

Abstract Submitted  
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**Single Electron Capture by C4+ from Atomic and Molecular hydrogen at low energies**<sup>1</sup> DWAYNE JOSEPH, Department of Physics, Florida A&M University, BIDHAN SAHA, Department of Physics, Florida A&M University — Electron Capture is well known to be an important collision process in nearly all types of plasma environments from terrestrial laboratories [1] to solar system atmospheres [2] to astrophysical sources. Ion-molecule collisions have received less attention both theoretically and experimentally than its atomic counterpart due to extra degree of freedom. We report here our calculation using ab initio structure calculations. We compare our findings with other available theoretical and experimental results. [1] R. K. Janev, in “Atomic and Molecular Processes in Fusion Edge Plasmas” (Plenum Press, NY, 1995), p1. [2] T. E. Cravens, Science 296, 1042 (2002).

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