



10 April 2024

Dear Court, Dear Judges,

My name is Natalia Berloff, I am a professor of applied mathematics at the Department of Applied Mathematics and Theoretical Physics, University of Cambridge. My area of research is fluid dynamics and concerns various heat conducting properties of fluids that are directly related to the subject of the research questioned by your proceedings. I have been engaged to provide an expert evaluation of the recent research conducted by Dr. Kabov and their team. After a thorough review of their publications, I am compelled to express not only my positive assessment but also my enthusiasm regarding the innovative and impactful results they have achieved.

**Innovative Discoveries:** The research undertaken by Dr. Kabov has led to ground-breaking discoveries in the behaviour of shear-driven liquid films and heat transfer dynamics. The unexpected initiation of liquid film rupture and the detailed analysis of local heat transfer coefficients are particularly noteworthy. These findings are not merely academic; they have the potential to significantly advance the field of thermal management systems.

**Scientific Contribution:** The results obtained from this research provide valuable insights that extend beyond the initial scope of the grant objectives. Such contributions are indicative of high-quality scientific inquiry and demonstrate the team's ability to explore and elucidate complex physical phenomena.

**Enhancement of Knowledge:** The detailed examination and outcomes of the research have enriched our understanding of heat transfer processes. This enhancement of our knowledge base is a testament to the successful execution of research objectives, regardless of whether the results were anticipated or not.

**Implications for Future Research:** The findings from Dr. Kabov's work lay a solid foundation for future investigations. They open new avenues for exploration and have the potential to inspire innovative solutions in thermal management and beyond.

**Relevance and Impact:** The implications of this research extend to various practical applications, potentially influencing the design and optimization of cooling systems in numerous industries. The ability to control and predict the behavior of liquid films under different conditions is invaluable, and the insights gained from this study are a significant step forward in this direction.

**Commendation for Research Integrity:** It is clear from the methodologies employed and the depth of analysis presented that this research was conducted with the utmost integrity and adherence to scientific principles. The results, therefore, stand as a robust and credible contribution to the field.

In light of these observations, I firmly believe that the research outcomes should be celebrated for their contribution to advancing our understanding and not be misconstrued or undervalued. The team's dedication to exploring uncharted scientific territories has yielded results that are both commendable and of substantial scientific value.

Should you require further elaboration or wish to discuss the findings in more detail, I am happy to discuss and provide any additional discussions or clarifications.

Sincerely,

Best regards

Prof Natalia Berloff