Growth and structure analysis of ZnWO₄ single crystals

<u>Kowalski Zbigniew*¹</u>, Kaczmarek Sławomir M.¹, Berkowski Marek²

¹ Institute of Physics, Faculty of Mechanical Engineering and Mechatronics, West Pomeranian University of Technology in Szczecin, Al. Piastow 17, 70-310, Szczecin, (Poland) ² Institute of Physics PAS, Al. Lotników 32/46, 02-668 Warsaw, Poland *e-mail: zwkowalski@gmail.com

In this work, series of $ZnWO_4$ single crystals were grown by conventional Czochralski as well as HP-Czochralski methods. Samples obtained by those processes, included undoped single crystals as well as crystals doped with different concentrations of Ag, Ce and Nb. Comparison of obtained crystals was made, according to growth method, including other samples that were previously grown by Bridgeman method. The crystal structure of all mentioned ZnWO₄ samples was investigated. The lattice parameters and volume of ZnWO₄ were parametrized and compared to the actual publications' data.



Figure 1. Model of ZnWO₄ structure.