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Investigation of optical spectroscopy for the different phases of helium . NELLY BONIFACI, G2E.lab Cnrs, JOEL ROSATO, Laboratoire PIIM, Aix-Marseille Universit and CNRS, 13397 Marseille CEDEX 20, ZHILING LI, Guizhou Institute of Technology, Caiguan Road 1, Guiyang 550003, China, JUSSI ELORANTA, 3Department of Chemistry and Biochemistry, California State University at Northridge, VYACHESLAV SHAKHATOV, Topchiev of Petrochemical Synthesis Institute, RUSSIA, VLADIMIR ATRAZHEV, Joint Institute for High Temperatures, RUSSIA — The micro-plasma created by corona discharge was established around the point electrode in gas and supercritical helium. The visible light from the microplasma was investigated by optical emission spectroscopy as a function of temperature and pressure. The impurity in the helium gas can be considered the addition to allow acquiring the optical emission spectra from not only the helium but also nitrogen and hydrogen. Profiles of the high resolution emission spectra for several species such as H, N_2, N_2^+, He_2 and He were presented and compared.

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