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Nota di contenuto	Preface -- 1. Potentially toxic construction materials: An Introduction -- 2. The main ecological health hazards from building materials -- 3. Atmospheric emissions from construction sector -- 4. PVC (The poison plastic), Chlorinated Polyethylene (CPE), Chlorinated Polyvinylchloride (CPVC), Chlorosulfonated Polyethylene (CSPE), Polychloropropene Rubber (CR)- Chemistry, Applications and ecological impacts -- 5. Volatile Organic Compounds (VOC) emission and its adverse health effects from building sector -- 6. Heavy metal contaminations from construction materials -- 7. Nanoparticles in construction industry and their toxicity -- 8. Traditional and novel thermal insulation materials and their implications -- 9. Sulfo-Aluminate cement and magnesium phosphate cement in eco-conservation -- 10. Exposure to airborne concrete, stone, brick and granite dust -- 11. Carpets and textiles:

Effect on indoor environment and health -- 12. Soil contaminations from the construction projects -- 13. Water pollution from construction industry -- 14. Construction sector, biodiversity and wildlife conservation -- 15. Embodied carbon in constructions and its ecological implications -- 16. Building Material Assessment System (BMAS) and its determination -- 17. Advances in Environmental impact assessment methods/tools in construction engineering -- 18. Special Concretes for Ecological Preservations. -- 19. Use of industrial waste materials in Civil Engineering Applications -- 20. Utilization of waste water for the construction projects -- 21. Use of Construction and Demolition wastes in Civil Engineering for Ecological preservation -- 22. Sustainable Techniques for building waste disposals -- 23. Ecological and sustainable Road constructions -- 24. Health impacts of the Construction Workers -- 25. Sustainable Geotechnical practices in the Constructions -- 26. Sustainable infrastructural Development through Ecological Conservations.

Sommario/riassunto

This book deals with the present adverse effects of using precarious building materials on the ecology and human health. Also, the detailed discussions on the novel and greener construction materials and their utilization as an alternative to the conventional harmful existing methods and materials are also presented in the subsequent chapters. This book helps to fill the research gaps in the existing prior-art knowledge in the field of sustainable construction and green building materials and methods giving due importance to ecology and health, specifically to the fields of sustainable structural engineering, sustainable geotechnical engineering, sustainable road engineering, etc. This book helps in achieving a sustainable environment through possible adoption of innovative and ecological construction practices. Hence, this book acts as a practical workbook, mainly for the academicians and practicing engineers who are willing to work toward the consecrated building industry. It is a well-established fact that the constructions of the engineering structures consume more and more earth resources than any other human activities in the world. In addition, the construction-related activities will produce several million tons of greenhouse gases, toxic emissions, water pollutants, and solid wastes. This creates a huge impact on environment and causes severe health issues on humans and animals. It is thus important to create an eco-friendly construction environment which can satisfy the ecological and health requirements.
