

Preface

This special edition highlights recent results in materials research and sustainable technology developments, with a particular emphasis on environmentally friendly approaches and applications aimed at addressing modern environmental challenges. The volume is organised into three chapters, each dedicated to a key area at the intersection of materials science, chemistry, and sustainability.

The first chapter focuses on the topic of using bio-based materials and eco-friendly chemical processes. The contributions emphasise the design and application of bio-derived polymers and composites, as well as green chemical processes that minimise environmental impact.

Chapter 2: Sustainable Building Materials presents advances in green building materials, designed to consider environmental requirements and ensure both the durability of structures and production efficiency. Studies address innovations in concrete and other building materials that support sustainable infrastructure and a reduced carbon footprint.

Chapter 3: Catalysts and Catalytic Processes for Pollution Degradation examines catalysts and catalytic processes designed to mitigate environmental pollution. Emphasis is placed on photocatalysts, photocatalytic reaction mechanisms, and their applications for pollutant degradation.

The special edition is intended to serve as a valuable reference for researchers and engineers, and to inspire further innovation toward a cleaner and more sustainable future.