



# **ABSTRACT BOOK**

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## Structural and magnetic properties of Gd-Fe films

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Electron diffraction examinations of structure of films of Gd-Fe system specify that the given films are condensed in amorphous-crystalline state. Structure formation essentially depends on requirements of condensation of films. Substrate rise in temperature leads to magnification of a polycrystalline phase [1].

It is known that the given compounds belong to the class soft magnetic material. We had been spent measurements of some magnetic performances of films and massive samples of Gd-Fe system. Hysteresis curves and numerical values of a coercive force are gained for massive and thin films samples. For this samples the Curie temperature also is determined. Influence of formation of a polycrystalline phase on absolute value of a coercive force is studied. Temperature dependences of magnetic saturation and curve magnetisations for films and compounds of Gd-Fe system are gained [2, 3, 4].

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  - 2 Prysyazhnyuk V.I., Mykolaychuk O.G. Magnetic properties of Gd-Fe system (Films and Bulk) // Proceedings of VI international Conference "Physics of Disordered Systems", – Lviv, – 2013. – P. 119.
  - 3 V. Prysyazhnyuk, O. Mykolaychuk Magnetic properties of films of Gd-Fe compounds and Gg/Fe multilayers // Abstr. book 13-th Conference on Functional and Nanostructured Materials, – Swornegacie, – Poland, – 2016, – P. 97.
  - 4 V. Prysyazhnyuk, O. Mykolaychuk Structural reorganization and magnetic properties of amorphous films of Gd-Fe system. // Lviv University Journal. Physical seria. – 2016. – 51. – P. 44-51. (In Ukrainian)