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Thermomagnonic spin transfer in textured magnets[1] ALEXEY A. KOVALEV, YAROSLAV TSERKOVNYAK — We study interplay between the spin-energy transport and magnetization dynamics in ferromagnetic insulators with magnetic textures. With the help of the Onsager reciprocity principle we construct a phenomenological theory capable of describing various thermomagnonic effects. Motion of domain walls by thermal gradients and generation of heat flows by magnetization dynamics are suggested. By estimating the kinetic coefficients (such as β like viscous coupling) for realistic materials (e.g. Yttrium iron garnet), we analyze the feasibility of mentioned effects for energy related applications.

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