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Sommario/riassunto	This PhD thesis summarises a study of the nanostructuring of single molecule magnets and organic radicals on metallic surfaces, carried out by the author in collaboration with a number of research groups in Italy, France, Germany and Israel. A tailored approach was followed to graft individual molecules to the surface, to characterise the morphology of the functionalised surfaces with standard scanning probe microscopy and to investigate their magnetic properties using X-Ray circular dichroism. The aim of this project was to develop the initial basis for the organisation and addressing of magnetic molecules with a view to the development of single molecule devices for data storage and molecular-spintronic applications.