



processes



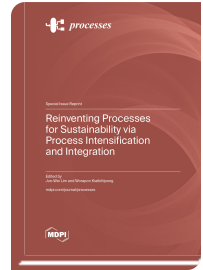
Special Issue Reprint

Reinventing Processes for Sustainability via Process Intensification and Integration

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In this Special Issue, readers will find selected works pertaining to the integration and intensification methods that are currently adopted for carbon capture, stemming from the generation of waste gasses. Novel optimization methods achieved through modeling as well as numerical studies are also reported in these papers in order to improve industries such as textile, and also to predict the onset of local diseases. Moreover, the potential use of solid organic waste as nutrients to grow microalgae for the production of protein, carbohydrate and lipid sources highlights the significant use of waste via bioconversion, without the need to undergo landfilling. Besides microalgae, bacteria are also capable of composting solid organic waste into useful green energy pellets to advocate the waste-to-energy development plan. Furthermore, the potential use of solar energy for process intensification has been integrated into industrial processes to partially offset a part of the energy requirements, gaining traction toward energy sustainability in the long term. Finally, not overlooking the importance of battery, various processes to recover lithium from oily wastewater sources are reported as well. Overall, this Special Issue undoubtedly captures every important feature of advanced processes in a perpetual intensification and integration for the betterment of both humanity and the natural environment.



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