

Abstract Submitted
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Successful Deposition of Cr₇Ni Molecular Clusters on Au and HOPG MARCO AFFRONTI, CNR-S3 and Univ. of Modena, ALBERTO GHIRRI, VALDIS CORRADINI, CNR S3, GRIGORE TIMCO, RICHARD WIMPENNY, Univ. Manchester, CNR S3 AND UNIV. MODENA TEAM, UNIVERSITY OF MANCHESTER TEAM — Molecular nanoMagnets (MnM) are quantum objects with great potentialities as molecular devices for storing or processing information [1]. Key issues are to understand to which extent we are able to control interaction with the surface and if/how MnM preserve their properties when grafted on surfaces. Here we deeply investigated the properties of submonolayer distributions of isolated molecular Cr₇Ni rings, excellent candidate for encoding qubits, deposited by liquid phase on Au(111) [2,3] and HOPG surfaces [4], exploiting STM, XPS, X-ray Absorption Spectroscopy (XAS) and Magnetic Circular Dichroism (XMCD) techniques. Overall, our results show that complex magnetic molecules can be successfully grafted onto different surfaces, and that possible changes in their magnetic behavior must be considered case by case.

- [1] M. Affronte . J. Mater. Chem., 19, 1731 – 1737 (2009); G. Timco et al. Nature Nanotechnology 4, (2009) 173.
- [2] V. Corradini et al., Phys. Rev. B 79, 144419 (2009)
- [3] V. Corradini et al., Phys. Rev. B 77, 014402 (2008)
- [4] A. Ghirri et al. submitted (2009).

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