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Nota di contenuto	An introduction to ultrafine and nanoparticles and their environmental effects / Marc A. Williams -- Ecosafety of nanomaterials in the aquatic environment / Maria J. Bebianno, Thiago L. Rocha, Jose P. Pinheiro, Margarida Ribau Teixeira, Fernanda Cassio -- Changes in toxicant physicochemistry and bioavailability during sorption/desorption processes with TiO ₂ nanoparticles in the aqueous phase / Danae Patsiou, Martin R. S. McCoustra, Teresa F. Fernandes, and Theodore B. Henry -- Behavior, fate and toxicity of engineered nanoparticles in estuarine and coastal environments / Daniel M. Lyons and Petra Buric -- Interactive effects of nanomaterials with other contaminants on aquatic organisms : nTiO ₂ as a case study / Laura Canesi, Camilla Della Torre, Teresa Balbi, Ilaria Corsi -- Soil nano-ecotoxicology : what have we learned from standard tests and what may we be missing? / David J Spurgeon, Elma Lahive, Carolin Schultz, Claus Svendsen -- Impacts of magnetic iron oxide nanoparticles in terrestrial and aquatic environments / Renato Grillo and Leonardo Fernandes Fraceto. --

Carbon nanotubes : sublethal effects and unique mechanisms of toxicity in aquatic species / Tara Sabo-Attwood, Christine Ngan, Candice Lavelle, Jaime Plazas-Tuttle, and Navid B. Saleh -- Surface reactivity of anatase and rutile samples -- relationship with toxicity on aquatic organisms / C. Hurel, N. Jordan, U. Gerber, S. Weiss, B. Kubier and R. Kleeberg -- Cardiorespiratory toxicity of nanoparticles in aquatic environments / Christopher A. Dieni and Tyson J. MacCormack -- Air pollution and neurodevelopmental disorders / Joshua L. Allen, C. Klocke, K. MorrisSchaffer, K. Conrad, M. Sobolewski and D.A. Cory-Slechta -- Toxicity of nanomaterials to the gastrointestinal tract / Penelope A. Rice -- The mucosal microbiome : impact of nanoparticles and nanomaterials / Katherine M. Williams, Kuppan Gokulan and Sangeeta Khare -- Human health impacts and immunotoxicology of metal nanoparticles and nanomaterials / Gregory P. Nichols and Jason Davis -- Vasculotoxicity of metal-based nanoparticles / Maria S. Sepulveda and Jiejun Gao -- Current and future directions in environmental nanotoxicology / Marc A. Williams.

Sommario/riassunto

"The focus of this book is on human health risk assessment in the context of nanoparticle exposures. The book is authored by a highly-qualified team of subject matter experts, guided by editors that each has at least 25 years or more of laboratory investigative experience and publication in the fields covered in this book. The book is split into four sections. The first section is an introduction which includes an overview of the field. The second section details Health Effects of Nano -- Evidence from Animal Models and In Vitro Systems. The third covers Health Effects of Nano -- Evidence from Human Exposures, Environmental Assessments, and Disasters. The book concludes with topics on Emerging Applications, Ecotoxicology of Nanotechnology, Risk Assessment, and Regulation".
