## Absolute high-resolution rate coefficients for dissociative recombination of electrons with HD+: Comparison of results from three heavy-ion storage rings

## A-KHALILI A, ROSE S, DANARED H, et al. PHYSICAL REVIEW A

## 68 (4): Art. No. 042702 OCT 2003

ABRAHAMSSON K CRYRING - A SYNCHROTRON, COOLER AND STORAGE-RING NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS 79: 269 1993

ADAMS NG DISSOCIATIVE RECOMBI: 99 1993

AMITAY Z Dissociative recombination of vibrationally excited HD+: State-selective experimental investigation PHYSICAL REVIEW A  $60:3769\:1999$ 

AMITAY Z Dissociative recombination of CH+: Cross section and final states PHYSICAL REVIEW A 54: 4032 1996

AMITAY Z ROTATIONAL AND VIBRATIONAL LIFETIME OF ISOTOPICALLY ASYMMETRIZED HOMONUCLEAR DIATOMIC MOLECULAR-IONS PHYSICAL REVIEW A 50 : 2304 1994

AMITAY Z SCIENCE 75: 281 1998

ANDERSEN LH Dissociative-recombination and excitation measurements with H-2(+) and HD+ PHYSICAL REVIEW A 55: 2799 1997

ANDERSEN LH RADIATIVE RECOMBINATION BETWEEN FULLY STRIPPED IONS AND FREE-ELECTRONS PHYSICAL REVIEW A 42: 1184 1990

AUERBACH D MERGED ELECTRON-ION BEAM EXPERIMENTS .1. METHOD AND MEASUREMENTS OF (E-HE-2(+) AND (E-HE-3(+) DISSOCIATIVE-RECOMBINATION CROSS-SECTIONS JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS 10 : 3797 1977

BATES DR DISSOCIATIVE RECOMBINATION PHYSICAL REVIEW 78: 492 1950

BIONDI MA MEASUREMENTS OF AMBIPOLAR DIFFUSION IN HELIUM PHYSICAL REVIEW 75: 1700 1949

DANARED H Electron cooling at CRYRING with an expanded electron beam NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT 391: 24 1997

DANARED H ELECTRON COOLING WITH AN ULTRACOLD ELECTRON-BEAM PHYSICAL REVIEW LETTERS  $72:3775\ 1994$ 

DATZ S RADIATIVE LIFETIMES FOR ALL VIBRATIONAL LEVELS IN THE X1-SIGMA+ STATE OF HEH+ AND ITS RELEVANCE TO DISSOCIATIVE RECOMBINATION EXPERIMENTS IN ION STORAGE-RINGS PHYSICA SCRIPTA 46: 343 1992

DEWITT DR Dielectronic recombination of boronlike argon PHYSICAL REVIEW A 53: 2327 1996

DUNN GH DISSOCIATION OF H2+ BY ELECTRON IMPACT PHYSICAL REVIEW LETTERS 15: 610 1965

FORCK P MOLECULAR PHYSICS IN A STORAGE-RING - DISSOCIATIVE RECOMBINATION AND EXCITATION OF COLD HD NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION B-BEAM INTERACTIONS WITH MATERIALS AND ATOMS  $79:273\:1993$ 

FORCK P DISSOCIATIVE RECOMBINATION OF COLD HD+ AT THE TEST STORAGE RING PHYSICAL REVIEW LETTERS  $70:426\:1993$ 

GALLAGHER TF RYDBERG ATOMS: 84 1994

GUBERMAN SL THE DOUBLY EXCITED AUTOIONIZING STATES OF H-2 JOURNAL OF CHEMICAL PHYSICS 78: 1404 1983

GWINNER G Influence of magnetic fields on electron-ion recombination at very low energies PHYSICAL REVIEW LETTERS 84: 4822 2000

HOCHADEL B A RESIDUAL-GAS IONIZATION BEAM PROFILE MONITOR FOR THE HEIDELBERG TEST STORAGE-RING TSR NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT 343: 401 1994

HUS H DISSOCIATIVE RECOMBINATION OF ELECTRONS WITH H-2+ IN LOW VIBRATIONAL-STATES PHYSICAL REVIEW LETTERS 60 : 1006 1988

KELLA D Branching ratios for dissociative recombination of (NN+)-N-15-N-14 PHYSICAL REVIEW LETTERS 77: 2432 1996

KELLA D The source of green light emission determined from a heavy-ion storage ring experiment (vol 277, pg 1530, 1997) SCIENCE 277: 167 1997

KELLA D The source of green light emission determined from a heavy-ion storage ring experiment SCIENCE 276: 1530 1997

KILGUS G HIGH-RESOLUTION MEASUREMENT OF DIELECTRONIC RECOMBINATION OF LITHIUM-LIKE CU26+ PHYSICAL REVIEW A 46 : 5730 1992

KRAMER D NUCL INSTRUM METH A 287: 268 1989

KROHN S Electron-induced vibrational deexcitation of H-2(+) PHYSICAL REVIEW A 62: Art. No. 032713 2000

KUDELAINEN VI ZH EKSP TEOR FIZ 56: 1191 1982

LAMPERT A High-resolution measurement of the dielectronic recombination of fluorinelike selenium ions PHYSICAL REVIEW A 53: 1413 1996

LANGE M Threshold effects and ion-pair production in the dissociative recombination of HD+ PHYSICAL REVIEW LETTERS 83: 4979 1999

LARSON A Resonant ion-pair formation in electron collisions with HD+ and OH+ PHYSICAL REVIEW A 62 : Art. No. 042707 2000

LARSSON M DIRECT HIGH-ENERGY NEUTRAL-CHANNEL DISSOCIATIVE RECOMBINATION OF COLD H3+ IN AN ION STORAGE RING PHYSICAL REVIEW LETTERS  $70:430\:1993$ 

MOLLER SP 1991 IEEE PART ACC C: 2811 1991

PASTUSZKA S Electron cooling and recombination experiments with an adiabatically expanded electron beam NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT 369: 11 1996

PEART B J PHYS B ATOM MOL PH 6: 359 1973

PEVERALL R The ionospheric oxygen green airglow: Electron temperature dependence and aeronomical implications. GEOPHYSICAL RESEARCH LETTERS 27: 481 2000

PHANEUF RA PRODUCTION OF D+(N = 4) FROM ELECTRON-D2+ DISSOCIATIVE RECOMBINATION PHYSICAL REVIEW A  $11:528\ 1975$ 

POTH H ELECTRON COOLING - THEORY, EXPERIMENT, APPLICATION PHYSICS REPORTS-REVIEW SECTION OF PHYSICS LETTERS 196: 135 1990

SCHMIDT HT Dissociative recombination for vibrationally excited H-2(+) ions: The effect of laser photodissociation on the initial vibrational distribution JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS 29: 2485 1996

SCHNEIDER IF Rotational effects in HD+ dissociative recombination: Theoretical study of resonant mechanisms and comparison with ion storage ring experiments JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS 30: 2687 1997

STERNBERG A CHEMISTRY IN DENSE PHOTON-DOMINATED REGIONS ASTROPHYSICAL JOURNAL SUPPLEMENT SERIES 99 : 565 1995

STROMHOLM C ABSOLUTE CROSS-SECTIONS FOR DISSOCIATIVE RECOMBINATION OF HD+ - COMPARISON OF EXPERIMENT AND THEORY PHYSICAL REVIEW A  $52:4320\:1995$ 

TAKAGI H DISSOCIATIVE RECOMBI 4: 180 2000

TAKAGI H Dissociative recombination and excitation of H-2(+), HD+, and D-2(+) with electrons for various vibrational states PHYSICA SCRIPTA 96: 52 2002

TANABE T DISSOCIATIVE RECOMBI 4: 170 2000

TANABE T A liquid-helium-free superconducting electron cooler at the storage ring TARN II NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT 441: 326 2000

TANABE T ELECTRON COOLING EXPERIMENTS AT INS NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT 307 : 7 1991

TANABE T DISSOCIATIVE RECOMBINATION OF HD+ WITH AN ULTRACOLD ELECTRON-BEAM IN A COOLER RING PHYSICAL REVIEW LETTERS 75 : 1066 1995

TANABE T DISSOCIATIVE RECOMBINATION OF HEH+ AT LARGE CENTER-OF-MASS ENERGIES PHYSICAL REVIEW LETTERS 70 : 422 1993

VANDERDONK P DISSOCIATIVE RECOMBINATION OF H-2+ PHYSICAL REVIEW LETTERS 67: 42 1991

VANDERZANDE WJ Dissociative recombination of H2+: Product state information and very large cross sections of vibrationally excited H2+ PHYSICAL REVIEW A 54 : 5010 1996

ZAJFMAN D MEASUREMENT OF BRANCHING RATIOS FOR THE DISSOCIATIVE RECOMBINATION OF COLD HD+ USING FRAGMENT IMAGING PHYSICAL REVIEW LETTERS 75 : 814 1995