Abstract Submitted
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The effect of nitrogen impurity on the DC breakdown voltage in argon at micrometer gaps[1] MATEJ KLAS, STEFAN MATEJCIK, Department of experimental Physics, Comenius University, Mlynská dolina F2, 84248 Bratislava, Slovakia, MARIJA RADMILOVIC-RADJENOVIC, BRANISLAV RADJENOVIC, Institute of Physics, Pregrevica 118, Belgrade, Serbia, DEPT OF EXPERIMENTAL PHYSICS, COMENIUS UNIVERSITY, MLYNSKÁ DOLINA F2, SLOVAKIA TEAM, INSTITUTE OF PHYSICS, PREGREVICA 118, BELGRADE, SERBIA TEAM — The dc breakdown voltage has been investigated experimentally in a discharge system consisting of two parallel planar Cu electrodes at separation of 100 μm, focusing on addition of a small amount of nitrogen to argon gas. The recorded breakdown voltage curves show the well-known V-shaped characteristics. It was found that the breakdown potential increases with increasing nitrogen concentrations especially at the right hand side of the breakdown voltage curves. The experimental data are compared with the PIC/MCC simulation results and a satisfactorily agreement has been achieved.

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