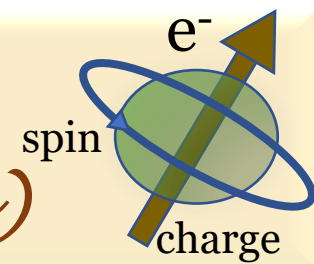




W2S Seminar

(Webinar series on Spintronics)



Cu-based spin Hall materials

- Antiferromagnetic spintronics & Non-equilibrium alloy -



Speaker:

Prof. Takeshi SEKI

IMR, Tohoku University, Japan & CSRN, Tohoku University, Japan & NIMS, Japan

Date and time:

17.09.2020 at

6.30 pm

Via

Google meet

Abstract

High-efficient conversion between charge current (\mathbf{J}_c) and spin current (\mathbf{J}_s) is the key for developing spintronic devices. A way for the conversion from \mathbf{J}_c to \mathbf{J}_s is to exploit the spin Hall effect (SHE), in which the conversion efficiency is given by the spin Hall angle (α_{SH}). Thus, materials showing large α_{SH} are indispensable. Aside from the usage of elemental nonmagnetic materials such as Pt, Ta, and W, element doping or alloying is a promising way to develop a spin Hall material. In this Webinar, I will introduce that the Ir-doped Cu is beneficial not only for spin-orbitronics but also for antiferromagnetic spintronics. In addition, we found that the non-equilibrium Cu-Ir alloys are candidates to achieve the large SHE.

H. Masuda, **TS** *et al.*, *Phys. Rev. B* **101**, 224413 (2020); H. Masuda, **TS** *et al.*, submitted.

If interested to attend then please visit <https://www.niser.ac.in/w2s-seminar/index.php>