Record Nr. UNINA9910720096303321 Ecological risks of emerging pollutants in urbanizing regions // **Titolo** Yonglong Lu, Pei Wang, and Jingjing Yuan, editors Pubbl/distr/stampa Singapore: ,: Springer Nature Singapore Pte Ltd., , [2023] ©2023 **ISBN** 9789811996306 9789811996290 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (402 pages) Disciplina 363.73091732 Soggetti **Pollutants** Urban pollution Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Chapter 1. Urbanization and emissions of pollutants -- Chapter 2. Nota di contenuto Spatial distribution of emerging pollutants in multimedia -- Chapter 3. Source identification and emission estimation of emerging pollutants -- Chapter 4. Multimedia modeling and simulation of contaminants transportation and fate -- Chapter 5. Exposure pathways and human risks of emerging pollutants -- Chapter 6. Ecological risks of emerging pollutants: methodology and applications -- Chapter 7. Conclusion and perspectives. This book characterizes the major pollution patterns of emerging Sommario/riassunto contaminants, such as sources, emission effluents, temporal and spatial distributions, multi-media transportation and transformation processes, exposure pathways to ecosystems and humans, and ecological risks. Based on this, it establishes an urbanizing region management concept and highlights how urbanization and its regional ecology have evolved into a more integrated vision. It also decouples the relations between urbanization and emissions of emerging pollutants that are framed within a broad socio-ecological context considering institutions, policies, and governance. All the theory,

methods, and case studies have been taken from the authors'

publications, which have undergone rigorous international peer review.

The book presents the spatial distribution, pathways, and flow diagrams of the pollutants as well as the interactions between urbanization and regional pollution and includes detailed figures and pictures. It also investigates ecological risk characterization and expression using maps based on geographic information systems to illustrate the general profile and the spatial variation of risks. The book is a valuable resource for postgraduates, researchers, academics, environmental NGOs, and regional managers such as urban planners, environmental agency staff, legal regulators, and decision makers. Bridging the gap between environmental science and policy, it offers interdisciplinary theory, approaches, and case studies that facilitate applications of frontier science in ecology and environmental science to regional social and economic development.