

1. Record Nr.	UNINA9910557733503321
Autore	Goupil Christophe
Titolo	Simulation with Entropy Thermodynamics
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 online resource (222 p.)
Soggetti	Research & information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	Beyond its identification with the second law of thermodynamics, entropy is a formidable tool for describing systems in their relationship with their environment. This book proposes to go through some of these situations where the formulation of entropy, and more precisely, the production of entropy in out-of-equilibrium processes, makes it possible to forge an approach to the behavior of very different systems. Whether for dimensioning structures; influencing parameter variability; or optimizing power, efficiency, or waste heat reduction, simulations based on entropy production offer a tool that is both compact and reliable. In the case of systems marked by complexity, it appears to be the only way. In that sense, realistic optimization can be carried out, integrating within the same framework both the system and all the constraints and boundary conditions that define it. Simulations based on entropy give the researcher a powerful analytical framework that crosses the disciplines of physics and links them together.

2. Record Nr.	UNINA9910576872903321
Autore	Balart Gimeno Rafael Antonio
Titolo	Biopolymers from Natural Resources
Pubbl/distr/stampa	Basel, : MDPI - Multidisciplinary Digital Publishing Institute, 2022
Descrizione fisica	1 online resource (422 p.)
Soggetti	History of engineering & technology Technology: general issues
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>This work covers all aspects related to the obtainment, production, design, and processing of biopolymers obtained from natural resources. Moreover, it studies characteristics related to the improvement of their performance to increase their potential application at an industrial level, in line with the concept of a global circular economy. Thus, this work firstly classifies biopolymers obtained from natural resources (e.g., biobased building blocks and biopolymers extracted directly from plants and biomass), and then summarizes several cutting-edge research works focused on enhancing the performance of biopolymers from natural resources to extend their application in the industrial sector, and contribute to the transition to more sustainable plastics.</p>