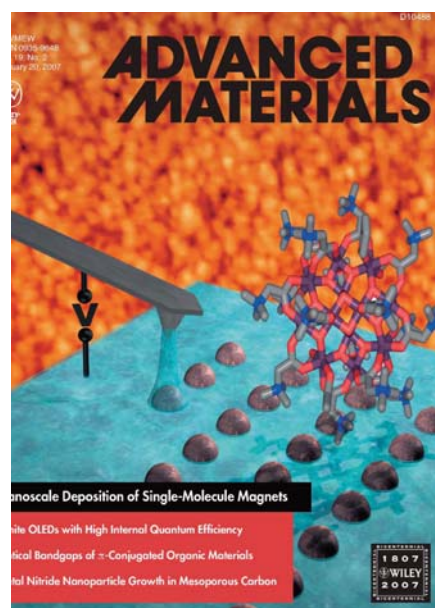


# THE INSTITUTE OF MOLECULAR SCIENCE, A NANOTECHNOLOGY LEADER

The Institute of Molecular Science (Instituto de Ciencia Molecular, ICMol) recently proposed an experiment to the international scientific community on quantum computing, a huge molecular nanoelectronics challenge indeed (cover of *Nature Nanotechnology*) and one that may well be a step towards the next computer revolution.

“IN CHEMISTRY, UNIVERSITAT DE VALÈNCIA IS THE SECOND MOST CITED SPANISH UNIVERSITY BY INTERNATIONAL SCIENTIFIC JOURNALS”



The results of this research come from work on nanometric systems in the storage and processing of information, this being one of the research lines of Eugenio Coronado's research team, the main character yet again on another international cover, that of *Advanced Materials*. In the former case, in cooperation with CSIC, an alternative was presented for the manufacturing of functional devices at a nanometric level, opening new manufacturing avenues for magnetic memories far better than current ones. Now, the proposal consists in using magnetic molecules for the study of the coupling between two q-bits. The q-bit –an information unit in

AFTER MAKING PROGRESS IN THE CONSTRUCTION OF TOP DENSITY MAGNETIC MEMORIES CORONADO'S TEAM SUGGEST AN EXPERIMENT ON MOLECULAR QUANTUM COMPUTER. THE PROJECT APPEARED ON THE COVER OF NATURE NANOTECHNOLOGY

quantum computing- contains much more information than the bit and allows to carry out operations that would not be possible in classical physics. Thus, problems considered

difficult by conventional computation turn trivial, this leading to more speed in the hypothetical quantum computer and to the possibility of resolving currently insurmountable problems. This research was jointly conducted with Daniel Loss' research group from the Swiss ETH.

In Chemistry, Universitat de València ranks second among Spanish universities as being most cited by international journals, in the 82th position of the world ranking of the ISI (Institute of Scientific Information) on the Web of Science. More than 90% of the highly influential publications that place UV in that position come from ICMol research groups.

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