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Nota di contenuto	Preface -- Sustainable Organic Synthesis in Ionic Liquids -- Industrial Applications of Green Solvents in Organic and Drug Synthesis for Sustainable Development of Chemical Process and Technologies -- Applications of Ionic Liquids in Organic Synthesis -- Water-Mediated Catalyst-Free Organic Transformations -- Modifications on Polymeric Membranes for Isopropanol Dehydration Using Pervaporation: A Review -- Environmentally Benign Organic Synthesis -- Green Aspects of Scale-Up Synthesis of some APIs, Drug Candidates Under Development, or Their Critical Intermediates -- Green Approaches to Synthesize Organic Compounds and Drugs -- Selective Conversion of Glycerol to

Lactic Acid Using Porous Multi-Functional Mixed Oxide Catalysts Under Alkaline Environment -- Green Biological Synthesis of Nanoparticles and their Biomedical Applications -- Silver Nanostructures, Chemical Synthesis Methods, and Biomedical Applications -- The Role of Heterogenous Catalysts in Converting Cellulose to Platform Chemicals -- Production of Reduced Graphene Oxide (rGO) from Battery Waste: Green and Sustainable Synthesis and Reduction -- Bio-Catalysis as a Green Approach for Industrial Waste Treatment -- Green Synthesis of Biodiesel Using Microbial Lipases -- Industrial Applications of Green Solvents for Sustainable Development of Technologies in Organic Synthesis -- Index.

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## Sommario/riassunto

Traditional methods in synthetic chemistry produce chemical waste and byproducts, yield smaller desired products, and generate toxic chemical substances, but the past two centuries have seen consistent, greener improvements in organic synthesis and transformations. These improvements have contributed to substance handling efficiency by using green-engineered forerunners like sustainable techniques, green processes, eco-friendly catalysis, and have minimized energy consumption, reduced potential waste, improved desired product yields, and avoided toxic organic precursors or solvents in organic synthesis. Green synthesis has the potential to have a major ecological and monetary impact on modern pharmaceutical R&D and organic chemistry fields. This book presents a broad scope of green techniques for medicinal, analytical, environmental, and organic chemistry applications. It presents an accessible overview of new innovations in the field, dissecting the highlights and green chemistry attributes of approaches to green synthesis, and provides cases to exhibit applications to pharmaceutical and organic chemistry. Although daily chemical processes are a major part of the sustainable development of pharmaceuticals and industrial products, the resulting environmental pollution of these processes is of worldwide concern. This edition discusses green chemistry techniques and sustainable processes involved in synthetic organic chemistry, natural products, drug syntheses, as well various useful industrial applications. .

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