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# Superconducting spintronic devices based on nanostructures ferromagnet/superconductor

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## Abstract

The layered nanostructures ferromagnet/superconductor (F/S) due to combination of incompatible in homogeneous materials properties are the most perspective materials for use in the new field of electronics - a superconducting spintronics. A new type of logical devices based on the layered F/S nanostructures and combining the advantages of the superconducting and magnetic recording channels in one sample is offered. Each channel can be separately controlled by weak magnetic field or current pulse and the switching time is of order of 10-10 - 10-11 s. The implementation of such devices on base of high-temperature superconductors will allow using nitrogen instead of expensive helium for cooling. © Published under licence by IOP Publishing Ltd.

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