

# **Environmental Footprints and Eco-design of Products and Processes**

## **Series editor**

Subramanian Senthilkannan Muthu, SGS Hong Kong Limited,  
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Editor

# Environmental Footprints of Packaging

 Springer

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# Preface

Packaging is one of the essential elements of today's life, and it plays a major role in our daily lives. Packaging is inevitable to different communities of people: manufacturers, shopkeepers, sellers, consumers and so on. Several kinds of packaging are made out of a wide array of materials we are surrounded with every day. Packaging serves an essential function of protecting goods from damage, apart from the other secondary functions, and it is used by every industrial segment. The environmental impacts of any product produced on Earth deserve significant attention these days, and this attention is very high for packaging because of its voluminous applications. Due to this, one can imagine the quantity of production of packaging materials and the associated environmental impacts. Not only the production of packaging, but also its disposal, creates impacts to the environment. Many environmental elements—such as the biodegradation potential of packaging materials, the uncountable proportion of consumption and disposal, the short shelf-life of packaging materials, and limited landfill space, etc.—are associated with this issue.

The dissemination of information and the knowledge of quantification of environmental footprints of different packaging materials and packaging systems are of great benefit to concerned consumers as well as researchers in the scientific community, and this book is an attempt toward the same. This book deals with the environmental footprints of packaging in seven informative chapters. All seven chapters deal with various important elements associated with the environmental implications of packaging: (1) the life-cycle assessment of packaging systems; (2) the sustainable design of packaging materials; (3) organization–life cycle assessment (OLCA); methodological issues and case studies in the beverage-packaging sector; (4) the potential of fibrous and nonfibrous materials in biodegradable packaging; (5) the environmental impacts of packaging materials; (6) the bioprocessing of metals from packaging wastes; and (7) the environmental implications of reuse and recycling of packaging. I am sure that the readers of the book will receive much useful information pertaining to the environmental footprints of packaging. I take this opportunity to thank all of the authors who contributed the chapters in this book for their time and priceless efforts.

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