

AU Le Padellec, A, Djuric, N, Al-Khalili, A, Danared, H, Derkatch, AM, Neau, A, Popovic, DB, Rosen, S, Semaniak, J, Thomas, R, af Ugglas, M, Zong, W, Larsson, M

TI Resonant ion-pair formation in the recombination of NO⁺ with electrons: Cross-section determination

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AB Resonant ion-pair formation from the collisions of NO⁺ ions with electrons was studied using the heavy-ion storage ring CRYRING at the Manne Siegbahn Laboratory of Stockholm University. The total cross section is measured for the formation of N⁺⁺O⁻ for electron energies 8-18 eV, and the results are compared with ion-pair formation in photoionization work. A peak in the cross section is observed at 12.5 eV, with a magnitude of 8.5×10^{-19} cm². An attempt to extract the cross section for the reverse process of associative ionization is made.

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