

Abstract Submitted
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Rate Coefficients for Ion Production by Electrons and Ions in BF₃ Gas VLADIMIR STOJANOVIC, ZELJKA NIKITOVIC, ZORAN RASPOPOVIC, Institute of Physics, University of Belgrade, P.O.B. 68, 11000 Belgrade, JASMINA JOVANOVIC, Faculty of Mechanical Engineering, University of Belgrade, 11000 Belgrade, Serbia, SVETLANA RADOVANOV, Varian Semiconductor Equipment Associates, 35 Dory Road, Gloucester, Massachusetts 01930, ZORAN PETROVIC, Institute of Physics, University of Belgrade, P.O.B. 68, 11000 Belgrade — The interest in the research of the electron and ion transport phenomena in molecular gases arises from their contribution in modeling phenomena of today's advanced technologies. Rate coefficients for radical ion production in plasmas are basic modeling tool to control ion implantation in devices such as PLAD. Cross section set for electrons of Biaggi [1] was extended to allow production of radicals by electron impact dissociative ionization of BF₃ molecule and used to obtain rate coefficients. Cross section sets for radical ions in BF₃ were used to calculate rate coefficients for radicals production. Calculations were performed by using null collision Monte Carlo technique for electron and ion transport that has been verified again basic swarm benchmarks. [1] S. Biagi, 2005 unpublished.

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