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Inductively Coupled Discharge and Post-Discharge with RF of Ne
NESLIHAN SAHIN, MURAT TANISLI, SERCAN MERTADAM, Anadolu University — Plasma, which is the fourth state of matter, can be produced in laboratories in different ways. In this study, the inductively radio frequency (RF) plasma at low pressure in the quartz glass reactor prepared for special conditions is obtained. This generated plasma is non-local thermodynamics plasma and it includes different particles such as positive ions, electrons and neutral particles. Inductively coupled neon's discharge and post-discharge characteristic properties are examined with optical emission spectroscopy (OES) and then OES is used for determining electron temperature. Differences between discharge and post-discharge zone under the same conditions are obtained. It is investigated how gas filling pressure, the applied RF power to gases and gas flowing rate affect neon inductively coupled RF discharge and post-discharge.

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