UNIVERSITY OF TWENTE.

Stockholm University

SPINTECH

SPINTECH is a three-year Coordination and Support Action (CSA) funded by the Horizon 2020 programme in the framework of the WIDESPREAD Twinning Call.

The overall aim of the SPINTECH project is to boost the scientific excellence and innovation capacity in the field of spintronics (especially in the development of advanced technology for design and production of superconducting spin-valves) of the D. Ghiţu Institute of Electronic Engineering and Nanotechnologies (IEEN) in Moldova.

This will be achieved through collaboration with two highly experienced Twinning partners: the University of Stockholm in Sweden and the University of Twente in the Netherlands.

SPINTRONICS

Spintronics is a new field of research and engineering exploiting the influence of the intrinsic magnetic moment of electron spin on electrical transport.

It is a rapidly developing area that allows insight into fundamental spin-dependent physical properties and exponentially expanding practical applications such as the read head sensors for hard drives and memory elements for computers.

One of the main challenges in this field is the realization of spintronics based devices; in particular, there is intense research activity focused on combining superconductivity and spintronics, in order to enhance device functionality and performance.

To achieve the project objectives, the consortium partners will put into practice a comprehensive set of measures via the project's work packages, which will include:

- Short term staff exchanges (WP1).
- Training workshops, conferences and summer schools (WP2).
- Dissemination and outreach activities (WP3).

SCIENTIFIC FOCUS

In this framework, strengthening of IEEN's research excellence in superconducting spintronics will be attained by focusing collaborative efforts on two specific topics:

- Advanced vacuum technologies development for fabrication of layered nanostructures for spintronics (IEEN and University of Stockholm)
- Elaboration and testing of a superconducting spin-valve for switching and memory elements (IEEN and University of Twente).

PROJECT OBJECTIVES

In order to boost the scientific excellence and innovation capacity in the field of spintronics of D. Ghiţu IEEN, during the three years of the project activities, the partners will implement a research and innovation strategy with the following objectives:

- Objective 1: Strengthen D. Ghiţu IEEN's research excellence in spintronics.
- Objective 2: Enhance the research and innovation capacity of D. Ghiţu IEEN and the Twinning partners.
- Objective 3: Raise the research profile of D. Ghiţu IEEN and the Twinning Partners.
- Objective 4: Contribute to the research and innovation priorities of Moldova.
- Objective 5: Support research and innovation on a European level.

CONTACT US

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For more information regarding the project and its achievements, please visit the SPINTECH website:

h2020-spintech.eu

SPINTECH

Boosting the scientific excellence and innovation capacity in spintronics of the D. GHITU Institute of Electronic Engineering and Nanotechnologies of the Academy of Science of Moldova

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