The study of structure and magnetic properties of \( \text{Cr}_6\text{Fe}_{18}\text{Mo}_5 \) phase compound

J. Rzącki\textsuperscript{1} and K. Gruszka\textsuperscript{1}

\textsuperscript{1}Institute of Physics, Faculty of production Engineering and Materials Technology, Czestochowa University of Technology, 19 Armii Krajowej street, 42-200 Czestochowa, Poland

Paper presents results of structure and magnetic properties investigation for phase \( \text{Cr}_6\text{Fe}_{18}\text{Mo}_5 \) obtained in the isothermal annealing process. Structural and magnetic investigations for prepared samples were conducted using XRD and VSM equipment and using \textit{ab initio} calculations. X-Ray diffraction patterns were submitted to the Rietveld refinement analysis. From the density functional theory (DFT) calculations, an equilibrium lattice parameters and magnetic properties were obtained.