Cathodic Arc Spacecraft Thruster Fuel Selection

Pulsed cathodic arcs are known to eject plasmas at drift velocities, from 5 – 30 km s\(^{-1}\), and so are attractive from a propulsion perspective. Cathodes constructed from different elements are known to create plasmas with different ion drift velocities, and operate at different energy efficiencies. It is, therefore, necessary to determine efficient fuels for ground tests of a pulsed cathodic arc thruster. In this talk I will detail some metrics by which potential fuels can be compared and then discuss applications, and future work.