

## Jury Member Report – Doctor of Philosophy thesis.

**Name of Candidate:** Mariia Korneva

**PhD Program:** Mathematics and Mechanics

**Title of Thesis:** Application of molecular dynamics simulations for the analysis of nanoscale structures

**Supervisor:** Assistance Professor Dmitry Kolomenskiy

**Co-supervisor:** Dr. Petr Zhilyaev

### Name of the Reviewer:

|  |            |
|--|------------|
| I confirm the absence of any conflict of interest<br><br>(Alternatively, Reviewer can formulate a possible conflict) | 29.11.2024 |
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*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 text of the dissertation correctly and qualitatively demonstrates the essence of the research. The structure of the dissertation. The structure of the dissertation is optimal for a clear presentation of the essence of the research and the correct presentation of its results.

The topic of dissertation is relevant to its actual content.

The methods used in the dissertation is relevant to the problems investigated in the dissertation/

The results obtained and their compliance correspond with the international level and current state of the art.

The obtained results are relevant to the applications for the graphene technologies

The quality of publications is good and actual.

The summary of issues to be addressed before or during the thesis defense corresponds with the content of the dissertation.

#### **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*