Special Issue

Advancements in Biofertilizer Research: Impacts on Soil Fertility and Plant Development

Message from the Guest Editors

Biofertilizers made up of microorganisms from phytobiomes are increasingly important for enhancing plant growth, nutrition, health, and stress resilience, and are seen as a solution to issues such as soil degradation, environmental contamination, ecosystem disturbance, and human health hazards in agroecosystems. However, there are challenges associated with the appropriate selection of safe and effective bioinoculants, successful delivery and establishment, and reliable and repeatable efficacy of biofertilizers and microbials in the field. Advancements in biofertilizer research aim to improve formulations, develop alternative delivery approaches, consider plant-microbiome assembly and dynamics, and incorporate microbiome-based concepts and plant-microbe-microbiome interactions. These advancements are guided by the development of omics-related technologies and analyses. With agroecosystems under increasing environmental stress from anthropogenic climate change and contaminants, biofertilizers and microbials are potential key players in finding solutions towards sustainable development.

Keywords: biofertilizers; plant growth and development; soil fertility

Guest Editors

Prof. Dr. Tongmin Sa

Department of Environmental and Biological Chemistry, Chungbuk National University, Cheongju 28644, Republic of Korea

Dr. Denver I. Walitang

College of Agriculture, Fisheries and Forestry, Romblon State University, Romblon 5505, Philippines

Deadline for manuscript submissions

closed (30 April 2024)

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/si/169759

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

mdpi.com/journal/applsci

Applied Sciences

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 5.5

mdpi.com/journal/applsci

MDPI

About the Journal

Message from the Editor-in-Chief

As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

Editor-in-Chief

Prof. Dr. Giulio Nicola Cerullo
Dipartimento di Fisica, Politecnico di Milano, Piazza L. da Vinci 32, 20133 Milano, Italy

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), Ei Compendex, Inspec, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q2 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)