



Novel Study on Biochar Carbon Stability in Soils

Guest Editors:

Dr. Ali El-Naggar

Department of Renewable Resources, University of Alberta, Edmonton, AB T6G 2E3, Canada

Dr. Balal Yousaf

CAS-Key Laboratory of Crust-Mantle Materials and the Environments, School of Earth and Space Sciences, University of Science and Technology of China, Hefei 230026, China

Dr. Xiao Yang

Institute of Geographic Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing 100101, China

Deadline for manuscript submissions:

closed (30 January 2024)

Message from the Guest Editors

Owing to its stability in soils, biochar has gained attention as a soil carbon sequestration tool to offset increasing atmospheric CO₂ concentrations. Biochar comprises disparate ratios of aliphatic and aromatic carbon substances at different stability rates, which may affect the stability of biochar carbon in the soil. However, the influence of soil and biochar properties on biochar carbon stability is not well-documented. Moreover, biochar-derived dissolved organic carbon may stimulate microbial activity via the breakdown of labile soluble organic carbon and the improvement in soil physical properties, phenomena which may increase the mineralization of the soil organic carbon. Those areas still have several knowledge gaps, an issue processing in particular from the reliance on traditional techniques and approaches to study them. Therefore, this Special Issue aims to present research underlying novel approaches and techniques to tracking and evaluating the unknown aspects of biochar carbon stability in soils.





an Open Access Journal by MDPI

Editor-in-Chief

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

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.

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

Journal Rank: JCR - Q1 (Engineering, Multidisciplinary) / CiteScore - Q1 (General Engineering)

Contact Us

Applied Sciences Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/applsci
applsci@mdpi.com
[X@Applsci](#)