

## Jury Member Report – Doctor of Philosophy thesis.

**Name of Candidate:** Artem Samtsevich

**PhD Program:** Materials Science and Engineering

**Title of Thesis:** Simulation of the mechanisms of solid-solid phase transition

**Supervisor:** Professor Artem Oganov

**Name of the Reviewer:** Anatoly B. Belonoshko

I confirm the absence of any conflict of interest

**Date:** 29-07-2021

*The purpose of this report is to obtain an independent review from the members of PhD defense Jury before the thesis defense. The members of PhD defense Jury are asked to submit signed copy of the report at least 30 days prior the thesis defense. The Reviewers are asked to bring a copy of the completed report to the thesis defense and to discuss the contents of each report with each other before the thesis defense.*

*If the reviewers have any queries about the thesis which they wish to raise in advance, please contact the Chair of the Jury.*

### Reviewer's Report

Reviewers report should contain the following items:

- Brief evaluation of the thesis quality and overall structure of the dissertation.
- The relevance of the topic of dissertation work to its actual content
- The relevance of the methods used in the dissertation
- The scientific significance of the results obtained and their compliance with the international level and current state of the art
- The relevance of the obtained results to applications (if applicable)
- The quality of publications

The summary of issues to be addressed before/during the thesis defense

The PhD thesis of Artem Samtsevich on mechanisms of solid-solid transitions is a comprehensive study with many innovative ideas. The examples that Artem provides in his thesis prove that those ideas are practical and can be applied to a number of cases. It is not to say that the study is exhaustive - in some cases the suggested methods are not applicable and some cases are not even mentioned. However, typical cases can be treated. While certain small things could be improved, the thesis is at the stage where it can be successfully defended. The content of the thesis is published in reputable journals or in the process of publication.

**Provisional Recommendation**

*I recommend that the candidate should defend the thesis by means of a formal thesis defense*

*I recommend that the candidate should defend the thesis by means of a formal thesis defense only after appropriate changes would be introduced in candidate's thesis according to the recommendations of the present report*

*The thesis is not acceptable and I recommend that the candidate be exempt from the formal thesis defense*