Preface

Biocomposites are natural fibre-reinforced biopolymers or synthetic fibres that remain bonded together by physical or chemical interactions but retain their individual physical or chemical identities. Their melting point and viscosity are influenced by the type of polymer matrix, while their mechanical properties are governed to a large extent by the type and amount of filler. Their applications are based on their physical, mechanical, and processing properties. Nowadays, many investigators have developed these materials via eco-friendly methods using lignocellulose, keratin, silk, rice straw, paper sludge, coconut coir, polylactic-co-glycolic acid, alginate, chitosan, graphene, gelatin, dextran, starch, gum, and so on as alternatives to conventional materials due to their sustainability, nontoxic nature, biodegradability, low cost, and more. In this book, researchers from all over the world highlight the importance of biocomposites and natural products.

Green composites are promising because they are renewable, biodegradable, and *durable* for non-renewable composites. In Chapter 1, Bhat et al. discuss green biocomposites and their importance. In Chapter 2, Sharma discusses the opportunities of extractive, cellulosic, and lignocellulosic fibres from non-wood forest products in biocomposites. In Chapter 3, Akhond and Sharif demonstrate the function of biocomposites in various engineering and biomedical materials. In Chapter 4, Sushant et al. examine the ability of biopolymers isolated from natural sources as novel bioexcipients in the design of novel drug delivery. In Chapter 5, Saddem and Koubaa present the properties of high-density polyethylene-polypropylene wood composites. In Chapter 6, Basel reviews the characterization, modelling, and production processes of biopolymers in the textile industry, which is an exciting and innovative area of research. In the final chapter, Harekrishna and Brajesh discuss the pharmacological applications and nutritional properties of *Aegle marmelos*, a rare species of tree also known as bael.

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