Special Issue

Heavy Metal Toxicity Effects on Plants

Message from the Guest Editor

Although heavy metals are naturally present in the soil, geologic and anthropogenic activities increase the concentration of these elements to amounts that are harmful to plants. Some of these activities include mining and smelting of metals, burning of fossil fuels, use of fertilizers and pesticides in agriculture, and production of batteries and other metal products in industries, sewage sludge, and municipal waste disposal. Growth reduction as a result of changes in physiological and biochemical processes in plants growing on heavy metal polluted soils has been recorded. Some of the heavy metal phytotoxic manifestations include disturbance of nutrient uptake and translocation, photosynthetic reduction (decrease of photosynthetic pigments, inhibition of electron transport, decrease of CO2 fixation, chloroplast disorganization, photooxidative damage), generation of reactive oxygen species (ROS), inhibitions of antioxidative enzymes, cellular redox imbalance, DNA damage, and protein oxidation. The assessment of heavy metal toxicity effects on plants will enable the evaluation of heavy metal plant-tolerant species and their use for phytoremediation of contaminated soils.

Guest Editor

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Message from the Editor-in-Chief

Toxics (ISSN 2305-6304) is an international, peer-reviewed, open access journal which provides an advanced forum for studies related to all aspects of toxic chemicals and materials. We aim to publish high quality work that furthers our understanding of the exposure, effects, and risks of chemicals and materials in humans and the natural environment as well as approaches to assess and/or manage the toxicological and ecotoxicological risks of chemicals and materials. Please consider publishing in *Toxics* when preparing your next paper.

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