AU Le Padellec, A, Collins, GF, Danared, H, Kallberg, A, Hellberg, F, Neau, A, Fritioff, K, Hanstorp, D, Larsson, M
TI Relative cross sections for the electron impact single detachment on Li-
SO JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS
LA English
DT Article
ID NEGATIVE HYDROGEN ION; PHOTODETACHMENT; RESONANCES; THRESHOLD; STATES; NONEXISTENCE; COLLISIONS; ATOMS; NA; H2
AB The electron impact single detachment process on Li- targets was, studied using the storage ring CRYRING located at the Manne Siegbahn Laboratory in Stockholm, Sweden. The Li- ions, first stored in the storage ring, were merged with a cold, 1.4 cm in diameter, electron beam. The neutral Li atoms, originating from the process under scrutiny, were recorded by an energy-sensitive surface barrier detector in order to measure the relative electron single detachment cross section. The findings are the following. The cross section increases smoothly above the 1.4 eV detachment threshold and reaches a maximum at about 12 ev At even larger energies a slow decrease, which follows the In(E)/E energy dependence predicted by the Bethe-Born approximation, is observed.
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RP Le Padellec, A, Univ Toulouse 3, LCAR, UMR 5589, 118 Route Narbonne, Bat 3 R1B4, F-31062 Toulouse 4, France.
NR 36
TC 3
PU IOP PUBLISHING LTD
PI BRISTOL
PA DIRAC HOUSE, TEMPLE BACK, BRISTOL BS1 6BE, ENGLAND
SN 0953-4075
J9 J PHYS-B-AT MOL OPT PHYS
JI J. Phys. B-At. Mol. Opt. Phys.
PD SEP
PY 2002
VL 35
IS 17
BP 3669
EP 3676
PG 8
SC Physics, Atomic, Molecular & Chemical; Optics
GA 703XH
UT ISI:000184307300008