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Research on New Thermal Protection Mechanism and Materials

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Message from the Guest Editors

In this Special Issue entitled “New Thermal Protection Mechanism and Materials”, achievements in experimental and computational studies of new thermal protection mechanism and materials are presented. New thermal protection materials have huge potential applications for thermal protection systems and hypersonic vehicles. They make it possible to overcome the limitations of traditional passive thermal protection materials, thereby improving the performance of thermal protection systems, which can be applied to the next generation of hypersonic vehicles. This Special Issue aims to cover recent trends and the latest research advances in the field of thermal protection mechanism, methods, characterization, models, and application to such aspects as thermal protection systems.

In particular, the topics of interest include, but are not limited to, the following:

- Reusable thermal protective materials;
- Ceramic-based thermal protective materials;
- New thermal protection structure;
- Active thermal protection mechanisms, materials, and structures;
- Electronic transpiration cooling;
- Surface physicochemical reaction;
- Ultrasonically absorptive coating.



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Message from the Editor-in-Chief

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