

ON THE COVER DANCING ELECTRONS LOSE THE RACE

Electrons photoemitted from subsurface layers of WSe₂ are strongly affected by intra-atomic interactions. After absorption of a photon, the electrons are dynamically confined by a centrifugal barrier and remain trapped for times in the attosecond scale. The motion of these electrons around the nuclei, before being eventually emitted, is kind of a dance. A combination of experimental and theoretical work shows that electrons that remain 'dancing' around the atom need longer times to reach the surface. The cover image shows an artist's rendition of this process.

Angular momentum-induced delays in solid-state photoemission enhanced by intra-atomic interactions
Siek F, Neb S, Bartz P, Hensen M, Struber C, Fiechter S, Torrent-Sucarrat M, Silkin VM, Krasovskii EE, Kabachnik NM, Fritzsche S, Diez Muino R, Echenique PM, Kazansky AK, Muller N, Pfeiffer W, and Heinzmann U. Science 357, 1274 (2017).