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Collana	Advances in Solid and Hazardous Waste Management
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Soggetti	Waste management Remote sensing Pollution prevention Natural disasters Waste Management/Waste Technology Remote Sensing/Photogrammetry Industrial Pollution Prevention Natural Hazards
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	1. Solid and Hazardous Waste Management: An Introduction -- 2. Moving Towards a Circular Economy in Solid Waste Management: Concepts and Practices -- 3. Institutional Waste Management -- 4. Scientific Approach for Municipal Solid Waste Characterization -- 5. Characterization of Municipal Solid Waste (MSW): Global Trends -- 6. Applications of Remote Sensing and Geographical Information System (GIS) in Assimilation of Environmental Data -- 7. Applications of Remote Sensing and GIS in Solid Waste Management –A Review -- 8. Environmental Impacts of Pond Ash Dumping at Kolaghat Thermal Power Plant (KTTP) – Physico-chemical Characterization of Pond Ash -- 9. Leaching Behaviour of Pond Ash -- 10. WQI, DRASTIC and Contaminant Transport Modelling Using WiscLEACH 2.0 -- 11. Degradation of Plastics -- 12. Electronic Waste (E-waste) Generation and Management -- 13. Survey of Municipal Solid Waste (MSW)

Treatment Methods and Compost Samples -- 14. Development and Application of a Multi-Criteria Decision Making (MCDM) Tool for Solid Waste Management: Kolkata as a Case Study -- 15. Fundamentals of Microbiology -- Appendix A: USEPA—RCRA's Chemical Waste Compatibility List -- Appendix B: Environmental Regulations in India -- Appendix C: Country-wise E-waste generation rates (ordered from highest to lowest by kg/person-y) -- Index.

Sommario/riassunto

This book presents reviews, examples and case studies of innovative applications in solid and hazardous waste management. The economics of waste management have since become a significant research area in their own right, and two chapters address these issues. In addition, dedicated chapters cover specific categories of waste such as biomedical and institutional waste, plastics and e-waste. The book subsequently discusses newer analytical methods like SEM, EDX, XRD and optical microscopy, along with selected “older” methods for sampling and characterizing different types of waste. The various applications of mathematical tools like linear optimization, various software/models like WISCLeach, and DRASTIC, and tools like remote sensing and GIS are illustrated in many of the chapters. Lastly, since composting is one of the most popular treatment methods for managing the organic component of municipal solid waste, the book provides an overview of composting and the fundamentals of microbiology that are essential to understanding waste-related biological processes. The book was primarily written for students and practitioners in the field who are already familiar with the basics. All chapters were prepared by practicing experts and scholars in the field, and are intended to help readers better understand and apply these principles and practices in their own endeavours. Key topics covered in the book:

- The circular economy and the economics of solid waste management
- Various remote sensing and GIS applications for managing municipal solid waste, coal fires in mines, changes in land use and land cover in industrial areas, etc.
- Treatment and management of different types of solid waste: institutional (including biomedical), residential, e-waste, plastic, and ash from thermal power plants
- Sampling and characterization of municipal waste and compost
- Fundamentals of microbiology
- Overview of environmental regulations, especially those pertaining to solid and hazardous waste management.
