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Total Cross Sections for Electron Scattering from CF_4, CF_3H, CF_2H_2, and CFH_3 Molecules in Energy Range from 100 to 3000 eV

SUN Jin-Feng,[1] TAN Xiao-Ming,[1] LIU Yu-Fang,[1] and SHI De-Heng[1,2]

[1] Department of Physics, Henan Normal University, Xinxiang 453002, China
[2] Department of Foundation, the First Aeronautical College of Air Force, Xinyang 464000, China
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Abstract: The additivity rule has been employed to calculate the total cross sections for electron scattering by CF_4, CF_3H, CF_2H_2, and CFH_3 molecules over an incident energy range from 100 to 3000 eV. Compared with other calculations and experimental data for CF_4, excellent agreement has been obtained. Above 1000 eV, there are no experimental data for CF_3H, CF_2H_2, and CFH_3, so the present results can provide comparison and prediction for experimental research.

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Key words: electron scattering, total cross sections, additivity rule

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