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Title:Observation of the spin-injection terahertz emission in planar ferromagnetic two-layer structures

Authors:Gulyaev, Yu.V. (1); Zil'Berman, P.E. (1); Malikov, I.V. (2); Mikhailov, G.M. (2); Chigarev, S.G. (1); Epshtein, E.M. (1)

Author affiliation:(1) Kotel'Nikov Institute of Radio Engineering and Electronics, Russian Academy of Sciences, Fryazino, Moscow oblast, 141190, Russia; (2) Institute of Microelectronics Technology and High-Purity Materials, Russian Academy of Sciences, Chernogolovka, Moscow oblast, 141432, Russia

Corresponding author:Gulyaev, Y.V.

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Abstract:The spin-injection emission of the system that consists of a nonmagnetic conducting rod and two-layer planar heteroepitaxial structure formed by thin metal and magnetite films is experimentally studied. The electromagnetic emission in the terahertz range is demonstrated for the first time due to the creation of the nonequilibrium population of the spin energy subbands (relatively low current densities of about 10^{5-2} A/cm² are needed at room temperature). © Pleiades Publishing, Inc., 2012.

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Uncontrolled terms:Electromagnetic emissions - Heteroepitaxial structure - Low current density - Magnetite films - Non equilibrium - Nonmagnetics - Room temperature - Spin-injection - Subbands - Terahertz emissions - Terahertz range - Thin metals - Two layers - Two-layer structures

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