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Рег.№ 4172/21.09.2026

OPINION

From: Associate Professor, PhD. Eng. Metodi Kirilov Mladenov, University of Chemical Technology and Metallurgy, Sofia, 1756, "St. Kliment Ohridski", No. 8, phone: 02/8163 262.

Subject: Competition for obtaining an educational and scientific degree "doctor" (PhD) in a professional direction 5.10. *"Chemical technologies"*, in the doctoral program *"Technology of natural and synthetic fuels"*.

Information about the contest

I participate as a member of the scientific jury for the competition according to the Order of the Rector of the University "Prof. D-r. Asen Zlatarov", Burgas – No. УД-316/30.07.2026.

1. Fulfillment of the requirements for awarding the educational and scientific degree "doctor"

A total of 16 publications authored or co-authored by the PhD candidate have been submitted for the competition. No citations of the candidate's works have been reported.

The doctoral candidate, Eng. Svetlin Petrov Vasilev, has fulfilled the minimum national requirements and the requirements of the Regulations for the terms and conditions for acquiring scientific degrees and academic positions at the University "Prof. D-r. Asen Zlatarov"-Burgas (Art. 43, Paragraph 3, Item 4), as follows:

Group A, indicator 1 – 50 points;

Group B, indicator 2 – not required;

Group C, indicator 3 or 4 – not required;

Group D, sum of indicators 5 through 11 – 82.7 points;

The remaining groups of indicators are not required.

2. Brief description of the dissertation work and the presented scientific works/publications

Engineer Vasilev's dissertation focuses on modeling the properties of petroleum fluids within the oil refining industry. The exceptionally detailed literature review is particularly noteworthy – it encompasses a vast array of sources and provides in-depth descriptions and explanations aligned with the dissertation's objectives, alongside a comprehensive analysis of the cited information. They are described numerous standardized analytical methods (such as ASTM D2892, ASTM D5236, and ASTM D1160) and identifies a significant number of software simulators relevant to the field of study.

The practical section of the dissertation includes a detailed description of the testing methods and techniques employed, as well as simulations using a software process simulator, all of which the doctoral candidate utilized in their experimental work. A notable feature here is the vast volume of experimental data presented – comprising more than half of the

dissertation. This data is further supported by a detailed analysis comparing it with similar published findings from the cited literature.

The candidate presents sixteen publications related to the dissertation topic, thirteen of which have appeared in refereed and indexed journals. Notably, the doctoral candidate's collaborative work stands out; however, he also presents one publication in a specialized journal as a sole author. Information is also provided regarding a granted patent (No. 2721118) for an invention concerning a method of producing road bitumen from heavy residue.

3. Brief evaluation of the main scientific and scientific-applied contributions of the candidate

The contributions reflected in the candidate's works are of a scientific and applied-scientific nature and provide a sufficiently clear picture of his professional knowledge, skills, and expertise in the field of technologies for processing crude oil and petroleum products. I view the published patent and the large number of scientific articles published in connection with the dissertation topic as positive aspects of the doctoral candidate's work.

4. Notes and recommendations

The dissertation submitted for review is notable for its accurate description and formatting, which adhere to the rules of Bulgarian writing. My only comment concerns the size of some of the figures (Figs. 60–74) included in the practical section, they are too small (both in terms of image size and font size) making them difficult to read. However, this should not be considered a significant shortcoming, as it is most likely due to an effort to reduce the overall length of the dissertation.

5. Conclusion

My overall assessment of the data presented by Eng. Svetlin Petrov Vasilev, summarized in the submitted dissertation and scientific publications, is **POSITIVE**. The candidate presents well-substantiated scientific and applied scientific contributions to the field and fully meets the requirements set forth in the Law on the Development of the Academic Staff in the Republic of Bulgaria for for awarding the scientific-educational degree **"Doctor" (Doctor of Philosophy)**.

Based on the foregoing, I recommend that the esteemed Scientific Jury award the educational and scientific degree of "Doctor" to Eng. Svetlin Petrov Vasilev.

17.09.2026
Sofia

Signature: .
/assoc. prof. PhD eng. Metodi K. Mladenov/