Record Nr. UNINA9911021963803321 Autore Khan Anish Titolo Uses and Products of Recycled Expanded Polystyrene Foam Wastes // edited by Anish Khan, Mohammad Jawaid, Khalid A. Alzahrani Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 9789819656189 9789819656172 Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (147 pages) Collana Sustainable Materials and Technology, , 2731-0434 Altri autori (Persone) **JawaidMohammad** AlzahraniKhalid A Disciplina 620.192 Soggetti **Polymers** Refuse and refuse disposal Materials Chemistry Waste Management/Waste Technology Materials Chemistry Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto 1. Mechanical Recycling of Expanded Polystyrene Foams -- 2. Industrial Uses Of Expanded Polystyrene Foams -- 3. New Packaging Products from Recycled Expanded Polystyrene Foams -- 4. Chemical Recycling Of Expanded Polystyrene Foams -- 5. Components of expanded polystyrene foams -- 6. Characteristics of expanded polystyrene foams. Sommario/riassunto This book addresses the various applications of recycled expanded polystyrene, a material used abundantly in the packaging of items ranging from domestic to industrial items. However, as useful as it is for consumers, it is a major source of environmental challenges due to waste disposal problems. Most are dumped in landfills and deface the environment; in some climes, they are burnt, releasing toxic fumes into the atmosphere. The resulting negative effects on the natural habitat

> include leaching into underground water and destroying nutrients needed for agricultural activities. Therefore, this book presents recent studies of innovative and sustainable ways to utilize this waste material

when recycled. It provides the foundational knowledge of expanded polystyrene foams and the recycling and reuse of its wastes to manufacture sustainable products. Furthermore, the book chapters are written by globally recognized researchers in the field providing a holistic overview of emerging technologies on recycling of waste as well as opportunities associated with its reuse. The book is also useful to postgraduate researchers and academics, community waste managers and council waste management workers interested in managing expanding polystyrene materials in their environment.