



D5.5 | Review

Author(s): Zhuoran Geng, Alberto Hijano, Stefan Ilic, Maxim Ilyn, Ilari J. Maasilta, Alessandro Monfardini, Maria Spies, Elia Strambini, Pauli Virtanen, Martino Calvo, Carmen Gonzalez-Orellana, Ari P. Helenius, Sara Khorshidian, Clodoaldo I. Levartoski de Araujo, Florence Levy-Bertrand, Celia Rogero, Francesco Giazotto, F. Sebastián Bergeret, Tero T. Heikkilä

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Author(s):	Zhuoran Geng, JYU Alberto Hijano, CSIC Stefan Ilic, CSIC Maxim Ilyn, CSIC Ilari J. Maasilta, JYU Alessandro Monfardini, CNRS Maria Spies, CNR Elia Strambini, CNR Pauli Virtanen, JYU Martino Calvo, CNRS Carmen Gonzalez-Orellana, CSIC Ari P. Helenius, JYU Sara Khorshidian, CNR Clodoaldo I. Levartoski de Araujo, CNR Florence Levy-Bertrand, CNRS Celia Rogero, CSIC Francesco Giazotto, CNR F. Sebastián Bergeret, CSIC Tero T. Heikkilä, JYU
Contributor(s):	
External contributor(s):	



Abstract

Deliverable 5.5 '*Review*' is delivered in form of a report, although the deliverable is the review article itself rather than this brief accompanying report. This report delivers the review article on thermoelectric detection.



1. Review

This review article focuses on the use of hybrid thin films of superconductors and ferromagnets for creating non-reciprocal electronic components and self-biased detectors of electromagnetic radiation. The topic is approached in structured manner as at first the theory behind these effects, as well as different possible materials that can be used in the fabrication of these components is introduced. Then, the review proceeds to discuss in detail the fabrication and characterization of Al/EuS/Cu and EuS/Al/Co based detectors, along with their noise analysis. In the end, some routes for multiplexing such self-biased detectors are also indicated.

The preprint version of the review is available in a free distribution service and an open-access archive arXiv (<https://arxiv.org/abs/2302.12732>). The review will be submitted to an international multidisciplinary journal *Superconductor Science and Technology*TM as an invited review. Submission of the review article is scheduled to take place by the end of March 2023.

