OPINION

by Prof. Irena Georgieva Markovska,
University "Prof. Dr. Asen Zlatarov", Burgas
member of the scientific jury according to the order of rector №236/15.07.2024
of the materials submitted for participation in the competition for occupying the academic position of "professor", in the field of higher education 5. Technical sciences, professional direction 5.5. Transport, shipping and aviation, scientific specialty 02.08.12 "Transport and storage of oil, gas and solid minerals", announced in the Official Gazette, no. 43/17.05.2024, in which Yordanka Tsankova Tasheva, associate professor, Ph.D., participated as a only candidate.

1. Brief biographical data

Associate Professor Yordanka Tasheva graduated from the University "Prof. Dr. Asen Zlatarov" in 1998 with a master's degree in "Chemical Technologies", specializing in "Petroleum Technology and Chemotology". She also has a second specialty in "Industrial Management". In the period from 2001 to 2055, he was a full-time doctorate in the department of "Production Technologies" at the university, and in 2006 he defended a dissertation at the VAK to obtain the doctor's degree on the topic "Methods for obtaining ecological middle distillate fuels". In the period 1998-2000, Associate Professor Tasheva worked as a chemist at the scientific sector of the University "Prof. Dr. Asen Zlatarov". In 2005 and 2006, she was a part-time assistant at the "Production Technologies" department, and since 2006, after winning a competition, assoc. prof. Tasheva was appointed to the academic position of "assistant" at the "Industrial Technologies and Management" department. Since 2011, Yordanka Tasheva has been an associate professor in the same department.

2. General description of the presented materials

The scientific research in the works of Prof. Yordanka Tasheva, submitted for the acquisition of the academic position "professor" are for the most part in the field of scientific direction, resp. the scientific specialty "Transport and storage of oil, gas, and solid minerals", for which the competition was announced. The total number of points collected by Associate Professor Tasheva for fulfilling the minimum national requirements according to the Regulations for the conditions and procedures for acquiring scientific degrees and holding academic positions at the University "Prof. Dr. Asen Zlatarov" - Burgas are 1390 points with the required a minimum of 1150 points.
Candidate Yordanka Tasheva participated in the competition with 1 monograph, 1 textbook, 2 manuals, and 44 articles, of which 10 scientific articles according to indicator B4, 10 articles according to indicator G7, and 24 scientific publications by indicator G8.
A total of 50 publications of the candidate can be found in the SCOPUS database, of which 35 are cited with a total of 90 citations. Specifically, 25 citations in the refereed and indexed

editions in the world databases with scientific information (Scopus/Web of Science) were noticed in the publications of the competition. Her SCOPUS H-factor is 6, without self-citations it is 5.

3. General characteristics of the applicant's activity

3.1.Educational and pedagogical activity (work with students and doctoral students)

Associate Professor Yordanka Tasheva demonstrates active pedagogical activity. She has academic and teaching experience of 19 years in the field of education - from 2005 when she was appointed as a part-time teacher until now. She teaches 19 academic disciplines to students, resp. 2 in professional bachelor's degree, 8 in bachelor's degree, and 9 in master's degree.

She is the academic supervisor of 27 successfully defended graduates from the specialties "Transportation Technology and Technologies", "Technology of Oil and Gas" and "Technology and "Management of the Oil and Gas Industry".

She is the co-supervisor of 2 successfully defended PHD students, respectively Dr. Anton Todorov Palichev, who defended his doctoral program 02.10.23 "Technology of natural and synthetic fuels" from professional direction 5.10, and Dimitrinka Ivanova - who defended her doctoral program "Ecology and environmental protection" from professional direction 4.2.

Assoc. prof. Tasheva has developed or updated 24 educational programs for training students for the following degrees: professional bachelor's, bachelor's, and master's.

In conclusion, it can be summarized that the candidate is a teacher with extensive experience in a wide range of disciplines in the field of technical sciences.

3.2. Applicant's administrative experience

Prof. Tasheva has significant administrative experience in organizational and management structures, namely:

- Member of the FS of the Faculty of Technical Sciences for the period 2019-2023;
- Member of the FS of the Faculty of Social Sciences for the period from 2023-2027;
- Member and secretary of the Attestation Commission at the Faculty of Social Sciences at the University "Prof. Dr. Asen Zlatarov" for the period 2019-2023;
- Member and secretary of the Attestation Commission at the Faculty of Social Sciences at the University "Prof. Dr. Asen Zlatarov" for the period 2023-2027;
- Member of the Colloquium of the Faculty of Social Sciences at the University "Prof. Dr. A. Zlatarov"- 2015-2019;

• Member and secretary of the Colloquium of the Faculty of Social Sciences at the University "Prof. Dr. A. Zlatarov" - 2019-2023;

• Member of the Colloquium of the Faculty of Social Sciences at the University "Prof. Dr. A. Zlatarov" - 2023-2027.

3.3.Project activity of the candidate

With regard to participation in scientific projects, it can be noted that Prof. Tasheva participated in 14 projects. She is a team member of 3 European-funded projects, a university team leader of 3 scientific and educational projects, a leader of 3 university projects, and a team member of 5 university projects.

4. Scientific and scientific-applied activity. Contributions

The candidate's contributions can be classified in 3 directions - scientific, scientific-applied, and applied.

4.1. Scientific contributions

1. It has been proven that the process of extraction of tannins from vegetable raw materials is thermodynamically stable (irreversible and non-spontaneous), proceeds slowly according to the calculated rate constants, is energy-intensive, and is dependent on many factors.
2. The upper and lower heat of combustion, the fuel index, and the energy density of biomass obtained after water distillation of needles and needles with their bearing branches from black pine were calculated.
3. The thermodynamic parameters of essential oil – ethanol-water systems of different essential oils were calculated.

4.2 Scientific and Applied Contributions

1. The structural dimensions of a Florentine vessel (decanter) used in cohobation installations processing primary distillation waters from various essential oil crops (rose, lavender, basil, fennel, fennel, coriander and white pine), which are mainly processed in the Republic of Bulgaria.
2. The obtained data on the calculated thermodynamic and kinetic parameters of emulsions with 4% soy protein isolate, are of interest to the modern food industry.
3. The coefficient of thermal conductivity and the coefficient of thermal conductivity as well as the specific heat capacity of sage essential oil and its main components were calculated.
4. The thermophysical properties - coefficient of thermal conductivity, specific heat capacity, and coefficient of thermal conductivity of studied alloys Sn – Zn with the addition of Ni were calculated.

4.3. Applied Contributions

1. An energy efficiency survey of buildings and industrial enterprises was carried out. It has been established that after the implementation of the energy-saving measures (ESM), CO_2 emissions in the environment are reduced as a result of the introduced ESM) and an economy of fuel used for heating is realized.

2. Molecular internal diffusion coefficients and equivalent diffusion coefficients were calculated during the extraction of tannins with ethanol (30, 50, 70, and 95 %) and propylene glycol, duration (1, 3, 5, and 7 hours), and temperature (20, 40 and 60 OS) from: leaves of three types of tobacco and two types of hawthorn, leaves of tobacco, etc.
3. The energy efficiency of distillation plants processing flower, leaf, and grain raw materials was studied. The consumption of steam and cooling water increases proportionally depending on the number of stills used in the distillery. It has been proven that distillation is an energy-intensive mass transfer process and for now, in Bulgaria, it is profitable to use periodic mobile and stationary devices.
4. The mass transfer coefficients of the extraction process (solid-liquid) were calculated for different plant raw materials.
5. The actual number of trays required for the processing of primary distillation waters (from basil and fennel) in a cohabitation column was calculated. The height of the cohobation column was also determined for the considered primary distillation waters.

5. Personal impressions

I have had the pleasure of knowing associate professor Yordanka Tahseva for many years, and my personal opinion is that associate professor Tahseva is a responsible and erudite colleague.

6. Conclusion:

Bearing in mind the above mentioned, I confidently propose to the respected Faculty Council of the Faculty of Technical Sciences to elect associate professor Yordanka Tasheva Ph.D, for occupying the academic position "professor" in the field of higher education 5. Technical sciences, professional direction 5.5. Transport, shipping and aviation, scientific specialty 02.08.12 "Transport and storage of oil, gas and solid minerals".

22nd August 2024

Jury member:
/prof. I. Markovska/