

Influence of the structure on the magnetic and magneto-optical properties of Co on Pd(100) overlayers

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The electronic, magnetic and magneto-optical properties of Co on Pd(111) overlayers have been studied using relativistic linear muffin tin orbital band structure calculations within density functional theory. The models of 1- and 2- monolayer thick Co with ordered and disordered structures corresponding to experimentally studied ones [1] have been studied using supercell approach. The calculated dependences of the magneto-optical Kerr effect on the structural disorder are compared with the observed in the experiment, and their correlation with the electronic, magnetic and anisotropic properties of the systems is discussed.

[1] H.L. Meyerheim, M. Przybylski, A. Ernst, Y. Shi, J. Henk, E. Soyka, and J. Kirschner, *Phys. Rev. B* **76**, 035425 (2007)

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Poster

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