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Magnetocrystalline anisotropy "space" distribution over atoms from different first principles approaches ROMAN CHEPULSKYY, DMYTRO APALKOV, New Memory Technology, Samsung Semiconductor R&D Center, Samsung Electronics — Interplays between bulk vs interface and electron hybridization vs stress contributing into the magnetocrystalline anisotropy are studied from first pronciples. Fe/MgO system is considered as example with variable Fe thickness. The effect of stress is modeled by consideration of a number of fixed in-plane lattice parameters with full relaxation in z-direction. Different approaches to calculate separate atom contributions into the total magnetocrystalline anisotropy are compared and controversies are discussed

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