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Sommario/riassunto	<p>In this work, magnetic atoms on surfaces are studied with low-temperature scanning tunneling microscopy. Motivated by the idea to use single atoms as magnetic bits, the factors that allow or prevent long-term stability of their magnetic moments are investigated. Lifetimes of up to several minutes can be achieved for the magnetic moments of holmium atoms on a Pt(111) surface, resulting from the combined symmetries of the system. Corresponding theoretical calculations are presented and evaluated.</p>