

Low Energy Electron Impact Excitation of Simple Diatomic Molecules – H₂ and N₂
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Recent progress regarding the electron impact excitation of the low-lying states of these important diatomics as well as comparisons with existing theoretical models, regarding differential scattering cross-sections, will be presented. In addition, new work on Rydberg-valence interactions¹ for the dipole-allowed states of N₂ will be discussed. These Rydberg-valence interactions result in complicated, but interesting interference effects in the differential scattering cross-sections and pose challenges for experiments and scattering models.

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1. Helene Lefebvre-Brion, Robert W. Field, *The Spectra and Dynamics of Diatomic Molecules* (Academic Press, New York) 2004.