

Selected Publications 2020

Yildirim, O.; Hilliard, D.; Arekapudi, S. S. P. K.; Fowley, C.; Cansever, H.; Koch, L.; Ramasubramanian, L.; Zhou, S.; Boettger, R.; Lindner, J.; et al. *Ion-irradiation-induced cobalt/cobalt oxide heterostructures: printing 3D interfaces*. ACS Appl. Mater. Interfaces 2020, 12 (8), 9858-9864.

<https://doi.org/10.1021/acsami.9b13503>

Mandru A.-O., Yildirim O., Marioni M. A., Rohrmann H., Heigl M., Ciubotariu O.-T., Penedo M., Zhao X., Albrecht M., and Hug H. J. *Pervasive artifacts revealed from magnetometry measurements of rare earth-transition metal thin films*. J. Vac. Sci. Technol. A 38, 023409 (2020).

<https://doi.org/10.1116/1.5135504>

Osmani B.; Schiff H.; Vogelsang K.; Guzman R.; Kristiansen P. M.; Crockett R.; Chacko A.; Bucher S.; Töpfer T.; Müller B. *Hierarchically structured polydimethylsiloxane films for ultra-soft neural interfaces*. Micro and Nano Engineering, 2020, 7, 100051.

<https://doi.org/10.1016/j.mne.2020.100051>

Schwenk J.; Kim S.; Berwanger J.; Ghahari F.; Walkup D.; Slot M. R.; Le S. T.; Cullen W. G.; Blankenship S. R.; Vranjkovic S.; Hug H. J.; Kuk Y.; Giessibl F. J.; Strosio J. A.. *Achieving μeV tunneling resolution in an in-operando scanning tunneling microscopy, atomic force microscopy, and magnetotransport system for quantum materials research*. Rev. Sci. Instrum. 91, 071101 (2020).

<https://doi.org/10.1063/5.0005320>

Vogler Ch.; Heigl M.; Mandru A.O.; Hebler B.; Marioni M.; Hug H.J.; Albrecht M.; Suess D.. *Hysteresis-free magnetization reversal of exchange-coupled bilayers with finite magnetic anisotropy*. Phys. Rev. B 102, 014429 (2020).

<https://doi.org/10.1103/PHYSREVB.102.014429>

Heigl M.; Vogler Ch.; Mandru A.O.; Zhao X.; Hug H.J.; Suess D.; Albrecht M.. *Microscopic Origin of Magnetization Reversal in Nanoscale Exchange-Coupled Ferri-/Ferromagnetic Bilayers: Implications for High Energy Density Permanent Magnets and Spintronic Devices*. ACS Appl. Nano Mater. 2020.

<https://doi.org/10.1021/acsanm.0c01835>

Ramasubramanian, L., Kákay, A., Fowley, C., Yildirim, O., Matthes, P., Sorokin, S., ... Deac, A.. *Tunable magnetic vortex dynamics in ion-implanted permalloy disks*. ACS Appl. Mater. Interfaces 2020, 12, 24, 27812–27818.

<https://doi.org/10.1021/acsami.0c08024>

Cicek, M. M., Saritas, S., Yildirim, O., & Emre, B.. *Effect of the low constituent boron on martensitic transformation, magnetic, and magnetocaloric properties of $\text{Ni}_{50}\text{Mn}_{35}\text{In}_{15}$ Heusler alloys*. Journal of Alloys and Compounds, 845, 155493.

<https://doi.org/10.1016/j.jallcom.2020.155493>

Mandru, A.-O., Yildirim, O., Tomasello, R., Heistracher, P., Penedo, M., Giordano, A., Suess, D., Finocchio, G., and Hug, H. J.. *Coexistence of distinct skyrmion phases observed in hybrid ferromagnetic/ferrimagnetic multilayers*. Nat. Comm. 11 (2020) 6365.

<https://doi.org/10.1038/s41467-020-20025-2>