Transport Parameters of $F^{(-)}$ Ions in Mixtures Ar/BF_3[1] ZELJKA

NIKITOVIC, VLADIMIR STOJANOVIC, ZORAN RASPOPOVIC, Institute of Physics, University of Belgrade, Pregrevica 118, 11080 Belgrade, JASMINA JO-VANOVIC, Faculty of Mechanical Engineering, University of Belgrade, Kraljice Marije 16, 11000 Belgrade, Serbia, ZORAN LJ. PETROVIC, Institute of Physics, University of Belgrade, Pregrevica 118, 11080 Belgrade — Transport parameters of $F^{(-)}$ ions in mixtures Ar/BF_3 in DC fields were calculated by using Monte Carlo simulation technique. The scattering cross-section set for $F^{(-)}$ in BF_3 is assembled on the basis of Nanbu's technique separating elastic from reactive collisions. In this work we present transport coefficients for the conditions of low and moderate reduced electric fields E/N (E-electric field, N-gas density) accounting for the non-conservative collisions. This mixture is usual in plasma etching applications.

Zoran Lj. Petrovic
Institute of Physics, University of Belgrade, Pregrevica 118, 11080 Belgrade