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Spin Seebeck, anomalous Nernst, and magnetic proximity effects in non-magnet/magnet heterostruc-

tures

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The spin Seebeck effect (SSE), the thermal generation of spin currents, is one of the most fascinating spin caloric phenomena. While the transverse SSE has been strongly discussed in the community [1], the longitudinal SSE (LSSE) in magnetic insulators detected by several groups is quite robust [2]. It has been shown for magnetic insulators, that magnetic proximity effects (MPEs) in the spin current detector material Pt do not hamper the spin caloric transport investigations [3]. Furthermore, alternative spin current detection techniques based on anomalous Hall effect [4] and magnetooptic Kerr effect in Au [5] have been performed recently. In my talk, I will give a brief introduction into the field of SSE and parasitic effects. I will further explain how we use x-ray reflectivity [6] to quantify MPEs in Pt and how these effects influences the SSE and parasitic effects. Finally, I will discuss the identification of the longitudinal SSE in magnetic conductors. [1] Meier, et al., Nat. Commun. 6, 8211 (2015); [2] Uchida et al., Proc. IEEE 104, 1946 (2016); [3] Miao et al., AIP Advances 6, 015018 (2016); [4] Hou et al., Nat. Commun. 7, 12265 (2016); [5] Kimling, et al. (2016), arXiv:1608.00702; [6] Kuschel et al., Phys. Rev. Lett. 115, 097401 (2015)