

Influence heat treatment on the irreversible structural relaxation in bulk amorphous $\text{Fe}_{61}\text{Co}_{10}\text{Ti}_3\text{Y}_6\text{B}_{20}$ alloy

Marcin Nabiałek,¹ Katarzyna Bloch,¹ and Michał Szota²

¹*Czestochowa University of Technology,*

Faculty of Materials Processing Technology and Applied Physics, Institute of Physics

²*Czestochowa University of Technology,*

*Faculty of Materials Processing Technology
and Applied Physics, Materials Engineering*

In the amorphous materials are present a structural defects, which play a decisive role in the magnetization process in the area known as the approach to ferromagnetic saturation. The paper presents the results of magnetization studies in a strong magnetic fields of the bulk $\text{Fe}_{61}\text{Co}_{10}\text{Ti}_3\text{Y}_6\text{B}_{20}$ alloy obtained in the form of a rod 1mm in diameter, in the as-quenched state and after isothermal annealing process at a temperature below the crystallization temperature. It was observed that the heat treatment carried out below temperature T_x leads to a irreversible structural relaxations, namely remodeling in atoms configuration in a volume of the amorphous structure.