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Nota di contenuto	Introduction / Sarah A. Fagents, Tracy K. P. Gregg and Rosaly M. C. Lopes -- Magma chamber dynamics and thermodynamics / Josef Dufek, Chris Huber and Leif Karlstrom -- The dynamics of dike propagation / Steve Tait and Benoit Taisne -- Dynamics of magma ascent in the volcanic conduit / Helge M. Gonnermann and Michael Manga -- Lava flows / Andrew J. L. Harris -- Unsteady explosive activity: strombolian eruptions / Mike R. James, Steve J. Lane and Bruce F. Houghton -- Unsteady explosive activity: vulcanian eruptions / Amanda B. Clarke -- Sustained explosive activity: volcanic eruption columns and Hawaiian fountains / Andrew W. Woods -- Modeling tephra sedimentation from volcanic plumes / Costanza Bonadonna and Antonio Costa -- Pyroclastic density currents / Olivier Roche, Jeremy C. Phillips and Karim Kelfoun -- Magma-water interactions / Ken Wohletz, Bernd Zimanowski and Ralf Buttner -- Deep sea eruptions / Tracy K. P.

Gregg -- Magma-ice interactions / Lionel Wilson, John L. Smellie and James W. Head -- Modeling lahar behavior and hazards / Vernon Manville, Jon J. Major and Sarah A. Fagents -- Introduction to quantitative volcano seismology: fluid-driven sources / Bernard Chouet -- Volcano acoustics / Milton A. Garces, David Fee and Robin Matoza -- Planetary volcanism / Rosaly M. C. Lopes, Sarah A. Fagents, Karl L. Mitchell and Tracy K. P. Gregg.

Sommario/riassunto

Understanding the physical behavior of volcanoes is key to mitigating the hazards active volcanoes pose to the ever-increasing populations living nearby. The processes involved in volcanic eruptions are driven by a series of interlinked physical phenomena, and to fully understand these, volcanologists must employ various physics subdisciplines. This book provides the first advanced-level, one-stop resource examining the physics of volcanic behavior and reviewing the state-of-the-art in modeling volcanic processes. Each chapter begins by explaining simple modeling formulations and progresses to present cutting-edge research illustrated by case studies. Individual chapters cover subsurface magmatic processes through to eruption in various environments and conclude with the application of modeling to understanding the other volcanic planets of our Solar System. Providing an accessible and practical text for graduate students of physical volcanology, this book is also an important resource for researchers and professionals in the fields of volcanology, geophysics, geochemistry, petrology and natural hazards.

2. Record Nr.	UNINA9911020262603321
Autore	Singh Chandan Deep
Titolo	Digitization and Manufacturing Performance : An Environmental Perspective
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Soggetti	Manufacturing processes - Technological innovations Manufacturing processes - Environmental aspects
Lingua di pubblicazione	Inglese
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Nota di contenuto	Cover -- Series Page -- Title Page -- Copyright Page -- Contents -- Preface -- Chapter 1 Green Energy Technologies -- 1.1 Introduction -- 1.2 Industrial Processes -- 1.3 Overview of Renewable Energy Technologies -- 1.4 Dedicated Energy Crops -- 1.5 Agricultural Crop Residue -- 1.6 Forestry Residues -- 1.7 Algae -- 1.8 Wood Processing Residues -- 1.9 Sorted Municipal Waste -- 1.10 Wet Waste -- 1.11 What is Solar PV? -- 1.12 Solar Photovoltaic Energy Conversion -- 1.13 What is Waste to Energy? -- 1.14 Where are Nanomaterials Found? -- References -- Chapter 2 Recent Advances in Green Energy Materials: A Review -- 2.1 Introduction -- 2.2 Solar Energy Materials -- 2.3 Wind Energy Materials -- 2.4 Hydroelectric Energy Materials -- 2.4.1 Turbines and Generators -- 2.4.2 Penstocks and Pipelines -- 2.4.3 Dams -- 2.4.4 Roller Compacted Concrete -- 2.4.5 Geosynthetics -- 2.4.6 Bamboo -- 2.4.7 Recycled Materials -- 2.4.8 Transmission Lines -- 2.5 Geothermal Energy Materials -- 2.5.1 Drill Bits and Casing -- 2.5.2 Heat Exchangers -- 2.5.3 Turbines and Generators -- 2.5.4 Piping -- 2.5.5 Sealing Materials -- 2.6 Biomass Energy Materials -- 2.6.1 Combustion Chambers -- 2.6.2 Boilers and Heat Exchangers -- 2.6.3 Gas Cleaning Systems -- 2.6.4 Storage Systems -- 2.6.5 Fuel

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Sommario/riassunto

The book provides valuable insights into how modern production strategies can enhance quality, efficiency, and environmental sustainability, ultimately driving profit and competitive advantage in today's high-tech industry. Today, production strategies are influenced by quality, cost, delivery, innovation, and responsiveness. Firms have traditionally pursued these goals through the adoption of production practices, such as simultaneous engineering, increasing efficiency through the elimination of defects, setup reduction, and worker empowerment. However, recent developments in industry suggest that industry regulators and professional bodies must encourage innovation in a broad range of high-tech production facilities with the environment in mind. The success of the industry depends on production facilities and the competitive advantage that the industry gains due to better quality and reliability. This advantage leads to an increase in sales and the creation of a sound customer base for greater market share, which eventually leads to more profit, growth, and expansion. A firm's processes must possess operating advantages in the form of competitive priorities to outperform its competitors, keeping in mind its influence on the environment. Digitization and Manufacturing Performance: An Environmental Perspective presents the expectations of industrialists, policymakers, and academics by evaluating the impact of production facilities. Readers will find the book: - Discusses emerging technologies and their role in environmental aspects in detail; - Provides a comprehensive overview of the latest existing and emerging technologies and their environmental aspects; - Justifies social, economic, and technical considerations of these technologies; - Explores the relationship between advanced technologies and the environment through in-depth studies. Audience Researchers, scholars, faculty, professionals in research and development, and industrialists in the industrial, production, mechanical, and electronics sectors.
