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EINLADUNG zum IFP-SEMINAR

Spin transport, detection and conversion in solids

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Host: Gaku Eguchi

Termin: Mittwoch, 30 Mai 2018, 11:00 Uhr

Ort: Institut für Festkörperphysik, TU Wien
Wiedner Hauptstraße 8-10, 1040 Wien
Seminarraum DB gelb 09 (gelber Bereich, 9. OG)

Spintronics has been attracting strong attention in recent decades and spreading its material stages from metals to semiconductors, molecules and topological insulators. In spintronics, realization of spin transport in solids, detection of spin information and spin conversion is quite significant for achieving novel spin device fabrications. Our group focuses on spin transport, detection and conversion in Si [1-3], Ge [4], graphene [5,6], topological insulators [7,8] and novel 2-dimensional electron gas systems [9], where spin injection is realized by electric, dynamical and thermal approaches. In this talk, I introduce our recent activities and attractiveness of modern spintronics and spin conversion science [10].

[1] T. Sasaki, M. Shiraishi et al., Phys. Rev. Applied 2, 034005 (2014).
[2] E. Shikoh, M. Shiraishi et al., Phys. Rev. Lett. 110, 127201 (2013).
[3] N. Yamashita, M. Shiraishi et al., Phys. Rev. Applied, in press.
[4] S. Dushenko, M. Shiraishi et al., Phys. Rev. Lett. 114, 196602 (2015)
[5] M. Shiraishi et al., Adv. Func. Mater. 19, 3711 (2009).
[6] S. Dushenko, M. Shiraishi et al., Phys. Rev. Lett. 116, 166102 (2016).
[7] Yu. Ando, M. Shiraishi et al., Nano Lett. 14, 6226 (2014).
[8] G. Eguchi, M. Shiraishi et al., Phys. Rev. B90, 201307 (R) (2014).
[9] R. Ohshima, M. Shiraishi et al., N30ature Mater. 16, 609 (2017).
[10] Y. Otani, M. Shiraishi et al., Nature Phys. 13, 829 (2017).