

Innovations in Energy Efficient Construction Through Sustainable Materials

Part of the Advances in Chemical and Materials Engineering Book Series

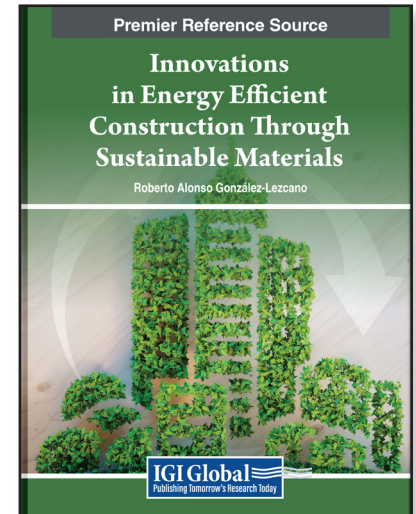
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Description:

The construction industry, a cornerstone of modern development, must meet the growing demand for new buildings while minimizing environmental impact. As global populations rise and living standards improve, the need for sustainable building practices has never been more apparent. Traditional construction methods and materials contribute significantly to carbon emissions, resource depletion, and biodiversity loss. Addressing these issues requires innovative solutions that balance development needs with environmental stewardship.

Innovations in Energy Efficient Construction Through Sustainable Materials offers a comprehensive response to this pressing problem. The book explores pioneering approaches to building design and construction, focusing on the use of alternative, low-carbon materials and advanced technologies. It provides an in-depth analysis of current and future trends in sustainable construction, covering topics such as recycling waste materials, utilizing biodegradable resources, and implementing energy-efficient designs. By presenting a variety of research fields and practical applications, the book bridges the gap between theoretical concepts and real-world solutions, making it an essential resource for industry professionals, researchers, and advanced students.

This book not only highlights the environmental benefits of sustainable construction but also addresses economic and social dimensions. It discusses sustainable procurement practices, the role of policy and governance, and the importance of health, safety, and wellbeing in design and construction. By offering insights into modular and prefab construction, intelligent modeling, and material science innovations, **Innovations in Energy Efficient Construction Through Sustainable Materials** equips readers with the knowledge and tools needed to drive the construction industry towards a more sustainable and efficient future.



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Topics Covered:

- Biodegradable Materials
- Circular Construction
- Eco-Friendly Innovations
- Energy-Efficient Design
- Green Construction
- Low-Carbon Materials
- Modular Construction
- Prefabricated Structures
- Recycling Waste Materials
- Renewable Resources
- Sustainable Building Practices
- Sustainable Procurement
- Vernacular Architecture
- Waste-to-Wealth
- Wellbeing in Construction

Subject: Computer Science and Information Technology

Classification: Edited Reference

Readership Level: Advanced-Academic Level (Research Recommended)

Research Suitable for: Advanced Undergraduate Students; Graduate Students; Researchers; Academicians; Professionals; Practitioners

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