

OS4: Flow Dynamics and Combustion Technology of Hybrid Rocket Propulsion, 17th Edition

November 10, 2025

EX-1

- OS4-1 **Development of Indigenous In-Space Hybrid Propulsion System for Turkish Lunar Project** (*Invited*)
13:30-14:00 Arif Karabeyoglu (Turkish Space Agency and Koc University, Turkey)
- OS4-2 **HyImpulse Sounding Rocket Launch Campaign** (*Invited*)
14:00-14:30 Mario Kobald (HyImpulse Technologies GmbH, Germany)
- OS4-3 **Development and Challenges of Axial Injection End-Burning Hybrid Rocket Using Liquid Oxygen**
14:30-14:45 Harunori Nagata, Sho Suzuki, Teajun Son, Mao Yamaguchi (Hokkaido University, Japan)
- OS4-4 **Development of a 18 KN-class H₂O₂/PP Hybrid Sounding Rocket**
14:45-15:00 Shih-Sin Wei (National Yang Ming Chiao Tung University, Taiwan), Chia-Hsien Hung, Hao-Chi Chang (Taiwan Space Agency (TASA), Taiwan)
- 15:00-15:15 BREAK
- OS4-5 **Demonstration of a Controlled Tethered Landing Attempt Using the HTTP-4 Hybrid Rocket**
15:15-15:30 Yong-Xiang Chang, Shuo-Chieh Wang, Zuo-Ren Chen, Yen-Ting Hou, Tsung-Chun Lee, Jing-Shiuan Shiang (National Yang Ming Chiao Tung University, Taiwan), Yu-Cheng Liang (Taiwan Space Agency (TASA), Taiwan), Chih-Chin Chang, Hsi-Yu Tso, Jui-Cheng Hsu, Leo Yang (National Yang Ming Chiao Tung University, Taiwan), Jhen-Wei Huang (Taiwan Space Agency (TASA), Taiwan), Ming-Tzu Ho (National Yang Ming Chiao Tung University / National Cheng Kung University, Taiwan), Shih-Sin Wei, Jong-Shinn Wu (National Yang Ming Chiao Tung University, Taiwan)
- OS4-6 **Estimation of Hybrid Rocket Combustion States Using an Extended Kalman Filter: A Call for Experimental Validation**
15:30-15:45 Toru Shimada (Nihon University, Japan)
- OS4-7 **Measurement of Residual Thrust Due to Post-Firing Fuel Ablation in a Hybrid Thruster**
15:45-16:00 Hinata Kariya, Kotaka Nagayama, Koichi Utsugi, Toshinori Kuwahara, Yuji Saito (Tohoku University, Japan)
- OS4-8 **Proposal for Low Toxicity Multifunctional Dual-Mode Thruster**
16:00-16:15 Kotaka Nagayama, Hinata Kariya, Koichi Utsugi, Toshinori Kuwahara, Yuji Saito (Tohoku University, Japan)

- OS4-9
16:15-16:30 **Development of High-Regression Rate Fuel for the Shortened Tsuâ-Ing Hybrid Rocket Engine**
Ken-Hsien Chang, Hao-En Sun, Hsi-Yu Tso, Chih-Chin Chang, Shuo-Chieh Wang, Jui-Cheng Hsu, Yong-Xiang Chang, Ming-Hao Wang (National Yang Ming Chiao Tung University, Taiwan), Yu-Tsao Chang, Tzu-Yu Lin (Taiwan Space Agency (TASA), Taiwan), Shih-Sin Wei, Zu Puayen Tan, Jong-Shinn Wu (National Yang Ming Chiao Tung University, Taiwan)
- OS4-10
16:30-16:45 **Experimental Study on the Application of Hypergolic Solid Fuel in High-Concentration Hydrogen Peroxide Hybrid Rocket Engines**
Tzu-Fu Lin, Kun-Hsiu Lee, Chih-Chin Chang, Ko-Lun Chang, Shu-Feng Lin, Hsi-Yu Tso, Jong-Shinn Wu, Zu-Puayen Tan, Shih-Shin Wei (National Yang Ming Chiao Tung University, Taiwan)
- 16:45-17:00 BREAK
- OS4-11
17:00-17:15 **Spray Characterization of Novel Rocket Propellants under High Pressure Environment**
Abdul Kadir M. Poonawala, Reeturaj, Neeraj Kumbhakarna, Aldo Ronald (IIT Bombay, India)
- OS4-12
17:15-17:30 **Molecular Dynamics Study on Interfacial Mass Transport in the Evaporation of n-Dodecane/Nitrogen Binary Mixtures**
Suman Chakraborty, Bongseok Kim, Li Qiao (Purdue University, USA)
- OS4-13
17:30-17:45 **Modeling Regression in CAMUI Hybrid Rockets Varying Concentration of Hydrogen Peroxide**
Melanie Deeble, Hikaru Sakurai, Yuta Miyahara, Hajime Miyasaka, Rihito Nitta, Masashi Wakita, Harunori Nagata (Hokkaido University, Japan)
- OS4-14
17:45-18:00 **Investigation of Key Parameters Influence on Heat Transfer of Subcooled Liquid Oxygen Flowing in a Horizontal Thin Tube under High Heat Flux Conditions**
Kazuaki Tanaka, Kohei Matsui, Koki Kitagawa (Kyushu Institute of Technology, Japan)
- 18:00-18:30 Round table