AU Larson, A, Djuric, N, Zong, W, Greene, CH, Orel, AE, Al-Khalili, A, Derkatch, AM, Le Padellec, A, Neau, A, Rosen, S, Shi, W, Vikor, L, Danared, H, af Ugglas, M, Larsson, M, Dunn, GH
TI Resonant ion-pair formation in electron collisions with HD+ and OH+
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ID DISSOCIATIVE RECOMBINATION; CROSS-SECTIONS; DIELECTRONIC RECOMBINATION; RYDBERG STATES
AB Resonant ion-pair formation from collisions of electrons with, electronic and vibronic ground-state diatomic molecular ions has been, studied in the present work for HD+ and OH+. The cross section for HD+ has a magnitude of the order of 3 x 10(-19) cm(2) and is characterized by an energy threshold and 14 resolved peaks in the energy range up to 16 eV. A theoretical study confirms that the structures derive primarily from quantum interference of the multiple dissociation pathways. Measurements for OH+ reveal that the cross section for H+ and O- formation is lower than 10(-21) cm(2) at energies of 6 and 12 eV.
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