

## Behavior of Materials (Alloys, Coatings) in Conditions Specific to Gen IV Nuclear Reactors

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submissions:

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### Message from the Guest Editors

Today, in the face of the global energy crisis, coupled with climate change, countries are looking for any potential alternatives to replace their dependence on fossil fuels. Thus, a renewed interest in nuclear energy, considered as much cleaner, can be observed. The Fourth Generation International Forum (GIF) is an important actor involved in R&D activities regarding advanced nuclear energy systems.

One of the main challenges in the development of these types of reactors is represented by the materials used for internal components and the chemistry of these harsh environments.

This Special Issue is focused on providing a platform for online academic exchanges between researchers and readers for finding solutions in the following fields:

- Experimental tests to assess the compatibility of environments specific for Gen IV reactors with candidate materials.
- High-performance coatings resistance in these environments.
- New materials produced via different technologies including additive manufacturing.
- Advanced methods and techniques to assess behaviour of candidate materials (alloys/coatings) under conditions specific to Gen IV reactors.



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## Message from the Editorial Board

Now more than ever, research is called for to produce technologies and improve knowledge to solve the major challenges faced by our society. The development of new materials and devices for (without the ambition to be exhaustive) energy, health and food technology, together with the need for establishing processes that reduce the impact on critical resources and the environment, is indeed at the center of most contemporary research. Surface science and engineering play a key role in this regard. Refining surfaces and their modifications provides new materials, architectures and processes with a huge potential to aid most societal challenges. *Coatings* is a well-established, peer-reviewed, online journal that focuses on the dissemination of publications in the field of surface science and engineering. *Coatings* publishes original research articles that report cutting-edge results and review papers on the hottest topics.

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