

INVESTIGATION OF VUV RADIATION
EXCITED BY ELECTRON - ZINC
ATOM COLLISIONS

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S u m m a r y

For the first time, using the electron-atom collision excitation method, the zinc atom emission VUV spectra at $60 \div 110$ nm are investigated in the electron energy range of $20 \div 60$ eV. It is found that these spectra consist mainly of the ZnII lines corresponding to the ground-state combinations of the $3d^9 4s 4p$ (Beutler) and ordinary $3d^{10} np$ ($n = 5 \div 8$) states. Amongst them, the first-type lines dominate in intensity. At relatively high electron energies (> 100 eV), the abnormal increase in the intensity of the second-type lines (for $n = 7$ and 8) is found that is explained due to the effect of configuration mixing. The excitation functions for the ZnII 88.1 nm line (the most intense in the spectra) and the resonance ZnIII 67,7 nm line are investigated. The results are compared with the excitation functions obtained earlier for ZnII and ZnIII lines from the states of other configurations.