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Excitation energies, radiative data and collisional excitation cross-section of Sn (Sn3+, Sn4+) and W (W11+ and W13+) ions

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Abstract
We have calculated atomic data such as energy levels, transition wavelengths, oscillator strengths, and transition rates for Sn3+, Sn4+, W13+ and W11+ ions [1-2]. We have employed Flexible atomic code (FAC) in our computations. We have computed lowest 31, 17, 304 and 500 fine structure levels for Sn3+, Sn4+, W11+ and W13+ resp. We have provided transition data among lowest 31, 17, 304 and 500 fine structure levels for Sn3+, Sn4+, W11+ and W13+ respectively. We have calculated lifetime of Sn3+ and Sn4+ ions and compared with theoretically calculated and experimentally measured lifetimes. We have also predicted that lifetime of fine structure levels of 4d95s is extremely large and can be used as metastable states. We have also reported collision cross-section for Ag-like and Pd-like Sn from ground state to lowest 31 levels and 17 levels resp. We have compared our calculated data with available theoretical and experimental results [3-12] and discussed difference between them.

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