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(54) **HIGH-TEMPERATURE SUPERCONDUCTING PLASMA THRUSTER SYSTEM HAVING VARIABLE TEMPERATURE RANGES AND BEING APPLIED IN SPACE**

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(57) **ABSTRACT**

A high-temperature superconducting plasma thruster system, having variable temperature ranges and being applied in space, is provided. The high-temperature superconducting plasma thruster system includes: a cathode-anode assembly, a high-temperature superconducting magnet system, a supporting and adjusting platform, a power-and-gas supply and cooling system, and an obtaining control system. The cathode-anode assembly is disposed at a center of a ring of the high-temperature superconducting magnet system; the cathode-anode assembly and the high-temperature superconducting magnet system are spatially engaged with each other by the supporting and adjusting platform to form a main body of the thruster system; the power-and-gas supply and cooling system and the obtaining control system are located outside of the main body of the thruster system and are connected to the cathode-anode assembly and the high-temperature superconducting magnet system.