Reprocessing of phosphate wastes
- Valorization and reuse of phosphate wastes and phosphogypsum

Guest Editors

Prof. Dr. Mostafa Benzaazoua

Geology and Sustainable Mining Institute (GSMI), University Mohammed VI Polytechnic (UM6P), Ben Guerir 43150, Morocco

Dr. Yassine Taha

Geology & Sustainable Mining Institute (GSMI), Mohammed VI Polytechnic University, Ben Guerir 43150, Morocco

Deadline for manuscript submissions

closed (30 April 2019)



Minerals

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Impact Factor 2.2
CiteScore 4.4



mdpi.com/si/18398

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Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
minerals@mdpi.com

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About the Journal

Message from the Editor-in-Chief

Minerals welcomes submissions that report basic and applied research in mineralogy. Research areas of traditional interest are mineral deposits, mining, mineral processing and environmental mineralogy. The journal footprint also includes novel uses of elemental and isotopic analyses of minerals for petrology, geochronology and thermochronology, thermobarometry, ore genesis and sedimentary provenance. Contributions are encouraged in emerging research areas such as applications of quantitative mineralogy to the oil and gas, manufacturing, forensic science, climate change, geohazard and health sectors.

Editor-in-Chief

Prof. Dr. Leonid Dubrovinsky

Bayerisches Geoinstitut, University Bayreuth, D-95440 Bayreuth,
Germany

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