



**Showcasing research from the Exotic Surfaces Group at
Graz University of Technology, Austria.**

Nanoscale motion of organic π -conjugated molecules:
exploring van der Waals forces, friction, and quantum
effects

We investigate how organic π -conjugated molecules move
and interact on surfaces at the nanoscale. Using advanced
scattering techniques, our work reveals how van der Waals
forces, molecular friction, and subtle quantum effects govern
diffusion and energy dissipation. These insights advance
the fundamental understanding of surface dynamics and
molecular transport, with implications for nanoscale devices,
molecular assembly, and functional materials.

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As featured in:



See Anton Tamtögl and
Marco Sacchi,
Nanoscale Horiz., 2025, **10**, 3158.