1. Record Nr. UNINA9910743222003321

Titolo	Structure and Functions of Pedosphere / / edited by Bhoopander Giri, Rupam Kapoor, Qiang-Sheng Wu, Ajit Varma
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2022
ISBN	981-16-8769-2 981-16-8770-6
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (427 pages)
Collana	Earth and Environmental Science Series
Disciplina	631.4
Soggetti	Soil science Agriculture Microbiology Soil Science
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1. Pedogenesis and Soil-Biota Interactions in the Pedosphere -- Chapter 2. Inter Microbial Interactions in the Pedosphere and their Importance -- Chapter 3. Role of Soil Biology on Soil Health for Sustainable Agricultural Production -- Chapter 4. Pedosphere: a Hot Spot of Largest and Most Complex Diversity of Microorganisms Among Terrestrial Ecosystems -- Chapter 5. Soil Acidity: Development, Impacts, and Management -- Chapter 6. Plant-Microbe Interactions in The Pedosphere Necessary for Plant to Overcome Various Stresses -- Chapter 7. Where Land Meets Sea: Biology of Coastal Soils -- Chapter 8. Soil Enzymes and Their Role in Nutrient Cycling -- Chapter 9. Role of Rhizobiome in Mitigating Plastic Pollution in Pedosphere -- Chapter 10. Geochemical Characteristics of Mineral Elements: Arsenic, Fluorine, Lead, Nitrogen and Carbon -- Chapter 11. Harnessing the Pedosphere Microbial Diversity in Sustainable Agriculture Production -- Chapter 12. Rhizospheric Metaproteomics: Current Status and Future Directions.- Chapter 13. Impact of Anthropogenic Activities on Soil Patterns and Diversity.-Chapter 14. Role of Soil Microbes to Assess Soil health -- Chapter 15. Ectomycorrhizal Networks and Silviculture in Mediterranean Forests -- Chapter 16. Mineralization of Soil Carbon, Nitrogen and

Phosphorus and Role of Nano-fertilizers in Soil Fertility and Plant Growth. Chapter 17. Soil Proteomics: Diversity and Functions.

Sommario/riassunto

This edited volume covers all aspects of the latest research in the field of soil formation and its functioning, soil diversity, soil proteomics, the impact of anthropogenic activities on the pedosphere, plant-microbe interactions in the pedosphere, and factors influencing the formation and functioning of the soils. In the pedosphere, all forms of soils possess a particular type of structure and different organic and mineral components. Thus, the pedosphere as a whole plays a significant role in providing unique habitats for a vast diversity of life forms, developing a link between geological and biological substances circulation in the terrestrial ecosystems. In the processes making available vital mineral elements to plants and supporting human health as various trace elements in the lithosphere are accessed by people through the formation of soils and such soils are utilized for food production. With the depth of information on different aspects of soil, this extensive volume is a valuable resource for the researchers in the area of soil science, agronomy, agriculture, scientists in academia, crop consultants, policymakers, government from diverse disciplines, and graduate and post-graduate students in the area of soil and environmental science.