

## Special Issue

# Stable Isotope Geochemistry for Future Planetary Exploration and the Search for Life beyond Earth

### Message from the Guest Editors

The 2022 Planetary Science and Astrobiology Decadal Survey highlighted both in situ measurements and laboratory analyses of returned samples as high priorities for the coming decade; isotope analyses were called out as key measurements in many of these investigations. Due to the breadth of this subject, we are soliciting original research contributions from experimentalists, analysts, modelers, observers, and in situ flight instrument developers. The timeline of planetary exploration requires a long view. We therefore particularly encourage those who are pioneering new techniques in stable isotope geo- and cosmochemistry for the interrogation of extraterrestrial organics to consider submitting manuscripts to this Special Issue. Defining the abiotic isotopic background of a planetary body is a crucial step towards assessing its habitability and recognizing possible biosignatures; therefore, we also strongly encourage contributions that focus broadly on the characterization of the stable isotope compositions of a planetary body's inventory of inorganic volatiles and products of abiotic organic synthesis. Of note, we are not soliciting mission concept papers in this call.

### Guest Editors

Prof. Dr. John M. Eiler

Division of Geological and Planetary Sciences, California Institute of Technology, Pasadena, CA 91125, USA

Dr. Amy E. Hofmann

NASA Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA 91125, USA

### Deadline for manuscript submissions

closed (20 December 2023)



## Life

an Open Access Journal  
by MDPI

Impact Factor 3.4  
CiteScore 6.0  
Indexed in PubMed



[mdpi.com/si/128494](https://mdpi.com/si/128494)

*Life*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[life@mdpi.com](mailto:life@mdpi.com)

[mdpi.com/journal/  
life](https://mdpi.com/journal/life)





# Life

---

an Open Access Journal  
by MDPI

---

Impact Factor 3.4  
CiteScore 6.0  
Indexed in PubMed



[mdpi.com/journal/  
life](https://mdpi.com/journal/life)



## About the Journal

### Message from the Editor-in-Chief

*Life* (ISSN 2075-1729) is an international, peer-reviewed open access journal that publishes scientific studies related to fundamental themes in life sciences. Some papers are published individually, while others are submitted for inclusion in special issues with guest editors. You are invited to contribute a research article, essay, or a review to be considered for publication.

---

### Editor-in-Chief

Prof. Dr. Lluís Ribas de Pouplana

Institute for Research in Biomedicine (IRB Barcelona), The Barcelona  
Institute of Science and Technology, 08028 Barcelona, Spain

---

### Author Benefits

#### Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

#### High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPIus / SciFinder, and other databases.

#### Journal Rank:

JCR - Q1 (Biology) / CiteScore - Q1 (Paleontology)