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Observation of self-assembled Mn_{12}-ac Molecules on Highly Ordered Pyrolytic Graphite[1] DONGMIN SEO, WINFRIED TEIZER, Department of Physics, Texas A&M University, College Station, TX 77843- 4242 — Thin films of the single molecule magnet Mn_{12}-ac have been deposited on Highly Ordered Pyrolytic Graphite (HOPG) by a solution evaporation method [1-3]. Mn_{12}-ac molecules in a well-ordered self-assembled triangular lattice were subsequently observed in these films by Scanning Tunneling Microscopy (STM) at room temperature under ambient conditions. STM images show typical center to center intermolecular separations of $\sim$ 5 nm. X-ray photoelectron spectroscopy shows that the self-assembled compound on the HOPG surface is consistent with Mn_{12}-ac and a control experiment demonstrated that it cannot be another species that may be present in the solvent.
[1] K. Kim et al., Appl. Phys. Lett. 85, 3872 (2004).
[2] D. M. Seo et al., J. Mag. Magn. Mater. 301, 31 (2006).
[3] D. Seo et al., J. Mag. Magn. Mater. in press (doi:10.1016/j.jmmm.2006.09.034).

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