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Nanoscale Interactions Driving Macroscopic Phenomena: New Insights into the role of Electron-Driven Processes in Atmospheric Behaviour[1]

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Electrons with energies over a wide range (eV to keV) drive a variety of atomic processes, such as ionisation and excitation of atoms and molecules. The products then play a role in the chemical reactions that occur in the atmosphere, and so influence macroscopic parameters, such as the density of minor constituents and the electron density. This talk describes new insights into the role of these electron-driven processes in atmospheric behaviour.

[1]In collaboration with Laurence Campbell and Peter Teubner, ARC Centre for Antimatter-Matter Studies, Flinders University; David Cartwright, formerly of Los Alamos National Labs.