

Special Issue Reprint

Renewable Energy and Green Metallurgy Technology

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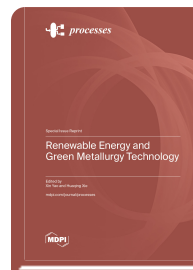
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ISBN 978-3-7258-0639-3 (Hardback)

ISBN 978-3-7258-0640-9 (PDF)



The aim of this Special Issue is to immerse the reader in the latest green metallurgy technology. The production process in traditional metallurgical industry uses large amounts of fossil fuels, which consume energy and emit CO₂ intensively, facing enormous challenges in energy and the environment. The industry is in urgent need of advanced techniques for replacing fossil fuels with renewable energy, and decreasing energy consumption and CO₂ emission. Replacing fossil fuels with renewable energy, energy recovery, and advanced technology will lead to the development of the green metallurgical industry. In addition, the strengthening mechanisms and smelting processes of non-quenched and tempered steel for automobiles and high-nitrogen steel smelting technology will allow us to master the mechanism of green metallurgy production and decrease fossil fuel consumption and carbon dioxide emissions from the metallurgy process. The Special Issue mainly focuses on six selected topics, such as biomass energy and solar energy as replacements for fossil fuels, resource utilization of metallurgical slag, low-carbon smelting technology in steel, CO₂ resource utilization, strengthening mechanisms and smelting processes of non-quenched and tempered steel for automobiles, high-nitrogen steel smelting technology, achieving green metallurgy production. The latest green metallurgy technology could provide the next direction for steel and iron production.

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