

Abstract Submitted
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Characterization of a low pressure Microwave Induced Plasma Discharge AHMED HALA, KACST, ERDOGAN TEKE, Sulyman Dimeril University — A low pressure (0.3-7 Torr) Argon gas Microwave Induced Plasma (MIP) discharge was characterized using Optical Emission Spectroscopy (OES). The electron temperature was measured using peak ratio of the Boltzman lines technique. Electron density was measured using the Stark line broadening technique. The electron temperature was found to decrease from 5000 K to around 3000 K for the pressure range of 0.3 to 7 Torr. This is due to the fact that most of the discharge power is directed to ionizing the gas rather than to heating the electrons.

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