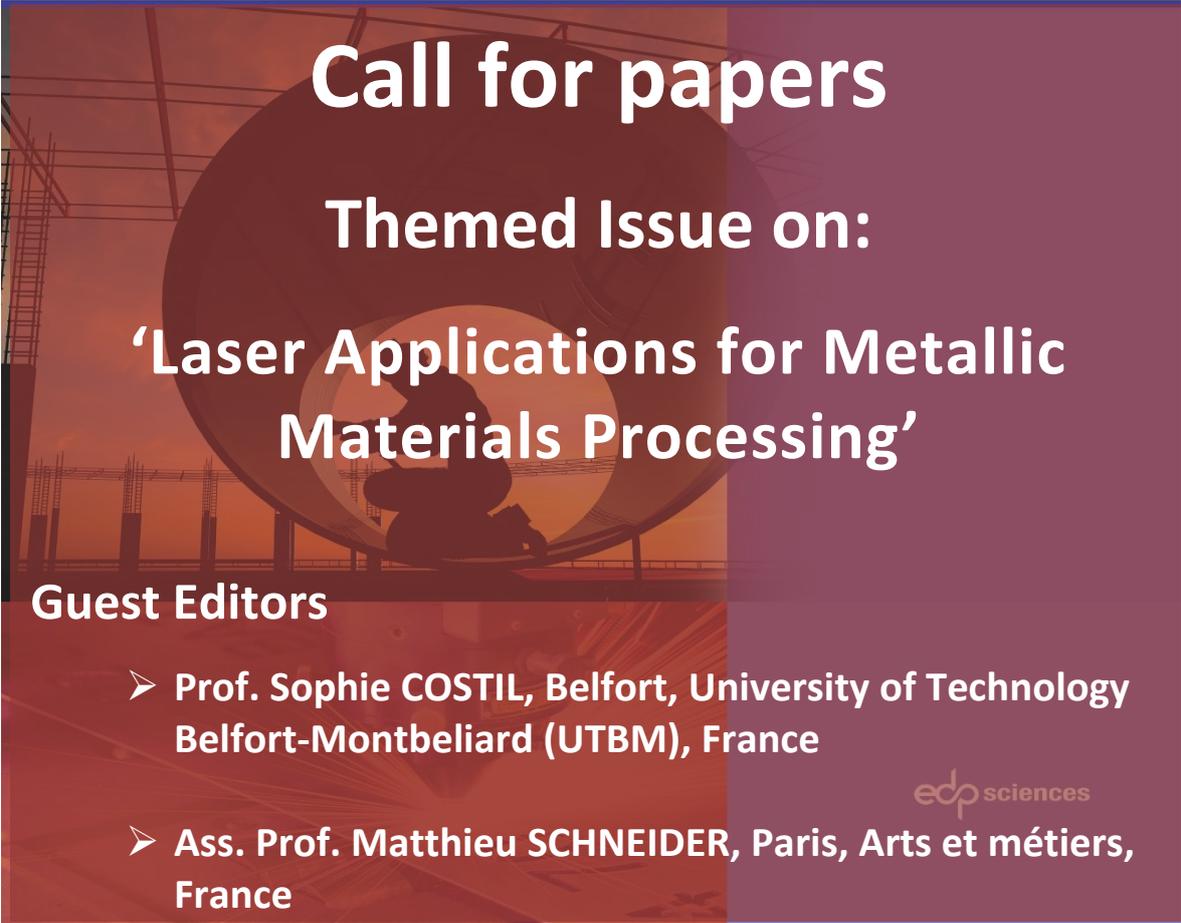




METALLURGICAL **Research & Technology**

Formerly REVUE de MÉTALLURGIE



Call for papers

Themed Issue on:

‘Laser Applications for Metallic Materials Processing’

Guest Editors

- Prof. Sophie COSTIL, Belfort, University of Technology Belfort-Montbeliard (UTBM), France
- Ass. Prof. Matthieu SCHNEIDER, Paris, Arts et métiers, France

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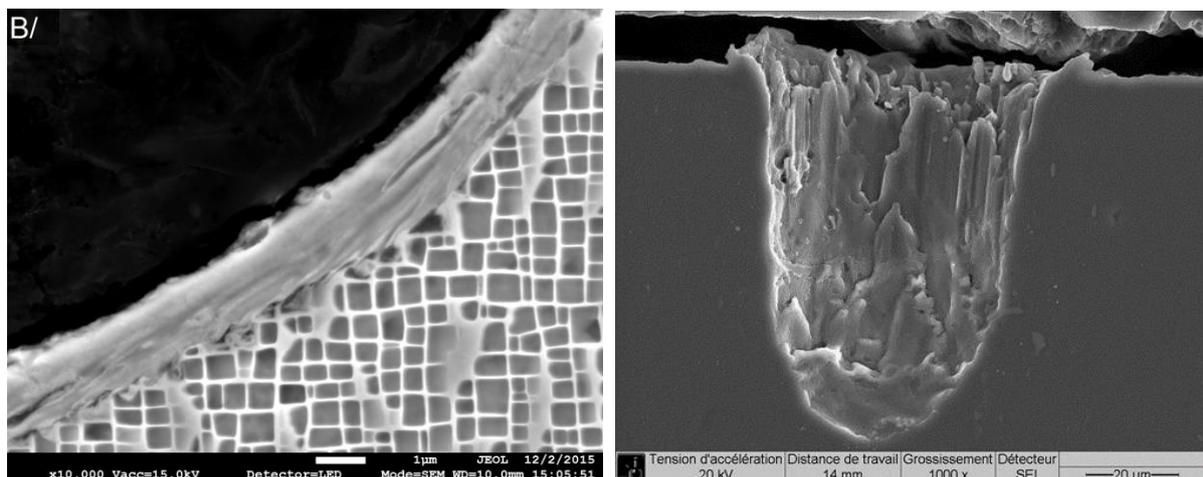
Background

Laser processes are constantly evolving, both from a technological point of view and from the point of view of associated applications. The arrival on the market of new laser sources forces us to regularly revisit the physics associated with the various laser-matter interaction regimes. This situation brings to light new emerging processes (welding, cutting, surface treatments, additive manufacturing, micromachining) which require new studies on a permanent basis. The relationship between processing conditions (laser power, pulse duration, etc.) and material properties must therefore be studied at different scales. The tremendous growth of interest for **multiscale materials** comes from the fact that their

chemical and physical properties can be tuned by varying their compositions and structures. The particularities of metallic materials (inclusions, precipitates, phases, etc.) strongly influence the interaction of a laser beam.

Aims and Scope of the Themed Issue

The aim of this Special Issue on the laser processes and multiscale materials is to bring together information on the recent progress in terms of laser treatments (surface treatments, additive manufacturing, machining, welding, etc.) and metallurgical modifications induced. Different alloy materials can be prepared by laser technology, designing appropriate atomic structures to construct nano and microstructures as well as dissimilar assembly. The influence of the materials in terms of composition and structure on the results after laser interaction must then be highlighted. Examples of some of the recent advances relating to the processing, properties, and structures of metallic materials can be listed in the laser field.



This special edition is mainly based on the thematic school named 'Laserap' dedicated to laser applications and held from October 10 to 14, 2022 in Semur-en-Auxois, France. The topics of the papers that will be considered for publication cover the current research in the field of laser processing of materials in order to relate the influence of their compositions, structures on the properties of use.

Submissions

All relevant papers can be submitted in English. They will be carefully considered, vetted by a distinguished team of international experts, and published in accordance to the Journal's standard policies. Full research 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 '**Laser Applications for Metallic Materials Processing**'.

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

Submission deadline – October 31st 2022

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

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2. For papers that have not chosen the Open Access Option (those papers will be read only by subscribers), there are **no publication charges**.

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