

Abstract Submitted
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Calculations of Stopping Powers for Electron in Bio-molecules

A.K.F HAQUE, M.A. UDDIN, A.K. BASAK, M.I. HOSSAIN, M. HASAN, Department of Physics, University of Rajshahi, Rajshahi-6205, Bangladesh, F.B. MALIK, Department of Physics, Southern Illinois University, Carbondale, IL-62901, B.C. SAHA, Department of Physics, Florida A&M University, Tallahassee, FL 32307 — Accurate information for the stopping powers (**SPs**) of various media including various complicated molecules for energetic electrons becomes essential in many areas of current research including health sciences. Few easy to implement formulas have enjoyed much use for atomic targets [1]. Molecular media, especially the bio-molecules, poses stringent test of any available relied theories. A semi empirical model including the accurate density distributions of the media is proposed to investigate complex molecular targets; our calculated **SPs** for **H₂O** and **C₅H₅N₅O** are found in good agreement with available experimental findings for E =1 to 10 GeV region.

[1] A. K. F. Haque, M. a. Uddin, A. K. Basak, M. I. Hossain, M. Hasan, B. C. Saha. and F. B. Malik and, *Electron impact stopping powers for atomic and molecular media: A simplified semi-empirical model*, **EPL** (under consideration) 2014.

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