



REPORT

by Prof. Sevdalina Hristova Turmanova, PhD

Member of the Academic Jury set to render a decision

on the competition for filling the academic position of a Professor

in the Professional Area **5.5**. Transport, shipping and aviation, scientific specialty according

to the Classifier of the Areas of Higher Education and the Professional Fields

(Scientific Specialty "Transport and storage of oil, gas and solid mineral products")

announced in SG, issue 43/ 17.05.2024

This Report is prepared in response to Order № RD-236/ 15.07.2024 issued by the Rector of the University „Prof. Dr. Asen Zlatarov” – Burgas. The Report is in compliance with Development of Academic Staff in the Republic of Bulgaria Act (DASRBA), the Rules for the Application of the Development of Academic Staff in the Republic of Bulgaria Act, and with the Rules set at the University „Prof. Dr. Asen Zlatarov” – Burgas, for applying the Act aforementioned.

1. Assessment of the scientific and research accomplishments

The required documents for this competition have been duly submitted and are in full compliance with the DASRBA, the Rules for the Application of the Development of Academic Staff in the Republic of Bulgaria Act, and with the Rules set at the University „Prof. Dr. Asen Zlatarov” – Burgas, for applying the Act for occupying the academic position of "professor".

The only candidate in the competition, Assoc. Prof. Yordanka Tsankova Tasheva, PhD, submits 44 scientific publications for review, of which 20 are in international journals with an Impact factor or Impact Rank, and 24 are in non-refereed journals with scientific review or in refereed collective volumes. The scientific works have been cited in the international scientific space a total of 25 times, *h-index* 4. The scientific publications of Assoc. Prof. Dr. Yordanka Tasheva have a high scientific-theoretical and scientific-applied value due to the fact that they are based on her rich scientific and teaching experience as scientist. Based on empirical knowledge, they are particularly valuable for enriching knowledge and have theoretical contributions to natural and synthetic fuel technology and oil and gas chemistry.

Prof. Tasheva is the author and co-author of 3 published textbooks – "Operating materials and characteristics in transport", Textbook for students, Yordanka Tsankova Tasheva, ISBN 978-954-471-996-8 Publishing house LIBRA SCORP 2023, Manual for laboratory exercises in chemistry and technology of oil and oil products, Yordanka Tsankova Tasheva and Alexander Nikolov Dimitrov, ISBN 978-954-471-649-3 Publishing house LIBRA SCORP 2020, and Operational and technological characteristics of oils, Yordanka Tsankova Tasheva and Alexander Nikolov Dimitrov, ISBN 978-619-273-031-4 LIBRA SCORP Publishing House 2024.

The leading role of Assoc. Prof. Dr. Yordanka Tasheva is proven by her participation as an independent, first or second author in the peer-reviewed scientific production. In the

current competition for Assoc. Prof. Dr. Yordanka Tasheva participates as an author and co-author with a total of 44 publications, of which 9 are personal, and in 21 she is the first author.

With deep conviction, I assert that Assoc. Dr. Yordanka Tasheva is a scientist with indisputable contributions to scientific activity, with indisputable dedication to the development of science, and I consider her leading participation in research and published results. Prof. Tasheva supervised the successful graduation of 27 graduates students. She is the scientific supervisor of PhD student Anton Todorov Palichev, who defended his thesis in 2015, and co-supervisor of the dissertation thesis of Dimitrinka Slavova Ivanova, whose defense was in 2022. The candidate also presents participation in the preparation of more than 30 study programs, two positive reviews from leading scientists and 4 reviews for specialized scientific publications.

The administrative experience of Assoc. Prof. Dr. Tasheva includes her participation in the Faculty Councils of the Faculty of Technical Sciences and the Faculty of Social Sciences, participation in attestation committees and scientific colloquiums.

Assoc. Prof. Dr. Tasheva is a person with rich pedagogical experience and erudition, and in her active academic activity she applies her unquestionably proven organizational abilities and her indisputable skills for working in a team.

According to all indicators, Assoc. Prof. Dr. Yordanka Tasheva exceeds the set minimum requirements. With the required minimum number of points for a professor of 1150, Assoc. Prof. Yordanka Tasheva collects 1390.37 points.

The submitted set of documents of the applicant includes other materials, in accordance with the criteria formulated by the regulations.

2. Main contributions, analysis and evaluation of the candidate's scientific and scientific-applied contributions and relevance of the topic

The main scientific contributions of the presented publications are in accordance with the professional field for which the competition was announced. The research program underlying the scientific works presented by the candidate on indicators from groups B and D can be summarized mainly in one currently developing scientific direction, namely the study of basic characteristics of liquid organic hydrocarbon mixtures - gasoline and middle distillate model fractions in order to improve their transport and storage performance as petroleum products.

In this regard, the more important scientific, scientific and applied contributions of Assoc. Prof. Tasheva can be summarized thematically as follows:

- Research related to analyzing and studying the processes of extraction, adsorption and oxidation of model mixtures, as well as in-depth studies of kinetic and thermodynamic parameters proving the irreversibility of the processes. Results were obtained regarding the change in distillate characteristics of base petroleum gasolines with added bioethanol.

Original results have been reported on the environmental impact assessment of waste products in the destruction of containers for hazardous chemical gas agents.

- Research on the preparation of methodologies for evaluating the influence of fuel on the consumption rates of trucks and cars.

Dependencies are derived for the influence of important indicators on the combined consumption of fuel at a gas station.

●Research on the preparation of comparative tests related to the determination in bench conditions of the capacities, economic and toxic indicators of a diesel engine operating in conditions of consumption of fresh and spent diesel fuel. The information from the in-depth study is useful for engineering and technology personnel in the automotive industry. An indisputable contribution of the candidate is the research proving that the operation of a Volkswagen 1.9 engine with spent diesel fuel does not lead to changes in its effective indicators.

Based on the in-depth analysis of the works of Assoc. Prof. Yordanka Tasheva, I believe that the obtained results should be considered as original scientific and applied contributions in the field of oil refining and technological equipment.

3. Opinions, notes and recommendations

Assoc. Prof. Dr. Yordanka Tasheva is a proven scientist, known in the international scientific space. Her scientific output contains critical and in-depth literature reviews on the scientific issues of the content of scientific publications.

The large volume of cited literary sources used, as well as the specialized textbook, are indisputable evidence of excellent awareness of world achievements by other authors in the scientific field of development.

Scientific interests and their realization in the form of original full-text publications confirm Assoc. Prof. Tasheva as a researcher capable of generating ideas and practically implementing them, which undoubtedly makes her a suitable candidate for the position in the competition. All documentation is complete and detailed, with an author reference for scientific contributions distinguishing between the applicant's scientific and applied contributions. I have no critical comments on the scientific production presented by the only candidate in the competition, Assoc. Prof. Dr. Yordanka Tasheva

4. Conclusion

The precise execution of scientific research and the important for science and practice results, give me the reason to evaluate the scientific, teaching and administrative activity of Assoc. Prof. Dr. Yordanka Tsankova Tasheva with a high positive rating.

In accordance with the above and referring to the qualities and contributions of Assoc. Prof. Dr. Yordanka Tsankova Tasheva as a scientist and proven university teacher, I propose that the respected Academic Jury vote positively and propose to the Faculty Council of the Faculty of Technical Sciences to elect Assoc. Prof. Dr. Yordanka Tsankova Tasheva in the academic position of "Professor" in Science Area 5. Technical Sciences, Professional Area 5.5. Transport, shipping and aviation, Science specialty Transport and storage of oil, gas and solid mineral products.

Date: 07.09.24

The report was written by:

Prof. Sevdalina Turmanova, PhD
Member of the Academic Jury