

REVIEW

from Atanas Ivanov Pavlov, DScTech – Full Professor at the University of Food Technology – Plovdiv; Professor at the Institute of Microbiology, Bulgarian Academy of Sciences (BAS); Corresponding Member of Bulgarian Academy of Sciences, Corresponding Member of Saxon Academy of Sciences

of the materials submitted for participation in a competition
for the academic position "Associate Professor"
in the Field of Higher Education - 5. Technical sciences,
Professional Area - 5.13. General engineering
Specialty - Engineering Ecology

In the competition for Associate Professor, announced in the State Gazette, issue 68/ 31.07.2020 and on the website of TU-Gabrovo for the needs of the Department of Mathematics, Informatics and Natural Sciences at the Faculty of Economics, as a candidate participates Ch. Assistant Professor Dragomir Stoyanov Vasilev, Ph.D.

1. Short biography of the candidate

Ch. Ass. Prof. Dragomir Stoyanov Vassilev completed several master's degrees: in "Occupational Safety" with a qualification of "Occupational Safety Engineer" at the Technical University, Gabrovo; on "Environmental Protection and Sustainable Development" with the qualification "Environmental Engineer"; in "Medical Chemistry" with a qualification of "Chemist in Medical Chemistry" at Plovdiv University Paisii Hilendarski and acquired the Educational and Scientific Degree Doctor in 2016 at the University of Food Technology, Plovdiv, majoring in Organic Chemistry and the topic of the Dissertation thesis "Ultrasonic synthesis of biodegradable plasticizers for plastics". The labor activity of Ch. Ass. Prof. Vassilev is fully associated with the Department of Mathematics, Informatics and Natural Sciences of the Technical University, Gabrovo, where he successively holds the academic positions of Assistant, Senior Assistant and Chief Assistant. The data from the career development of Ch. Ass. Prof. Vassilev show consistency and are a prerequisite for the development of a good professional level in the near future.

2. Overview of submitted competition documents

Presented by Ch. Ass. Prof. Dr. Eng. Dragomir Stoyanov Vassilev set of materials is in accordance with the Regulations for the Development of the Academic Staff of TU-Gabrovo and includes the following documents:

1. Application to the Rector for admission to the competition;
2. Copy of the State Gazette with the announcement of the competition;
3. Diploma for completed higher education;
4. Diploma for educational and scientific degree "Doctor";
5. Curriculum vitae European variant;
6. List of publications for participation in the competition;
7. List of publications submitted for obtaining the educational and scientific degree "Doctor";
8. List of citations;
9. Author's reference for the contributions in the scientific works;
10. Abstracts of papers after defense of a doctoral dissertation;
11. Information for fulfillment of the minimum requirements for holding the academic position "Associate Professor";
12. Abstracts of peer-reviewed publications, in Bulgarian and in a foreign language;
13. Declaration of authenticity of the provided information;
14. List of other scientific achievements - at the discretion of the candidate;
15. Copies of publications.

The candidate Ch. Ass. Prof. Vassilev has submitted a total of 36 scientific papers, a list of 20 research projects (in two of which he is a supervisor), 1 implementation document, 1 textbook and 4 teaching manuals. 31 scientific papers, 1 implementation, 1 textbook and 4 teaching manuals are accepted for review, which are outside the dissertation for ONS "Doctor" and are taken into account in the final evaluation, as well as 20 research projects. 5 scientific papers related to the dissertation for obtaining the educational and scientific degree "Doctor" are not reviewed. The distribution of scientific papers by relevant headings, in the country and abroad, is as follows: 1 monograph, 3 publications in referenced foreign

publications that do not have an Impact Factor or Impact Rank. 7 publications in refereed Bulgarian journals and 21 published materials in collections of scientific forums are presented. In 16 publications Ch. Ass. Prof. Dr. Dragomir Vassilev is a leading, first or correspondent author - an indicator that takes into account the contribution to concrete scientific papers.

3. Reflection of the applicant's scientific publications in the scientific community (known citations)

In the available scientific literature there are 10 citations of scientific works of Dr. Vasilev. The fact that the works of the candidate are cited exclusively by foreign scientists is very impressive, which is indicative of the recognition of Dr. Vassilev among the international scientific community working in this field. This is a prerequisite to expect the development of a successful scientific career in the near future.

4. Overview of the content and results in the presented works

All presented scientific articles are in the field of applied chemistry and engineering ecology. Areas of scientific interest of Ch. Ass. Prof. Vassilev, according to the results in the presented scientific papers, can be summarized as follows:

- Application of ultrasonic and microwave energy for synthesis and modification of organic compounds;
- Engineering ecology and environmental protection.
- Ensuring safety at risk of exposure to chemicals.

The published data in these areas are valuable both from a fundamental point of view and as a basis for the development of further applied research. In addition, Ch. Ass. Prof. Vassilev also presents a series of scientific papers related to educational technologies and training in chemistry

5. General characteristics of the candidate's activity

5.1. Educational and pedagogical activity

The presented documents characterize Ch. Ass. Prof. Dr. Dragomir Vassilev as a promising young teacher. He has participated in the development of bachelor's

degree programs in "Chemistry", "Environmental Chemistry", "Engineering Ecology" and a curriculum in the master's degree in "Environmental Protection and Sustainable Development". He has taught in an impressive 16 disciplines. Ch. Ass. Prof. Vassilev is the author of a textbook and four teaching manuals in the field of his competencies. These works definitely add value to the currently known publications in the field. Ch. Ass. Prof. Vassilev has supervised 6 defending graduates, has supervised numerous student works, as well as reviewed a large number of diploma theses. It should be especially emphasized that regardless of the early stage of his career development, Ch. Ass. Prof. Vassilev was in charge of the master's degree in "Environmental Protection and Sustainable Development". This fact is unambiguous regarding the level of Ch. Ass. Prof. Vassilev as a lecturer.

5.2. Scientific and scientific-applied activity

The scientific production of Ch. Ass. Prof. Vassilev from 31 scientific papers, as well as 29 presentations at scientific conferences is proof of active and successful work in the field of scientific research. The presented scientific papers in connection with this competition show that he is an active scientist. The number of scientific publications and their distribution by rubrics, presented above, meet the criteria of the Technical University, Gabrovo for the academic position of "Associate Professor".

The contributions listed below, as well as the scientometric indicators of the presented scientific production (10 citations), determine Ch. Ass. Prof. Vassilev as a recognizable scientist in the field of competence among the college.

This scientific production would not be possible without comfortable research funding. In this regard, we can also determine the indicators of Ch. Ass. Prof. Vassilev as impressive - he has twice managed research projects and in 18 projects he is a member of the research team - indicators that are difficult to achieve even by habilitated lecturers.

5.3. Implementation activity

A practical tool for workplace risk assessment in the economic activity "Human Health" has been implemented (code 86 of NACE.BG-2008). The development is in connection with the implementation of project BG051PO001 - 2.3.01 "Prevention for

safety and health at work", funded by the Operational Program "Human Resources Development".

6. Contributions (scientific, scientific-applied, applied).

The main contributions, a consequence of the intensive scientific activity of Ch. Ass. Prof. Dragomir Vassilev, can be referred as confirming previous statements these and applied:

1. Confirming previous statements these

- Aliphatic and sugar esters of higher fatty acids are obtained by ultrasonic action;
- New organic substances with potential biological activity have been synthesized through microwave exposure;
- The morphology of plasticized polyvinyl chloride with sucropalmitate is defined using CEM.

2. Applied

- Catalytic systems for complete oxidation based on nickel and cobalt oxides have been developed and their applicability for treatment of wastewater contaminated with organic substances has been proven;
- A tool for monitoring the parameters of a flow-circulation reactor for complete catalytic oxidation has been developed;
- The reaction parameters for ultrasonic synthesis of aliphatic and sucrose esters of higher unsaturated fatty acids without destruction, isomerization and oxidation of the reaction products are optimized;
- The antimicrobial and antifungal activity of ultrasonic esters has been proven;
- Ultrasound synthesis of sucropalmitate is optimized;
- The applicability of sucropalmitate and inulin acetate as biodegradable plasticizers in the processing of plastics (PVC) is defined;
- The reaction conditions of transesterification have been optimized by reducing the reaction time and the reaction temperature.

7. Assessment of the personal contribution of the candidate.

A far as we evaluate a candidate for the academic position of "Associate Professor", I would like to emphasize that I am pleasantly surprised by the clearly defined scientific handwriting in the publications in which Ch. Ass. Prof. Vassilev is a leading author (corresponding or first), his scientific style is clearly outlined. The presented original scientific results and the formulated contributions to the development in the respective scientific field, in these publications, can also be defined as a result of the work of Ch. Ass. Prof. Vassilev with a significant personal contribution.

8. Critical remarks and recommendations

I have no specific critical remarks. My main recommendation to Dr. Vassilev is not to lose the momentum and to concentrate their efforts on organizing a scientific group capable of structuring and subsequently successfully absorbing funds provided by various scientific funds at the national and international level.

9. Personal impressions

I know Ch. Ass. Prof. Dragomir Vassilev from the time of his doctorate at the University of Food Technology, Plovdiv, during which time I had the pleasure to witness his growth as a young scientist. I was pleasantly impressed by the rationality of Dr. Vassilev in planning and subsequent implementation of the various tasks related to his doctorate. A quality that is definitely evident that helps him in his next career development.

10. CONCLUSION

The documents and materials submitted by Ch. Ass. Prof. Dragomir Vassilev comply with all the requirements of the Law on Academic Staff Development in the Republic of Bulgaria (ZRASRB), the Rules for the Implementation of ZRASRB, and the Rules of the Technical University of Gabrovo.

The candidate has submitted a sufficient number of scholarly works published later than the materials included in the defense of the doctoral degree. The candidate's work comprises original scientific and applied contributions that have received international recognition, a representative part of which has been published

in journals and scientific compendiums published by international academic publishers. Ch. Ass. Prof. Dragomir Vassilev's scientific level is good.

The results achieved by Ch. Ass. Prof. Dragomir Vassilev in his research fully comply with the specific requirements of the Technical University of Gabrovo Regulations for the application of ZRARB.

Having acquainted myself with the materials and scholarly works submitted in relation to the competition, the analysis of their importance and scientific and applied contributions contained therein, I consider it should be legitimate to give my positive opinion and to recommend that the Scientific Jury prepare a report to the Faculty Council of Faculty of Economics regarding the appointment of Ch. Ass. Prof. Dragomir Vassilev as Associated Professor at Technical University of Gabrovo in Field of Higher Education - 5. Technical sciences, Professional Area - 5.13. General engineering, specialty - Engineering Ecology

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Review prepared by: /signature/
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