

## Soil Health and Sustainability: Opinions from Chinese Young Soil Scientists

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Soil health is a major issue involving people's well-being and strategic development, and it has become an issue of global concern for agriculture and the environment. Therefore, the title and theme of the special issue, "Soil Health and Sustainability," could not be timelier. It

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is a great pleasure to present this special issue in *Soil Science Society of America Journal*, which represents the proceedings from the 19<sup>th</sup> Chinese Young Soil scientists and the 14<sup>th</sup> Chinese Young Plant Nutrition and Fertilizer Scientists Conference, held 18 to 22 May 2021 in Jinggangshan City, Jiangxi, China. More than 650 experts, scholars, and students from universities, research institutes, and enterprises in China attended the conference, during which 38 eminent speakers delivered keynote and invited lectures.

This conference provided an exchange and cooperation platform for young workers in the fields of soil, fertilizer, plant nutrition, and other agricultural resource utilization to stimulate the vitality and intelligence of young scientific and technological workers and promote the connection, intersection, and integration of various research fields of agronomy. There were 18 thematic sessions covering “Black Soil Protection and Sustainable Agricultural Development,” “Microbial Ecology and Soil Health,” “Soil Material Cycle, Water and Soil Environmental Protection,” “Mountain Soil and Environment,” “Magnesium Nutrition Seminar,” “Plant Nutrition and Green Agriculture,” “Soil Nitrogen Cycle, Process, Mechanism, and Regulation Technology,” “Nitrogen Environment, Health and Climate Effects,” “Research Progress in Soil Physics and Hydrology,” “Soil Hydrology and Carbon and Nitrogen Cycle and its environmental effects,” “Evolution of Soil and Water Processes and Environmental Functions in the Earth’s Key Zones,” “Soil Temporal and Spatial Evolution and Resource Utilization,” “Soil Biological Processes and Greenhouse Gas Emission Reduction under the Carbon Neutrality Target,” “Soil Heavy Metal Pollution & Remediation,” “Synchrotron Radiation Technology and Environmental Soil Science,” “Soil Acidification and Local Improvement,” “Site Contaminated Soil,” and “Soil Ecology and Environment.” Meanwhile, four special sessions were also conducted for postgraduates to share their research progress.

This special issue is a compilation of 16 manuscripts related to the areas of soil biotic, soil environment, soil fertility, plant nutrition, and so on. Specifically, the following topics are covered in this special issue:

1. Soil nutrients (e.g., nitrogen, phosphorus, and carbon) cycling

2. Soil microbiome and heathy soil
3. Soil quality degradation, improvement processes, and their biotic and abiotic mechanisms
4. Soil minerals (e.g., silicon, iron)
5. Forest, dryland ecosystems, and sandy soil
6. Soil pollutants (e.g., polycyclic aromatic hydrocarbons [PAHs] and microplastics)
7. Soil organic carbon prediction and mapping

The guest editors firmly believe that articles in the special issue showcase the achievements and progress made by young soil and fertilizer scientists in China in recent years, in soil health and sustainability, soil fertility, plant nutrition, and so on.

The guest editors of this special issue are thankful to Kaitlin Miller, Managing Editor of Soil Science Society of America Journal for providing an opportunity to publish selected peer-reviewed papers that were presented in the conference. Thanks also to all the reviewers for their valuable and critical comments on manuscripts that were submitted for this special issue. The guest editors would also like to thank the MS and PhD students and the staff from the State Key Laboratory of Soil and Sustainable Agriculture, Institute of Soil Science, Chinese Academy of Sciences, Nanjing, and School of Life Sciences, Jiangnan University, for their assistance and support in organizing the conference.

Special issue guest editors

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