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Magnetic properties of nanocrystalline materials for high frequency applications

Craus, Cristian

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List of publications

1. **C.B. Craus**, A.R. Chezan, N.G. Chechenin, D.O. Boerma and L.Niesen, “Magnetization dynamics in soft nanocrystalline thin films with induced uniaxial anisotropy”, submitted to Phys. Rev. B (chapter of the thesis).
2. **C.B. Craus**, A.R. Chezan, N.G. Chechenin, D.O. Boerma and L.Niesen, “The influence of the substrate topography on the magnetization dynamics of soft magnetic thin films”, to be submitted to J. App. Phys. (chapter of the thesis).
3. **C.B. Craus**, A.R. Chezan, N.G. Chechenin, D.O. Boerma and L.Niesen “Soft magnetism in nitrided Fe₉₃Ni₄Cr₃ and Fe₉₄Ni₄Ti₂ cold rolled alloys”, *Journal of Magnetism and Magnetic Materials*, 263(1-2), 47, (2003) (chapter of the thesis).
4. **C.B. Craus**, A.R. Chezan, M.H. Siekman, J.C. Lodder, D.O. Boerma and L. Niesen, “Stripe domains in Fe-Zr-N nanocrystalline films”, *Journal of Magnetism and Magnetic Materials*, 240, 423, (2002) (chapter of the thesis).
5. A.R. Chezan, **C.B. Craus**, N.G. Chechenin, T. Vystavel, J.Th.M. De Hosson, L. Niesen and D.O. Boerma, “Grain refinement by phase cycling of FeNi(Ti/Cr)N alloys”, submitted
6. A.R. Chezan, **C.B. Craus**, N.G. Chechenin, T. Vystavel, J.Th.M. De Hosson, L. Niesen and D.O. Boerma, “Controlling the induced anisotropy in soft magnetic films for high frequency applications”, *IEEE Transaction on Magnetism*, v 38 no.5, 3144, (2002).
7. N.G. Chechenin, **C.B. Craus**, A.R. Chezan, T. Vystavel, D.O. Boerma, J.Th.M. De Hosson and L. Niesen, “Relation between observed micromagnetic ripple and FMR width in ultrasoft magnetic films”, *IEEE Transaction on Magnetism*, v.38 no. 5, 3027, (2002)
8. N.G. Chechenin, A. R. Chezan, **C.B. Craus**, T. Vystavel, D.O. Boerma, J.Th.M. de Hosson and L. Niesen, “Precipitate formation in low-temperature nitrided cold-rolled Fe₉₄Ni₄Ti₂ and Fe₉₃Ni₄Cr₃ films”, *Metallurgical and Materials Transactions A*, 33A (2002) 3075.
9. A.R. Chezan, **C.B. Craus**, N.G. Chechenin, L. Niesen and D.O. Boerma, “Structure and soft magnetic properties of Fe-Zr-N films”, *Physica Status Solidi A*, 189 (2002) 833-836.
10. N.G. Chechenin, A.R. Chezan, **C.B. Craus**, T. Vystavel, D.O. Boerma, J.Th.M. de Hosson and L. Niesen, “Microstructure of nanocrystalline FeZr(N)-films and their soft magnetic properties”, *Journal of Magnetism and Magnetic Materials*, 242-245 (2002) 180-182.
11. N.G. Chechenin, P.M. Bronsveld, A.R. Chezan, **C.B. Craus**, D.O. Boerma, J.Th.M. De Hosson and L. Niesen, “Evolution of nanostructure of FeNi(Ti/Cr)N alloys during phase cycling”, in *Materials Research Society Symposium Proceedings*, M Aindow *et al*, Eds., Materials Research Society, Warrendale, Pennsylvania, 652 (2001) Y.8.1.1-8.1.6
12. N.G. Chechenin, P.M. Bronsveld, A. Chezan, **C.B. Craus**, D.O. Boerma, J.Th.M. De Hosson and L. Niesen, “TEM study of Ti-N and Cr-N precipitate formation in iron alloys”, *Physica Status Solidi A*, 177 (2000) 117-125.

List of contributions to conferences:

1. "Magnetization dynamics in thin ferromagnetic films for high frequency applications", C.B. Craus, A.R. Chezan, N.G. Chechenin, L. Niesen, and D.O. Boerma, Materials Research, 2002, Veldhoven, The Netherlands
2. "Stripe domains in Fe-Zr-N nanocrystalline films", C.B. Craus, A.R. Chezan, , M.H. Siekman, J.C. Lodder, D.O. Boerma, L. Niesen, *MML '01 Symposium on Metallic Multilayers, Aachen, Germany, 2001*
3. "Soft magnetic properties of nitrided FeXN films", School of Synchrotron Radiation and Magnetism, Mittelwihl, *France, 2000*
4. "Study of magnetic stripe domains", C.B. Craus, A.R. Chezan, L. Niesen, and D.O. Boerma, Materials Research, 2001, Veldhoven, The Netherlands
5. "The role of CrN and TiN precipitates in magnetic properties of (Fe-Ni)-N films", C.B. Craus, A.R. Chezan, ,N.G. Chechenin, L. Niesen, and D.O. Boerma, Materials Research, 2000, Veldhoven, The Netherlands
6. "Mössbauer characterization of nitrogen austenite (γ') in $(\text{Fe}_{93}\text{Ni}_4\text{Cr}_3)_x\text{-N}_{1-x}$ ", C.B. Craus, A.R. Chezan, L. Niesen and D.O. Boerma, poster, AIO Workshop "Scanning Probe Techniques", 1999, Ameland, The Netherlands
7. "Catalytic nitriding of iron", C.B. Craus, B. Feddes, A. Chezan, L. Niesen, and D.O. Boerma, MSC biannual meeting, 1999, Vlieland, The Netherlands
8. "Study of Cr-N and Ti-N precipitate formation in iron alloys", C.B. Craus, A.R. Chezan, N.G. Chechenin, P.M. Bronsveld, D.O. Boerma, and L. Niesen, FOM meeting, 1999, Veldhoven, The Netherlands