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| Nota di contenuto | Nanomaterials and Nanocomposites Exposures to Plants: An overview -- Phytotoxicity Response and Defense Mechanisms of Nanocomposites or Mixture of Nanoparticles -- Phytotoxicity Response and Defense Mechanisms of heavy metals and metal-containing nanoparticles -- Toxicity assessment of silver nanoparticles and silver ions on plant growth -- Toxicity assessment of gold nanoparticles and gold ions on plant growth -- Plant response to selenium nanoparticles: growth performance, Phytotoxicity and Defense Mechanisms -- Plant response to platinum nanoparticles: growth performance, Phytotoxicity and Defense Mechanisms -- Plant response to silicon nanoparticles: growth performance, Phytotoxicity and Defense Mechanisms -- Plant response to iron nanoparticles: growth performance, Phytotoxicity and Defense Mechanisms -- Cerium Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Zinc Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Copper Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Titanium Oxide |

Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Iron Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Aluminium Oxide Nanoparticles: Plant Response, Interaction, Phytotoxicity and Defense Mechanisms -- Interaction between metal nanoparticles and PGPR on the plant growth and development -- Interaction between metal-oxide nanoparticles and PGPR on the plant growth and development -- Synergistic Effects of Nanomaterials/Nanocomposites and Heavy Metals Toxicity in Plant -- Effects of Nanomaterials/Nanocomposites on trace element uptake and phytotoxicity -- Nanomaterials/Nanocomposites and their toxicity to beneficial soil bacteria and fungi associated plants Rhizosphere -- Polymeric nanomaterials and their interaction during seed germination and plant growth -- Nanomaterials/Nanocomposites and their effects on seed germination: stimulation and toxicity response.

Sommario/riassunto

This book looks at the interaction between plants and nanomaterials/nanocomposites, and their effects ecology, the food chain and human health. It focuses on nanomaterials/nanocomposites phytotoxicity, which is an important precondition to promote the application of nanotechnology and to avoid the potential ecological risks. It describes the influencing factors of nanotoxicity of nanomaterials and the mechanisms of these toxic effects and defense mechanisms in plants. The chapters in this book are written by internationally renowned researchers and professionals and provides exciting and remarkable information (on the above-mentioned topics) to the scientist, researcher and student working field of plant biology, agricultural science, nanobiotechnology, plant biochemistry, plant physiology, plant biotechnology and many other interdisciplinary subjects.