1. Record Nr. UNINA9910971033303321

Titolo	Fourth Annual Symposium on Frontiers of Engineering / / National Academy of Engineering
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1999
ISBN	9786612081408 9781282081406 1282081403 9780309524803 0309524806 9780585017341 0585017344
Edizione	[1st ed.]
Descrizione fisica	1 online resource (158 p.)
Collana	Compass series
Disciplina	620/.0072073
Soggetti	Engineering - Research - United States Engineering - Technological innovations - United States
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	"Reports on leading edge engineering from the 1998 NAE Symposium on Frontiers of Engineering"--Cover p. [1].
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Front Matter -- Preface -- Contents -- INTRODUCTION -- Artificial Proteins: Bridging the Gap Between Natural and Synthetic Macromolecular Materials -- Biomedical Imaging Using Optical Coherence Tomography -- Confocal Reflectance Microscopy: Diagnosis of Skin Cancer Without Biopsy? -- Trends in Computational Materials Science for Materials Design and Processing -- Design, Synthesis, Development, and Integration into Manufacturing of New Polymer Materials Architectures for Advanced Integrated Circuit Fabrication -- Novel Sheet Steel Developments -- Role of Simulation in the Design of Next-Generation Engines for Military Aircraft -- Role of Simulation in Understanding Surface Roughness in Formed Aluminum Parts -- Machine Performance Assessment Methodology and Advanced Service Technologies -- A Brief History of Robotics -- Algorithms in Robotics: The Motion Planning Perspective -- Mechanics, Control, and Applications of Biomimetic Robotic Locomotion -- Robotic Perception

		for Autonomous Navigation of Mars Rovers -- Technology Innovation and American Leadership -- Contributors -- Program -- Participants -- Glossary.
2.	Record Nr.	UNINA9911047668103321
	Autore	Nakamatsu Kazumi
	Titolo	Intelligent Theory and Application for Sustainable Society : Proceedings of 5th International Conference on Advanced Intelligent Technologies / / edited by Kazumi Nakamatsu, Margarita Favorskaya, Roumiana Kountcheva
	Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2026
	ISBN	9789819673322 9789819673315
	Edizione	[1st ed. 2026.]
	Descrizione fisica	1 online resource (690 pages)
	Collana	Smart Innovation, Systems and Technologies, , 2190-3026 ; ; 123
	Disciplina	006.3
	Soggetti	Computational intelligence Artificial intelligence Artificial intelligence - Data processing Computational Intelligence Artificial Intelligence Data Science
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Nota di contenuto	The Selection Model of Cross-Border E-Commerce Products Based on Big Data and XGBoost -- Research on Distributed Network Management System in Cloud Computing Environment -- Research and Implementation of a Lead Acid Battery Density Monitor -- Performance Optimization and Implementation of Load Balancing Technology under Cloud Computing Architecture -- Design of Safety Controller for Two-link Manipulator System under Hybrid Attack.
	Sommario/riassunto	This book includes new research results of scholars from the Fifth International Conference on Advanced Intelligent Technologies (ICAIT 2024) organized by IRNet International Academic Communication Center and IIMT Bhubaneswar, held during November 22–24, 2024. The

	book covers research work from active researchers who are working on collaboration of industry and various intelligent technologies such as intelligent technologies applicable/applied to manufacturing and distribution of industrial products, factory automation, business, etc. The topics included are all computational intelligence techniques applicable/applied to industry, intelligent techniques in data science applicable/applied to business and management, intelligent network systems applicable/applied to industrial production, intelligent technologies applicable to smart agriculture, and intelligent information systems for agriculture.

3. Record Nr. UNINA9910960559203321

Titolo	Use of reclaimed water and sludge in food crop production / / Committee on the Use of Treated Municipal Wastewater Effluents and Sludge in the Production of Crops for Human Consumption, Water Science and Technology Board, Commission on Geosciences, Environment, and Resources, National Research Council
Pubbl/distr/stampa	Washington, D.C., : National Academy Press, 1996
ISBN	9786610192274 9780309175623 0309175623 9781280192272 1280192275 9780309568111 0309568110 9780585030869 0585030863
Edizione	[1st ed.]
Descrizione fisica	1 online resource (192 p.)
Soggetti	Sewage sludge as fertilizer Sewage sludge as fertilizer - Environmental aspects Sewage sludge as fertilizer - Health aspects
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia

Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Use of Reclaimed Water and Sludge in Food Crop Production -- Copyright -- Preface -- Contents -- Executive Summary -- BACKGROUND -- CONCLUSIONS AND RECOMMENDATIONS -- Adequacy of Existing Regulations for Pathogens in Reclaimed Water and Sludge -- Adequacy of Existing Regulations for Harmful Chemicals in Reclaimed Water and Treated Municipal Sludge -- Reclaimed Water -- Treated Municipal Sludge -- Soil, Crop, and Ground Water Effects -- Reclaimed Water -- Treated Municipal Sludge -- Economic, Legal, and Institutional Issues -- Economic Considerations -- Public Perception and Liability -- Other Regulations and Institutional Controls -- CONCLUDING REMARKS -- 1 Introduction -- REFERENCE -- 2 Municipal Wastewater, Sewage Sludge, and Agriculture -- HISTORICAL PERSPECTIVES -- Wastewater -- Sewage Sludge -- IRRIGATION WITH RECLAIMED WATER -- Crop Irrigation -- Deemand for Irrigation Water -- Wastewater Reclamation Motivated by Disposal Priorities -- Value of Reclaimed Wastewater -- USE OF SEWAGE SLUDGE IN AGRICULTURE -- Potential Role of Sewage Sludge in Crop Production -- Ecological Linkages Between Urban and Agricultural Systems -- SUMMARY -- REFERENCES -- 3 Municipal Wastewater and Sludge Treatment -- QUANTITY AND QUALITY OF MUNICIPAL WASTEWATER EFFLUENT AND SLUDGE -- CONVENTIONAL WASTEWATER TREATMENT PROCESSES -- Preliminary Wastewater Treatment -- Primary Wastewater Treatment -- Secondary Wastewater Treatment -- Tertiary or Advanced Wastewater Treatment -- TREATMENT TO FACILITATE CROP IRRIGATION WITH RECLAIMED WATER -- SLUDGE TREATMENT PROCESSES -- Volume Reduction Processes -- Thickening -- Dewatering -- Conditioning -- Drying -- Stabilization Processes -- Biological Stabilization -- Chemical Stabilization -- Inactivation of Pathogenic Organisms and Viruses -- Other Sludge Treatment Processes -- Solidification/Immobilization. Metal Stripping and Toxic Organic Destruction -- Combustion -- Ultimate Sludge Utilization or Disposal -- Integrated Sludge Management Schemes -- INDUSTRIAL WASTEWATER PRETREATMENT -- Fate of Toxic Chemicals During Secondary Wastewater Treatment -- Heavy Metals -- Cyanide -- Toxic Organic Chemicals: Volatile and Semivolatile Organic Compounds, Pesticides and PCBs -- Pretreatment -- Pretreatment Goals -- Pretreatment Implementation -- SUMMARY -- REFERENCES -- 4 Soil, Crop, and Ground Water Effects -- SLUDGE AS A SOURCE OF PLANT NUTRIENTS -- Nitrogen -- Phosphorus -- Other Essential Plant Nutrients -- TREATED MUNICIPAL WASTEWATER AS A SOURCE OF PLANT NUTRIENTS AND IRRIGATION WATER -- Plant Nutrients -- Irrigation Water Quality Concerns -- EFFECTS OF SLUDGE AND WASTEWATER ON SOIL PHYSICAL PROPERTIES -- Organic Matter -- Water Retention Properties -- Structure and Aggregation -- Water Transmission Properties -- EFFECTS OF SLUDGE AND WASTEWATER ON SOIL CHEMICAL PROPERTIES -- Soluble Cations, Anions, and Molecules -- Trace Elements -- Accumulation of Potentially Harmful Inorganic Chemicals in Soils and Crops -- Accumulations of Potentially Harmful Organics in Soils and Crops -- EFFECTS OF SLUDGE ON SOIL MICROORGANISMS -- Microbial Biomass and Activity -- Biological Nitrogen Fixation -- EFFECTS ON GROUND WATER -- Pathogenic Microorganisms -- Heavy Metals -- Toxic Organic Compounds -- LANDSCAPE-LEVEL CONSIDERATIONS -- SUMMARY -- REFERENCES -- 5 Public Health Concerns About Infectious Disease Agents -- INFECTIOUS DISEASE TRANSMISSION -- INFECTIOUS DISEASE RISK -- MONITORING INFECTIOUS DISEASE POTENTIAL -- PUBLIC HEALTH EXPERIENCE WITH

THE USE OF RECLAIMED WATER AND SLUDGE -- SUMMARY -- REFERENCES -- 6 Public Health Concerns About Chemical Constituents in Treated Wastewater and Sludge -- FATE OF AND EXPOSURE TO ORGANIC CHEMICALS.
Behavior of Toxic Organics in the Soil -- Uptake of Toxic Organics by Plants -- Phthalate Esters -- Polynuclear Aromatic Hydrocarbons (PAHs), -- Polychlorinated Biphenyls (PCBs). -- Chlorinated Pesticides -- Disinfection Products -- Acid-Extractable Organic Compounds -- Chlorinated Dibenzo-p-dioxins (CDDs) and Dibenzofurans (CDFs). -- Volatile Aromatic Compounds (VOC) -- Generalizations Regarding Uptake of Organics by Plants -- Uptake of Toxic Organics by Animals -- FATE OF AND EXPOSURE TO TRACE ELEMENTS IN SLUDGE -- Uptake of Trace Elements by Animals -- NONSPECIFIC HEALTH EFFECTS OF SLUDGE AND WASTEWATER -- SUMMARY -- REFERENCES -- 7 Regulations Governing Agricultural Use of Municipal Wastewater and Sludge -- REGULATORY BACKGROUND -- Agricultural Irrigation with Wastewater -- Agricultural Use of Sewage Sludge -- FEDERAL STANDARDS FOR THE CONTROL OF PATHOGENS IN SEWAGE SLUDGE -- APPROACHES TO TOXIC CHEMICAL REGULATION IN SLUDGE AND WASTEWATER LAND APPLICATION -- Preventing Toxic Chemical Pollutant Accumulation in Soils -- Allowing Pollutant Accumulation in the Soil -- DEVELOPMENT OF U.S. CHEMICAL POLLUTANT STANDARDS FOR AGRICULTURAL USE OF SEWAGE SLUDGE -- General Approach to Risk Assessment -- Hazard Identification -- Dose-Response Assessment -- Exposure Evaluation -- Risk Characterization -- EPA's Risk Assessment Approach -- Hazard Identification -- Exposure Assessment -- Risk Characterization -- EVALUATION OF FEDERAL STANDARDS FOR CHEMICAL POLLUTANTS IN SEWAGE SLUDGE -- Justification for Exempting Organic Pollutants From Regulation Should be Confirmed -- APLRs May Cause Maximum Permissible Loading Limits to be Exceeded -- Food Safety is not Likely to be Affected by the Regulations -- REGULATIONS AND GUIDANCE FOR AGRICULTURAL USE OF MUNICIPAL WASTEWATER -- Evolution of Regulations Governing Irrigation with Treated Municipal Wastewater.
General Description of the State Regulations -- Adequacy of Current Regulations for Reclaimed Water -- SUMMARY -- Pathogen Regulations for Sludge -- Toxic Chemicals Regulations for Sludge -- Regulations for Effluent Irrigation -- REFERENCES -- 8 Economic, Legal, and Institutional Issues -- ECONOMIC INCENTIVES FOR LAND APPLICATION OF TREATED MUNICIPAL WASTEWATER AND SLUDGE -- POTW Economic Perspectives -- Farm Economics of Treated Wastewater and Sludge Use -- Food Processor Perspectives -- MANAGING RESIDUAL RISKS -- Residual Risks -- Public Concerns to be Addressed -- Risk Management: Private Sector -- Common Law Liability -- Market Forces -- Voluntary Self-Regulation -- OTHER, RELATED GOVERNMENT REGULATIONS -- Toxic Waste Segregation, Waste Collection, and Treatment -- Treated Effluent and Sludge Discharge Management Options -- Surface and Ground Water Protection -- Public Health Protection for Harvested Crops -- Analysis for Regulatory Gaps and Overlap -- SUMMARY -- REFERENCES -- Appendix -- COMMITTEE MEMBER BIOGRAPHICAL INFORMATION.

Sommario/riassunto

The debate over health and aesthetic concerns about using treated waste to fertilize human food crops is well over a century old. In 1993 the US Environmental Protection Agency asked for an update of the situation, in light of the food industry's continuing hesitation a decade after the EPA deemed the practice safe. Among the topics discussed are the history and technology of wastewater treatment, effects on soils and crops, public health concerns, existing regulations, and economic

and liability issues. Not addressed are the extensive efforts of chemical fertilizer producers to keep people worried. No index. Annotation copyright by Book News, Inc., Portland, OR