1. Record Nr. UNINA990010088100403321

Autore	Ogunsola, Ade
Titolo	Electromagnetic compatibility in railways : analysis and management / Ade Ogunsola, Andrea Mariscotti
Pubbl/distr/stampa	Berlin : Springer, ©2013
ISBN	978-3-642-44575-0
Descrizione fisica	xix, 528 p. : ill. ; 24 cm
Collana	Lecture notes in electrical engineering ; 168
Altri autori (Persone)	Mariscotti, Andrea
Disciplina	621.382
Locazione	DINEL
Collocazione	10 D II 748
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910298347003321

Titolo	Radionuclide Contamination and Remediation Through Plants / / edited by Dharmendra Kumar Gupta, Clemens Walther
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-07665-5
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (315 p.)
Disciplina	333.7 363.73 570 571.2
Soggetti	Botanical chemistry Environmental management Environmental toxicology Plant physiology Pollution Plant Biochemistry Environmental Management Ecotoxicology Plant Physiology Terrestrial Pollution
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 at the end of each chapters.
Nota di contenuto	Phytoremediation of Radionuclides: A Report on the State of the Art -- Natural Plant Selection for Radioactive Waste Remediation -- Radionuclide Uptake From Soil to Plants: Influence of Soil Classification -- Contributions to the State of the Art in Radionuclides-Plants Interaction Field -- Transfer of Radionuclides to Plants: Influence on the Speciation of Radionuclides in Soil -- Radionuclide Uptake by Plants: Soil to Plant Transfer Factors, Kinetics of Absorption and Internal Radionuclide Distribution of 137Cs And 40K in South American Species -- Impact on Plant Growth in Waste Contaminated Areas --

Remediation of Radionuclide Contaminated Sites Using Plant Litter Decomposition -- Bioaccumulation of Radionuclide Metals in Plants: A Case Study of Cesium -- Speciation of Actinides After Plant Uptake -- Kinetic Models for Representing the Uptake of Radionuclides in Plants -- Metal-Microbe Interaction and Bioremediation -- Metabolism of 14C-Containing Contaminants in Plants and Microorganisms -- 90Sr and 137Cs Accumulation in Plants in the Area of Radiation Accidents -- Migration of 90Sr and 137Cs in the Soil After Radiation Accidents.

Sommario/riassunto

This book focuses on the mechanistic (microscopic) understanding of radionuclide uptake by plants in contaminated soils and potential use of phytoremediation. The key features concern radionuclide toxicity in plants, how the radioactive materials are absorbed by plants, and how the plants cope with the toxic responses. The respective chapters examine soil classification, natural plant selection, speciation of actinides, kinetic modeling, and case studies on cesium uptake after radiation accidents. Radionuclide contaminants pose serious problems for biological systems, due to their chemical toxicity and radiological effects. The processes by which radionuclides can be incorporated into vegetation can either originate from activity interception by external plant surfaces (either directly from the atmosphere or from resuspended material), or through uptake of radionuclides via the root system. Subsequent transfer of toxic elements to the human food chain is a concrete danger. Therefore, the molecular mechanisms and genetic basis of transport into and within plants needs to be understood for two reasons: The effectiveness of radionuclide uptake into crop plants – so-called transfer coefficient – is a prerequisite for the calculation of dose due to the food path. On the other hand, efficient radionuclide transfer into plants can be made use of for decontamination of land – so-called phytoremediation, the direct use of living, green plants for in situ removal of pollutants from the environment or to reduce their concentrations to harmless levels.