

OPINION

on a competition for taking an academic position **ASSOCIATE PROFESSOR**
in the field of higher education **5 "Technical Sciences"**, professional field: **5.13 General Engineering**, scientific specialty 02.10.23 **"Technology of natural and synthetic fuels"**,
University "Prof. Dr. Asen Zlatarov" – Burgas,

Announced in the State Gazette, issue 42 of 12.05.2023.

with a single candidate Chief Assist. Eng. **MILENA PETKOVA DIMITROVA**, PhD
Prepared the opinion: **Assoc. Prof. Dr. Eng. Silvia Igorova Lavrova-Popova**, UCTM-Sofia
(determined by Rector's Order No RD-182/27.06.2023 as a member of the scientific jury)

1. Meeting the minimum requirements under the Regulations on the terms and conditions for acquiring academic degrees and occupying academic positions at the University "Prof. Dr. Asen Zlatarov" – Burgas

Chief Assist. Eng. Milena Petkova Dimitrova, PhD:

- has acquired educational and scientific degree "Doctor" in the specialty "Technology of natural and synthetic fuels", which coincides with the scientific specialty in which the competition is;
- has held the positions of "assistant" and "chief assistant" in the last four years from 02.09.2019 until now;
- has published in 2022 a monographic work "Side processes causing pollution of technological equipment in oil refineries" with ISBN 978-619-7559-27-9;
- meets the minimum national requirements and minimum requirements of these Regulations, namely:
 - Scientific publication in editions that are referenced and indexed in world-famous databases of scientific information (Scopus; Web of Science) – 12 pcs.;
 - Scientific publication in non-refereed journals with scientific review or in edited collective volumes – 7 pcs.;
 - Citations or reviews in scientific publications, referenced and indexed in world-famous databases of scientific information or in monographs and collective volumes (Scopus; Web of Science, etc.) – 22 citations are presented (no self-citations) in research papers in Scopus;
 - has submitted 3 published university textbooks or textbooks that are used in the school network - "Customs Investigation and Risk Analysis", Part 1, Part 2 and Part 3 from 2023,
 - has presented 12 curricula, in the development of which she participated as a co-author;
 - was a supervisor of a thesis for acquiring the Master's degree in the period 2021/2022
 - For the period 2020/2022 she has prepared 8 reviews of diploma theses;
 - has 2 participations in intra-university research projects – leader of 1 project and member of a scientific team in 2 projects;

- has participated in 2 scientific forums with international participation, of which the papers are published in the refereed journal "Industrial Technologies" with scientific review.

From the provided reference for the number of compliance points per indicator in area 5. Technical Sciences from Regulations on the conditions and procedures for the acquisition of scientific degrees and academic positions at the University "Prof. Dr. Asen Zlatarov" – Burgas it becomes clear the fulfillment of the set minimum national requirements and the requirements under these Rules: group of indicators A: 50 out of 50 required points, group of indicators C: 100 out of 100 required points, group of indicators D: 375.7 out of 300 required points, group of indicators E: 220 of required points 100, group of indicators F: 120 of required points 100.

2. Evaluation of the candidate's pedagogical activity

The candidate is a long-time lecturer at the University "Prof. Dr. Asen Zlatarov" – Burgas. From 2012 to 2019 she was a part-time lecturer, leading lectures seminars and practical classes with students from the two educational and qualification degrees - "Bachelor" and "Master". From 02.09.2019 to 13.07.2021 Dr. Eng. Milena Petkova Dimitrova holds the academic position of "Assistant" and from 13.07.2021 until now she holds the academic position of Assistant Professor. During this period of time, she led lectures, seminars, practical classes and specialized practice to students from the Bachelor's and Master's Degree in more than 14 disciplines. Her average academic activity in both educational qualification degrees over the past 4 academic years is 488.5 hours/year and her extracurricular employment is 160 hours/year. Also in the period from 2019 to the present Chief Assist. Eng. Milena Dimitrova, PhD also holds a position at the Central Research Laboratory at the University "Prof. Dr. Asen Zlatarov" – Burgas, where at the same time he trains and performs analyzes of an apparatus for complex thermal analysis.

3. Scientific and/or applied research contributions

From the materials submitted for participation in the competition, it becomes clear that the main contributions of the candidate for the scientific position "Associate Professor" are in the following 3 directions, namely:

- Analysis of the side processes causing pollution of the technological equipment in oil refineries in order to develop good practices and improve the technological processes in oil refining, as well as in-depth studies on the impact of the raw material on the intensity of lateral processes. Application of modern methods for reducing pollution in installations for atmospheric distillation of oil and in installations for hydrotreatment of diesel fractions. In this direction, the monograph on indicator C.3 has been published. and one publication (D.7.12);
- Study of the specifics of corrosion processes for installations in oil refinery complexes and their impact on the formation and growth of dirt on equipment surfaces, implementation of methods for reducing corrosion processes in installations for atmospheric distillation of oil and introduction of inhibitory protection in bitumi

production plants. There are a total of 3 publications in this direction (D.7.9., D.7.10., D.7.11.);

- Studies related to the chemical treatment of different petroleum fractions in order to reduce and remove sulfur compounds by alternative oxidation methods. The results of these surveys are reflected in publications on indicator D and are 18 in total (D.7.1., D.7.2., D.7.3., G.7.4., G.7.5., G.7.6., G.7.7., G.7.8., G.8.1., G.8.2., G.8.3., G.8.4. G.8.5., G.8.6., G.8.7., E.23.1., E.23.2., E.23.3.).

The scientific output of the applicant is in accordance with the field of higher education 5. Technical sciences, professional field: 5.13 General engineering and the scientific specialty "Technology of natural and synthetic fuels" under the announced competition.

4. Significance of contributions to science and practice

It is a good impression that the publications and contributions of the candidate are extremely directly aimed at solving practical problems in the field of oil refining industry.

5. Critical remarks and recommendations

I have no critical remarks. I would recommend the candidate to publish more papers in foreign issues referenced and indexed in SCOPUS and Web of Science. It would also be good to participate more actively in research projects here in Bulgaria as well as in abroad.

6. Conclusion

The established full compliance with the requirements of the Law for the development of the academic staff in the Republic of Bulgaria and those referred to in art. 67 of the Regulations on the conditions and procedures for the acquisition of scientific degrees and academic positions at the University "Prof. Dr. Asen Zlatarov" requirements of the submitted documents and references for the fulfillment of the minimum national requirements, gives me grounds to confidently propose the candidate Chief Assist. Eng. Milena Petkova Dimitrova, PhD to take the academic position of Associate Professor in the professional field 5.13 General Engineering, scientific specialty 02.10.23 "Technology of natural and synthetic fuels".

Aug 18, 2023
Sofia

Member of the scientific jury:
/Ass. Dr. Ing. Silvia Lavrova-Popova/