Special Issue

Plasmas for Space Propulsion II: Modelling and Diagnostics

Message from the Guest Editors

Most electric space propulsion systems require the formation of a plasma to operate, and sometimes unwanted plasmas develop during operation. While, in principle, plasma use is widespread and can be extended to numerous industrial applications, such as surface modifications or electric switches, the conditions in space can significantly deviate from earthbound applications. This fact most certainly justifies the development and application of new innovative methods to: (a) Experimentally analyze such plasma through diagnostic means;
(b) Model the plasma particle behavior under said conditions. This Issue tries to provide a glimpse at the numerous efforts being undertaken at present to understand the plasmas used in space propulsion applications. While modelling and diagnostics may appear to be separate issues, neither aspect can do without the other in the goal of furthering knowledge about plasmas for space propulsion.

- plasma/ion thrusters
- electric propulsion
- plasma diagnostics
- modeling EP

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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