1. Record Nr. UNINA9910812422003321

Autore	Westerhoff Paul
Titolo	Fate of engineered nanomaterials in wastewater biosolids, land application, and incineration / / by Paul Westerhoff, Kiril Hristovski
Pubbl/distr/stampa	London, England : , : IWA Publishing, , 2014 ©2014
ISBN	1-78040-549-9
Descrizione fisica	1 online resource (104 p.)
Collana	WERF Research Report Series
Disciplina	363.179
Soggetti	Nanostructured materials - Environmental aspects Sewage - Purification - Sequencing batch reactor process
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.
Nota di contenuto	Cover; Copyright; Acknowledgments; Abstract and Benefits; Table of Contents; List of Tables; List of Figures; List of Acronyms; Executive Summary; Chapter 1.0: Introduction; 1.1 Background; 1.2 Goals and Research Questions; 1.3 Organization of Report; Chapter 2.0: Experimental Methods and Materials; 2.1 Laboratory Methods; 2.1.1 Batch NM Sorption Tests; 2.1.2 Sources and Size Discrimination of Titanium Dioxide NMs in Food and PCPs; 2.1.3 SBRs; 2.1.4 Biosolids Incineration Tests; 2.1.5 Effect of ENMs on Biological Carbon Conversion in an Arizona Soil Under Dark Conditions; 2.2 Field Sampling 2.2.1 Analysis of Aqueous Samples by sp-ICP-MS2.2.2 Biosolids Processing Facilities; 2.2.3 Biosolid Management Facility (Texas); 2.3 Analytical Methods; 2.3.1 Chemical Analysis; 2.3.2 Electron Microscopy Analysis; Chapter 3.0: Absorption of ENM to Wastewater Biomass; 3.1 Batch Sorption Experiments; 3.2 Composition and Properties of Food-Grade Titanium Dioxide; 3.3 Titanium Content of Foods; 3.4 Titanium Content in PCPs; 3.5 Titanium Content of Paints and Adhesives; 3.6 Selection of Titanium Dioxide Models for Environmental Studies; 3.7 Sorption of E171/P25 - Titanium Dioxide to Biomass 3.8 SummaryChapter 4.0: Occurrence of ENMs in Treated Effluents and Biosolids; 4.1 Detection of ENMs in Water by Single Particle ICP-MS; 4.2 Mass Flow of Titanium During Biosolids Treatment; 4.3 Metals in EPA