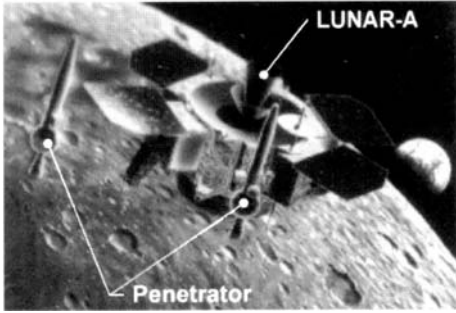
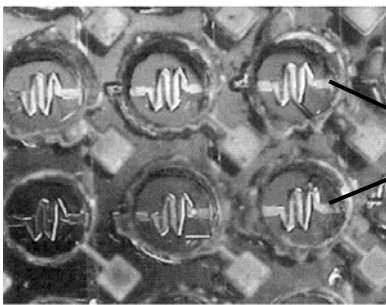
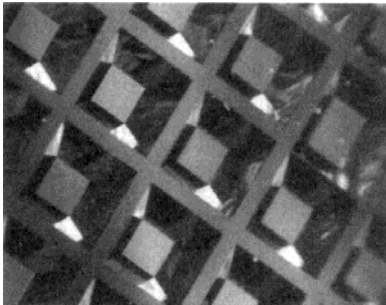
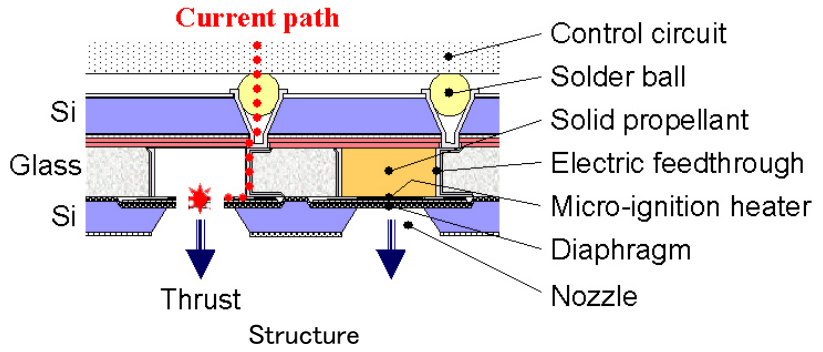


Digital Micro Thruster (Solid Rocket Engine Array)

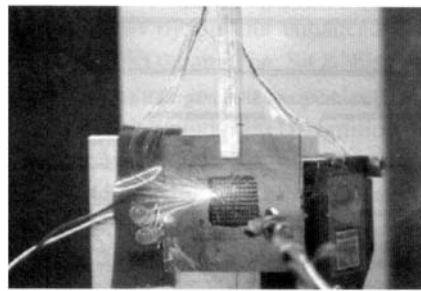
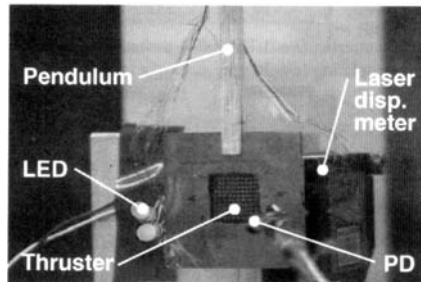


Purpose

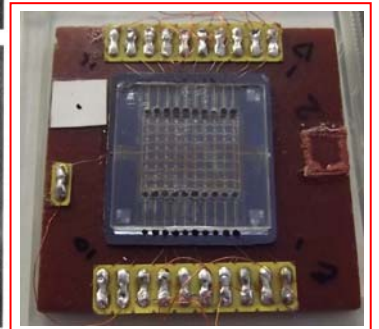


Heater for ignition

Top and bottom sides



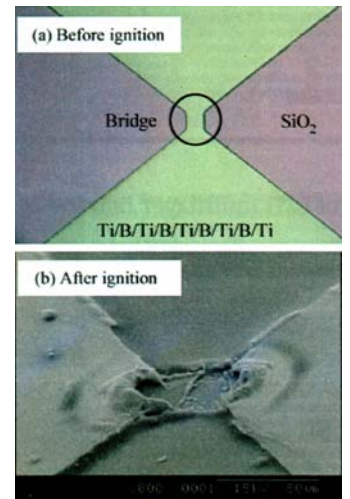
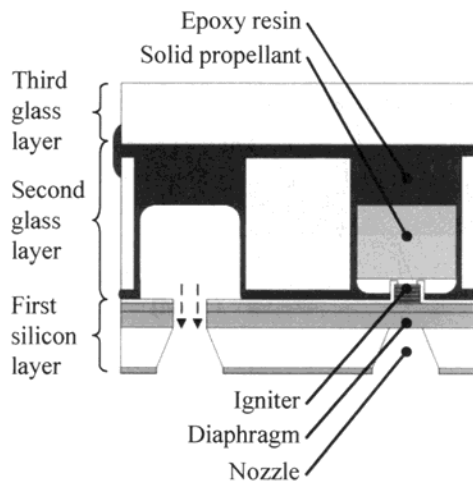
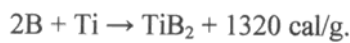
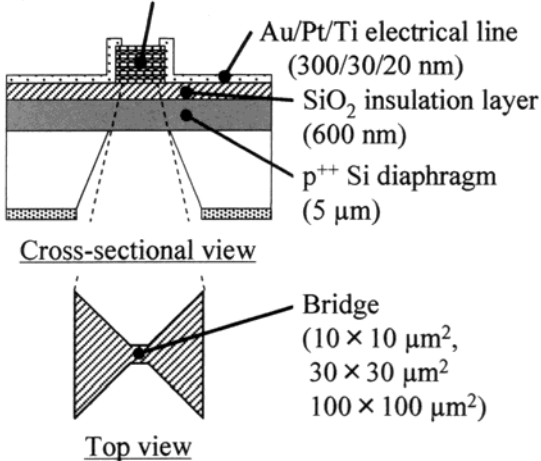
Measurement of thrust force



Digital micro thruster (Tohoku Univ. - JAXA)

Reference : S.Tanaka, R.Hosokawa, S.Tokudome, K.Hori, H.Saito, M.Watanabe and M.Esashi, MEMS-Based Solid Propellant Rocket Array Thruster with Electrical Feedthroughs, Trans. Japan Soc. Aero. Space Sci., 46 (2003) pp.47-51

Ti/B/Ti/B/Ti/B/Ti/B/Ti multilayer
(Ti: 250 nm, B: 220 nm)



Igniter using a reaction of Bi / Ti (Tohoku Univ. - JAXA)

Reference : S.Tanaka, K.Kondo, H.Habu, A.Itoh, M.Watanabe, K.Hori and M.Esashi, Test of B/Ti Multilayer Reactive Igniters for a Micro Solid Rocket Array Thruster, Sensors and Actuators A, 144 (2008) pp.361-366