

Power Spintronics

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Spintronics is not just a new type of electronics in the 21th century [1,2] but provides a variety of possibilities for energy conversions [3,4]. The spin motive-force converts magnetic energy into electricity, and spin Seebeck effect does heat to electricity via spin current. These conversions are called “power spintronics” which is a new challenge in physics. I would like to present “power spintronics” and its future.

References:

- [1] *Concepts in Spin Electronics*, ed. S. Maekawa (Oxford University Press, 2006).
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- [3] S. E. Barnes and S. Maekawa: Phys. Rev. Lett. 98, 246601 (2007).
- [4] S. Maekawa et al., J. Phys. Soc. Jpn. 82, 102002 (1-23) (2013).