



Advances in Hypersonic Aircraft Propulsion Technology

Guest Editor:

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Message from the Guest Editor

Numerous experiments and studies performed over the past 50 years have shown the potential benefits of hypersonic aircraft. The revolutionary method of propulsion which makes this possible is the scramjet engine and high-performance propulsion systems, such as turbine-based combined cycle (TBCC) or rocket-based combined cycle (RBCC) systems.

Heat transfer and flow dynamics are the main topics of concern for propulsion systems. Thermal protection has become the biggest problem for aircraft operating at hypersonic speeds due to external aerodynamic heating and internal combustion heat. In addition to more research on thermal management, research into advanced spray, combustion, and flow control technology is also necessary to ensure high combustion efficiency in advanced propulsion systems. Novel or optimized computational and experimental methods can be applied to measure spray, combustion, heat transfer, and flow dynamics within propulsion systems.

This Special Issue aims to provide an overview of recent advances in hypersonic aircraft propulsion technology. We highly encourage original research and review articles from international researchers.





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