



Recent Developments in Catalysts for Space Thrusters Using Green Monopropellants

Guest Editors:

Dr. Ghanshyam L. Vaghjiani

In-Space Propulsion Branch,
Rocket Propulsion Division,
Aerospace Systems Directorate,
Air Force Research Laboratory,
AFRL/RQRS, Edwards Air Force
Base, CA 93524, USA

Prof. Dr. Charlie Oommen

Department of Aerospace
Engineering, Indian Institute of
Science, Bangalore, India

Deadline for manuscript
submissions:
closed (31 March 2022)

Message from the Guest Editors

Dear Colleagues,

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

1. Green propellant overview
2. Ionic liquids as propellants
3. MP: mission scenario and thruster designs
4. MP: decomposition catalyst development
5. MP: catalyst decomposition chemistry and kinetics
6. MP: catalyst bed configuration and thruster design
7. MP: numeric models for catalytic decomposition
8. 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

Dr. Ghanshyam L. Vaghjiani

Prof. Dr. Charlie Oommen

Guest Editors

