

Special Issue

VNIR-TIR Spectroscopy: How Reflectance and Emissivity of Minerals, Rocks and Meteorites Can Help Planetary Exploration

Message from the Guest Editors

The analysis of hyperspectral remote sensing observations from orbiting spacecraft and rovers in recent decades has improved our knowledge about the different bodies in our solar system. Visible to near-infrared as well as thermal infrared spectroscopy enables the mapping of surface compositions of the different planetary surfaces, through the detection of rock-forming minerals as well as secondary mineralogies, and highlights the different molecular species in planetary atmospheres. Each solar system object has its specifics, including temperature, atmospheric pressure and composition and exposition level to solar and galactic energetic particles.

This Special Issue will provide the scientific community with works looking for new approaches to the investigation of the composition and weathering of minerals, and their mixtures, and rock analogs, as well as meteorites, focusing on the present and future goals of understanding the surface composition of planetary bodies using reflectance and emissivity.

Guest Editors

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Deadline for manuscript submissions

closed (31 March 2024)



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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

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JCR - Q2 (Mining and Mineral Processing) / CiteScore - Q1 (Geology)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.2 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the first half of 2025).