Special Issue

Tectonics and Morphology of Back-Arc Basins

Message from the Guest Editors

Back-arc basins open in response to extensional processes of the overriding plate, which in turn is controlled by the subduction of oceanic lithosphere. These systems are usually controlled at wide-scale by plates convergence, as for the cases of the Mediterranean basins, differently from what happen for the two basins in the Atlantic belonging to the Scotia and Caribbean systems. Generally opening starts as symmetric extension, controlled by pure shear system characterized by a series of horsts and grabens bounded by normal faults or listric faults, and evolves as asymmetric controlled by simple shear system generating a series of half grabens and ridges bounded by more complex faults systems. Tectonics strongly influence the morphology of the seafloor, distribution of small sedimentary basins or sub-basins, and it is also one of the main factors able to modify canyons and channel systems connecting the subaerial hydrographic network with abyssal plans. Analysis of the inherited morphology and of the tectonics can help to understand processes at crustal scale that controlled the opening and evolution of back-arc basins, improving knowledge on plates geodynamics.

Guest Editors

Dr. Maria Filomena Loreto

Dr. Camilla Palmiotto

Dr. Paraskevi Nomikou

Dr. Manel Prada

Deadline for manuscript submissions

closed (15 September 2021)

Geosciences

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 5.1

mdpi.com/si/41178

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

mdpi.com/journal/geosciences

Geosciences

an Open Access Journal by MDPI

Impact Factor 2.1
CiteScore 5.1

mdpi.com/journal/geosciences

About the Journal

Message from the Editor-in-Chief

Understanding the Earth's origin and its bio-geological evolution, the multiple implications of the geosciences (as a coherentset of interconnected disciplines), and the sociocultural and ethical interdisciplinary approaches, will be crucial for a better understanding of Nature, and also for undertaking scientifically based political decisions.
We are committed to drive *Geosciences* to a position in which it is recognized for its high-quality, cutting-edge research and scientific influence, and strongly encourage and invite your participation and manuscripts.

Editor-in-Chief

Prof. Dr. Alberto G. Fairén
1. Centro de Astrobiología, CSIC-INTA, Madrid, Spain
2. Department of Astronomy, Cornell University, Ithaca, NY, USA

Author Benefits

Open Access:

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

High Visibility:

indexed within Scopus, ESCI (Web of Science), GeoRef, Astrophysics Data System, and other databases.

Journal Rank:

CiteScore - Q1 (General Earth and Planetary Sciences)