

# TEMPERATURE-INDUCED CHANGES IN STATIC AND DYNAMIC MAGNETIC PROPERTIES OF Py/FeMn BILAYERS

## Abstract Content

Collective magnetization dynamics has been studied for the exchange-coupled Py/FeMn bilayers with a varied thickness of an antiferromagnetic FeMn layer. In performed ferromagnetic-resonance (FMR) experiments, the collective dynamics manifests itself in two separate FMR lines, which can be attributed to the acoustic and optical resonance modes. The analysis of temperature- and angle-dependent FMR behavior of the acoustic mode yields enhanced effective magnetization of the bilayer and gives evidence of a non-zero magnetic moment in FeMn. The results obtained testify that a combination of ferromagnetic and antiferromagnetic materials may provide extraordinary thermo-magnetic properties which are now of great interest for practical applications in the field of spintronics (memory devices, nanooscillators, etc.).

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## Contact Phone

**Primary authors:** Dr POLISHCHUK, Dmytro (Institute of Magnetism of the NAS of Ukraine and MES of Ukraine); Mr BORYNSKYI, Vladyslav (Faculty of Radio Physics, Electronics and Computer Systems, Taras Shevchenko National University of Kyiv); Dr POLEK, Taras (Institute of Magnetism of the NAS of Ukraine and MES of Ukraine); Prof. TOVSTOLYTKIN, Oleksandr (Institute of Magnetism of the NAS of Ukraine and MES of Ukraine)

**Presenter:** Mr BORYNSKYI, Vladyslav (Faculty of Radio Physics, Electronics and Computer Systems, Taras Shevchenko National University of Kyiv)

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