

Preface

The special edition highlights recent research in properties analysis of advanced alloys and steel, and highlights their expanding role in sustainable technologies. The articles address high-entropy alloys, shape memory alloys, and carbon structural steel, focusing on their mechanical properties, corrosion behaviour, and machinability using electric discharge machining. Beyond structural metals, the edition explores processes in biomass processing, waste recycling, and pollutant removal, underscoring the importance of environmental and resource recovery solutions.

This edition presents a multidisciplinary perspective on the development of advanced structural materials and technologies for environmental protection, with a focus on sustainability.