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Magnetic anisotropies of late transition metal atomic clusters

JAIME FERRER, LUCAS FERNANDEZ-SEIVANE, Departamento de Física, Universidad de Oviedo — We analyze the impact of the magnetic anisotropy on the geometric structure and magnetic ordering of small atomic clusters of palladium, iridium, platinum and gold. We have employed a non-collinear implementation of Density Functional Theory where the spin-orbit interaction has been included self-consistently. The size of the clusters range from two to five, six or seven atoms, depending on the element. Our results highlight the relevance of the spin orbit interaction in the magnetic properties of small atomic clusters made of fourth- and fifth-row elements [1].

[1] L. Fernández-Seivane and J. Ferrer, Phys. Rev. Lett. **99**, 183401 (2007)

Jaime Ferrer
Departamento de Física, Universidad de Oviedo

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