

## MAGNETISM OF SOFT-LANDED CADMIUM ATOMS ON NICKEL SURFACE

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Applying elaborate preparation techniques, isolated radioactive Cadmium atoms were positioned at different sites on a ferromagnetic Nickel surface [1]. The magnetic hyperfine fields and the electric field gradient were measured by the perturbed angular correlation (PAC) spectroscopy of gamma-radiation. The experiments were performed in ultra-high vacuum at the on-line mass separator ISOLDE of CERN/Geneva. The magnetic fields at Cd were found to depend on the number of neighbouring Nickel atoms (coordination number NN) and exhibited a change of sign between NN=5 and NN=4. The results were confirmed by calculations using the Greens function embedding methods and can be explained by a polarization in the s-conduction band [2]. The field gradients, which are a representation of the electric charge distributions, were interpreted to develop from asymmetric populations of p-sublevels [3]

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[3] V. Bellini, S. Cottenier, M. Çakmak, F. Manghi and M. Rots, Phys. Rev B 70 (2004) 155418