Special Issue

Recent Developments in Catalysts for Space Thrusters Using Green Monopropellants

Message from the Guest Editors

Realizing the importance of consolidating the findings in this field and sensitize and initialize other catalyst researchers to this vital space technology that can wipe out the use of toxic hydrazine, “catalysts” has decided to bring out a special issue on “Recent development in catalysts for space thrusters using green monopropellants”. The articles can be both original research articles or comprehensive reviews that encompass a particular field. Some of the likely titles can be as follows

- Green propellant overview
- Ionic liquids as propellants
- MP: mission scenario and thruster designs
- MP: decomposition catalyst development
- MP: catalyst decomposition chemistry and kinetics
- MP: catalyst bed configuration and thruster design
- MP: numeric models for catalytic decomposition
- DFT or other quantum mechanical methods for exploring heterogeneous catalysis mechanisms in space thrusters

MP: monopropellant (MP) can be HAN, ADN, HP, nitrous oxide, or any other energetic ionic liquid that can be considered as a green monopropellant

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Editor-in-Chief

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Journal Rank:

JCR - Q2 (Chemistry, Physical) / CiteScore - Q1 (General Environmental Science)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 16.6 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).

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