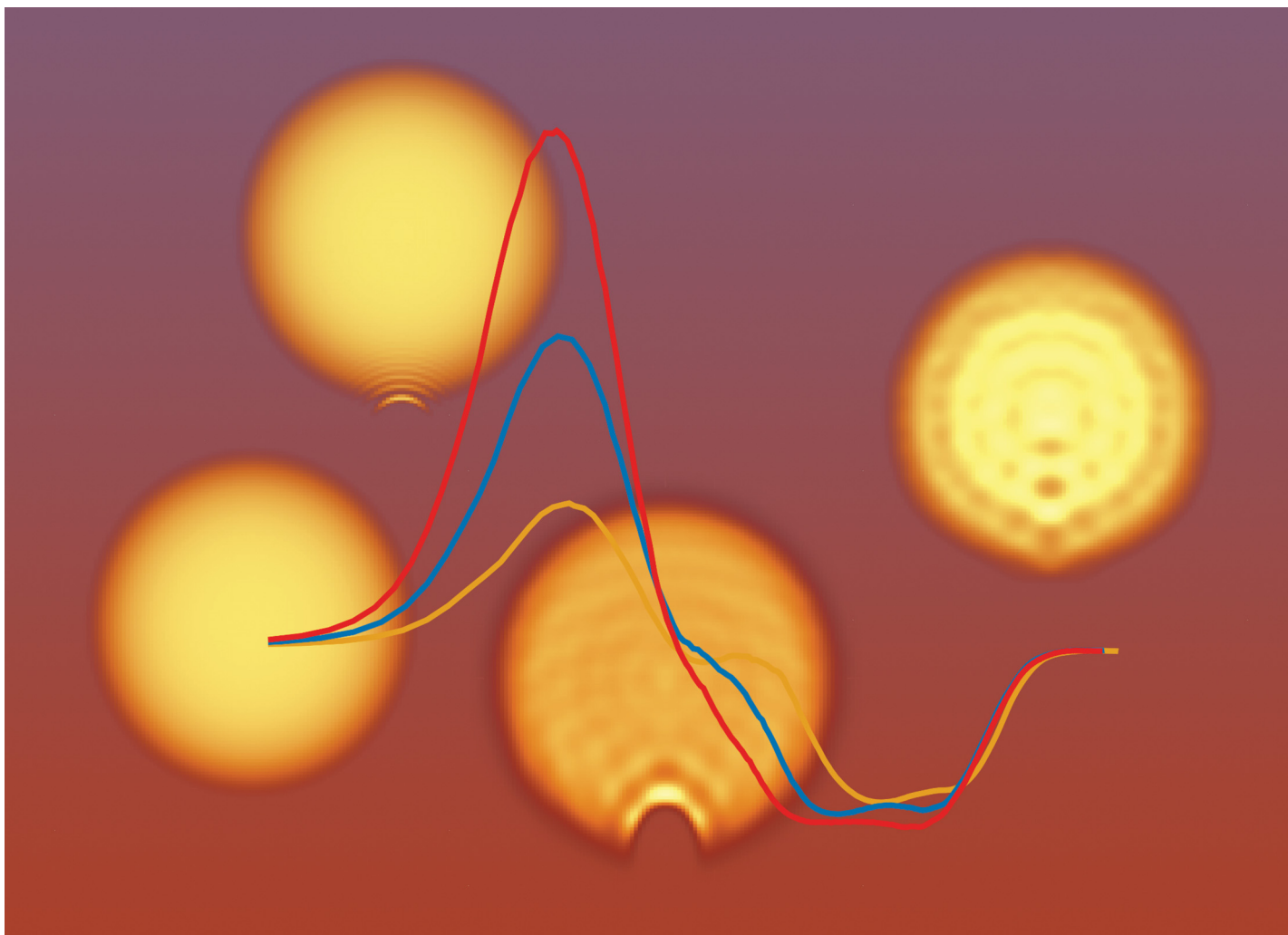


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Showcasing collaborative research between the Center for Nanoscale Materials (Argonne National Laboratory) and the Dept. de Ciència de Materials i Química Física and IQTC (Univ. Barcelona)

Quantum dynamics of the temporary capture of light atoms by superfluid helium nanodroplets at very low collision energies ($\approx 1\text{--}13$ meV): the case of the hydrogen atom and its isotopes

The capture of H and isotopes by a HeND was studied at very low energies. A dynamical barrier and minimum arise which play key roles. Only a temporary capture of the atom occurs (atom-HeND collision complexes with different lifetimes). Hydrogen exhibits behaviour different from other isotopes due to its more quantum character and faster motion.

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As featured in:



See Miguel González *et al.*, *Phys. Chem. Chem. Phys.*, 2025, **27**, 17212.