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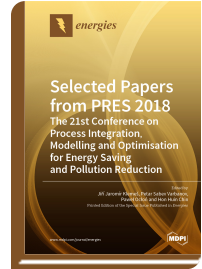
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The depletion of natural energy resources provides evidential adverse impacts on world economy functionality. The strong requirement of a sustainable energy supply has escalated intensive research and the discovery of cleaner energy sources, as well as efficient energy management practices. In the context of a circular economy, this research not only targets the optimisation of resources utilisation at different stages but also emphasises the eco-design of products to extend production life spans. Based on this concept, this book discusses the roles of process integration approaches, renewable energy sources utilisation and design modifications in addressing the process energy and exergy efficiency improvement. The primary focus is to enhance the economic and environmental performance through process analysis, modelling and optimisation. The articles mainly show the contribution of each aspect: (a) design and numerical study for innovative energy-efficient technologies, (b) process integration—heat and power, (c) process energy efficiency or emission analysis, and (d) optimisation of renewable energy resources' supply chain. The articles are based on the latest contribution of this journal's Special Issues in the 21st conference entitled "Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction (PRES)". This book is complemented with an editorial review to highlight the broader state-of-the-art development.



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