

Matériaux & Techniques



Call for papers

Themed Issue on

'Circular Economy initiatives and solutions in the
steel sector'

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Background

The concept of a Circular Economy (CE) is in the backbone of the steel industry, as part of its production is obtained by re-melting and transforming steel from end-of-life goods. CE also entails design of steel products with durability and longevity in mind, waste minimization at every stage of the value chain, and improved recycling and waste management practices. Nowadays circularity encompasses not only secondary raw materials and residues, but also other streams, such as energy carriers and water, and can be implemented in cooperation with other industrial sector, also by implementing Industrial Symbiosis solutions. The advantages of CE in terms of resource conservation and energy efficiency are widely recognised and lead to considerable economic and environmental benefits. While CE adoption is gaining momentum, the steel sector is committed to face existing challenges related, for instance, to the need for updated infrastructures, lack of homogeneity in regulations concerning residues across Europe, upscaling and full deployment of novel technologies. However, this shift toward circularity represents a promising avenue for creating a more sustainable and responsible steel industry that aligns with global efforts to combat climate change and reduce the environmental footprint of industrial processes.

Aim and Scope of the Themed Issue

The aim of this special issue is to achieve the following goals:

- Resource efficiency.
- Increasing the recycling of steel scrap and scrap processing residues.
- Materials recirculation (external and internal) with high recycling rate.
- Circularity of other resources (e.g., water, energy, CO₂) and related logistics.
- Enablers (e.g., digital solutions, methods and tools to measure and demonstrate the impact of circular economy approach, workforce upskilling in the area of CE, market creation for residues valorisation, social innovation on CE practices and technologies).
- Disruptive collaboration with clients and suppliers for the circularity of: automotive, construction, energy generation plants (e.g., eco design).
- Industrial-urban symbiosis cases in steel sector.
- Hubs for circularity (or circular industrial parks) in which steelmaking/metal working plays a critical role.



The articles will be based on contributions presented in the ESTEP Annual Event on Circular [\(https://www.estep.eu/events/estep2023annualevent-a-circular-economy-driven-by-the-european-steel/ \)](https://www.estep.eu/events/estep2023annualevent-a-circular-economy-driven-by-the-european-steel/)

Submissions

All relevant papers will be carefully considered, peer reviewed by a distinguished team of international experts, and published in accordance with the Journal's standard policies. Full research papers, technical papers and review articles can be submitted online via the journal's submission and peer review site. Please register choosing the title of the special issue 'Circular Economy initiatives and solutions in the steel sector'.

Please find the instructions for authors at: <https://www.mattech-journal.org/author-information/instructions-for-authors>

Submission deadline – January 31st 2024

Article submission and editorial system [here](#).

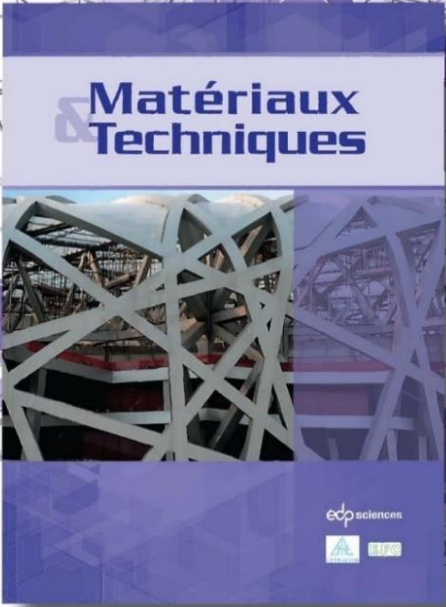
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