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Author: Dr. Djamal Darfilal Agence Spatiale Algérienne (ASAL), Algeria, djameldar89@hotmail.fr

GREEN PROPELLANT FOR SPACE APPLICATIONS: LESSONS LEARNED

Abstract

currently, almost every satellite is equipped with a propulsion subsystem, which act as the primary mobility device for orbital modifications and attitude control. due to competitive advantages and successful applications, green propulsion has become a key technology for the next generation of scientific and commercial space missions. Considering these advances in space propulsion technology, theoretical and experimental activities are initiated at the Algerian Space Agency initiated to establish a satellite propulsion test laboratory and develop a green propulsion system. In the scope of the project, ASAL's first qualification test model green propellant based propulsion system has been developed in Algeria's very first satellite propulsion laboratory. the developed system is optimized to provide a minimum of 10 N thrust and 120 s ground specific impulse. In this paper, the project activities are summarized and outputs are presented.