



Biom mineralization of Organisms Used as Environmental Proxy Archives

Guest Editors:

Dr. Gernot Nehrke

Alfred Wegener Institute
Helmholtz Centre for Polar
and Marine Research, Section
Biogeosciences, 27570
Bremerhaven, Germany

Gernot.Nehrke@awi.de

Dr. Gerald Langer

The Marine Biological
Association of the United
Kingdom, The Laboratory,
Citadel Hill, Plymouth, Devon
PL1 2PB, UK

gerlan@MBA.ac.uk

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Message from the Guest Editors

The climate change debate has intensified efforts to infer past environmental parameters, such as sea surface temperature, from biogenic carbonates. Since the pioneering work by Urey and co-workers in the early 1950s who demonstrated that the geochemical signatures, i.e., “proxy signatures” of biogenic carbonates, i.e., “proxy archives” provide information on the environment, the number of proxy systems has grown as new analytical methods became available. Modern microanalytical methods push the limits toward smaller sample sizes and lower concentrations but also reveal the inhomogeneity of many proxy archives, which leads to the question of the “true” environmental signal.

From the outset, the quest for finding these “true” environmental signals has been linked to biomineralizer physiology, the so-called “vital effect”. Over the last three decades, conceptual biomineralization models designed to explain proxy relationships have become common in the geochemical community. Apart from purely “academic” interest, the main motivation for developing these models is to improve the application of geochemical proxies. However, biomineralization models are rarely put to practical use in the application and interpretation of proxy data.

Therefore, we would like to invite you to submit manuscripts that focus on biomineralization mechanisms directly linked to geochemical proxies.





Editor-in-Chief

Prof. Dr. Paul Sylvester

Endowed Pevehouse Chair,
Department of Geosciences,
Texas Tech University, Lubbock,
TX 79409-1053, USA

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.

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Contact Us

Minerals
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
Fax: +41 61 302 89 18
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minerals@mdpi.com