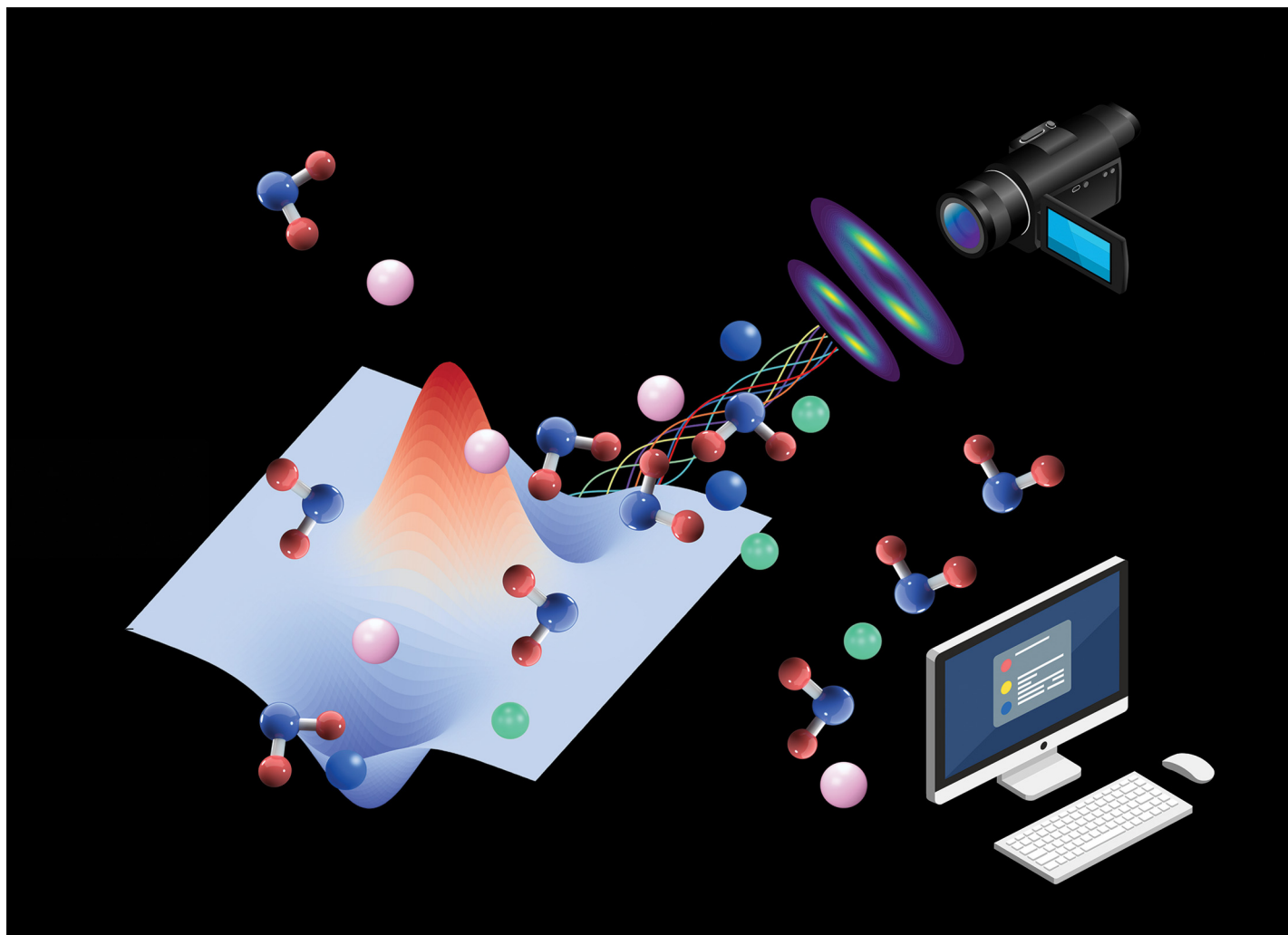




Showcasing research from the groups of Thierry Stoecklin, Institut des Sciences Moléculaires, Université de Bordeaux, Bordeaux, France, and Zhong-Fa Sun and David H. Parker, Department of Physics, Anhui Normal University, Anhui, China.

A comprehensive study of the differential cross sections for water-rare gas collisions: experimental and theoretical perspectives

Using crossed molecular beams, velocity map imaging, and quantum scattering calculations on precise potential energy surfaces, this study explores water-rare gas collisions (Ne, Ar, Xe). Experimental results align well with theory, showing cross sections increasing with rare gas mass due to stronger interactions. Angular distribution oscillations highlight short-range repulsion, confirming collision dynamics are dominated by the interaction potential's repulsive component.

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See Ricardo Manuel García-Vázquez, Zhong-Fa Sun, David H. Parker, Thierry Stoecklin *et al.*, *Phys. Chem. Chem. Phys.*, 2025, **27**, 12139.