

1. Record Nr.	UNINA9910585945503321
Autore	Devasahayam Sheila
Titolo	Recycling and Resource Recovery from Polymers
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (282 p.)
Soggetti	Environmental economics Pollution control Research & information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>Environmental challenges posed by wrong end of life plastic management drive the plastics recycling schemes for energy recovery and cutting emissions, penalties, energy consumption, non-renewable resources, and manufacturing costs. Plastic recycling has the lowest environmental impact on global warming potential and total energy use. However, under-utilised plastic wastes due to low value issues with sorting/contamination pose major challenges. Novel technologies drive innovation in a circular economy model for plastics and employ reuse, recycling and responsible manufacture solutions, support the development of new industries and jobs, reduce emissions and increase efficient use of natural resources (including energy, water and materials). Many economies are working towards achieving a zero plastic waste economy. This Special Issue covers the applications of recycled plastics in the areas of energy recovery/alternative fuels, economic analyses, bitumen additives, flame retardants, recycled polymer nanocomposites to enhance the mechanical property, thermomechanical recycling to improve physical properties, mechano-chemical treatment, cryogenic waste tyre recycling, application in decarbonizing technology, e.g., cement industry, waste characterization, improving agricultural soil quality, as smart fertilizers. The Editors express their appreciation to all the contributors across the</p>

world in the development of this reprint. This reprint gives different perspectives and technical ideas for the transformation of plastic wastes into value-added products and to achieve higher recycling rates in the coming years.

---