



## REVIEW

by competition for the academic position "Associate Professor" in a professional direction 5.1 Mechanical Engineering, School discipline "Materials Science and Technology of Materials". at the Department of "Materials Science and Technology of Materials" at MTF, announced by Technical University – Varna in DV No 2/05/01/2024. with a single candidate ch. Assistant Professor **DANIELA TODOROVA SPASOVA**. Ph.D

Member of the scientific jury: Prof. Dr. Eng. Mara Krumova Kandeва-Ivanova – Technical University-Sofia

**BASIS** for the preparation of the opinion: Order No. 108/28.02.2024 of the Rector of TU - Varna for the approval of a scientific jury and Decision from the first meeting of the scientific jury.

### **1. General characteristics of scientific research and applied science activity of the candidate**

Ch. Assistant Professor Daniela Spasova, PhD participated in the current competition with 30 pcs. scientific publications. Of them, 11 pcs. in publications referenced and indexed in world-renowned databases, of which 2 nos. - independent and in 5 pcs. she is the lead author. The remaining 19 pcs. publications were published in non-refereed peer-reviewed journals, such as 6 nos. - independent and in 7 pcs. candidate is the lead author. The scientific research works of ch. Assistant Professor D. Spasova, PhD are presented in two groups. The first group includes 10 publications, united as equivalent to a monographic work. The second group includes 20 publications systematized in five thematic areas.

The works do not repeat the publications included in the dissertation work for the acquisition of the ONS "Doctor". I accept all posts for review.

Out of all 30 publications submitted for review, of which 8 nos. are independent (B.4.2; B.4.5; Г.8.7; Г.8.9; Г.8.11; Г.8.16; Г.8.17; Г.8.18), in 12 pcs. the candidate is the lead author (B.4.1; B.4.3; B.4.4; B.4.8; B.4.9; Г.8.2; Г.8.5; Г.8.6; Г.8.8; Г.8.10; Г.8.12; Г.8.14), of which 7 have been published in publications referenced and indexed in world-renowned databases.

The applicant submits a Certificate of fulfillment of the minimum national requirements as follows:

Group of indicators **A**, indicator 1 – **50 points**.

Group of indicators **B**, indicator 4 – **239 points**.

Group of indicators **Г**, indicators 7 and 8 – **215 points**.

Group of indicators **Д**, indicator 12 – **100 points**.

Group of indicators **Ж**, indicator 29 – **195 points**.

In summary: according to indicators A, B, Г and Д, the candidate achieved **604 points**, with minimum requirements for the academic position **400 points**.

Ch. Assistant Professor Daniela Spasova, PhD participated in the development of 13 research projects. Of them, 3 pcs. national and 10 units, with targeted funding from the state budget, one of which the candidate is the head of. It should be noted her active participation in the construction of a laboratory for obtaining new composite materials and increasing the quality of the laboratory teaching process. For the high achievements and contributions in the scientific research activity D. Spasova, received two diplomas and an award in the period 2011-2023.

The entire research and scientific-applied activity of ch. Assistant Professor D. Spasova is on the theme of the contest.

### **2. Evaluation of the pedagogical preparation and activity of the candidate.**

Ch. Assistant Professor Daniela Spasova, Ph.D., is a full-time teacher in the department "Materials Science and Technology of Materials" (MTM) from 2009 until now. Her educational and

pedagogical activity is related to conducting lectures, laboratory and seminar exercises, developing curricula for disciplines for the Bachelor's and Master's " to students from more than 10 specialties for full-time and part-time study. Over the past three years, she has had a significant academic workload, and for the last academic year her total classroom workload reached 545.5 hours. D. Spasova took part in the development of 12 study programs for the "Bachelor" OCS. She was the supervisor of 11 successfully defended diplomas (7 for the "Bachelor" and 4 for the "Master").

Under the Erasmus program for the period 2016-2023, D. Spasova has implemented 12 mobilities in universities in the Czech Republic, Romania, Spain, Greece, etc.

### **3. Basic scientific and scientific-applied contributions**

The issues, content and achievements of the presented scientific works are entirely related to the theme of the competition. They cover a wide range of fundamental and applied research in the field of materials and technology, in particular the creation and research of new composite materials obtained by different technologies with application in different operational conditions and areas of industry. The research has an interdisciplinary nature, covering technological, methodological, physical-mechanical and tribological aspects.

I accept the contributions formulated by D. Spasova as scientific-applied and applied in the two main groups of scientific publications, as follows:

**First group (I)** - 10 pcs. publications united as equivalent to a monographic work on the topic "Research of materials and technologies applicable to facilities in the marine and mining industry" [B.4.1, B.4.2, B.4.3, B.4.4, B.4.5, B.4.6, B.4.7, B.4.8, B.4.9, B.4.10].

**Second group (II)**- 20 pcs. publications systematized in the following thematic areas:

- Development of new and improvement of existing methods and technologies for making casting molds and obtaining complex non-technological castings from various alloys [Γ.8.1, Γ.8.2, Γ.8.3, Γ.8.16, Γ.8.18];

- Conducting research on technologies for the production of composite materials and evaluation of their quality and properties [Γ.8.5, Γ.8.6, Γ.8.7, Γ.8.8, Γ.8.14];

- Study the application of software products for automating data processing and modeling thermal processes [Γ.7.1, Γ.8.10];

- Increasing the strength and operational characteristics of construction materials through additional applied technological processes [Γ.8.4, Γ.8.9, Γ.8.11, Γ.8.15, Γ.8.17, Γ.8.19];

- Conducting research, quality control and restoration activities on the operating condition of production facilities [Γ.8.12, Γ.8.13].

### **4. Significance of contributions to science and practice**

The specified scientific-applied and applied contributions enrich knowledge and practice with new methods and facts, as well as increase the quality of educational activities in the science of materials and technologies.

The large number of publications, independent, as a leading author and in a collective, give me reason to think that the scientific works presented in the competition and the contributions in them are personal achievements of the candidate ch. Assistant Professor Daniela Spasova, Ph.D. Eng. Her participation in many projects presents her as a scientist who successfully works in a team, and the large number of citations of her works speak for the recognition of the candidate by the scientific circles at home and abroad.

### **5. Critical notes and recommendations.**

I have no critical remarks on the substance, as well as on the technical presentation of the contest materials.

## CONCLUSION

Based on the analysis of the presented scientific works of the candidate, their relevance and significance, the scientific-applied and applied contributions contained in them, as well as her teaching activity, with full conviction I allow myself to recommend to the respected members of the Scientific Jury to vote positively for awarding the academic position of **ASSOCIATE PROFESSOR** to ch. Assistant Professor **DANIELA TODOROVA SPASOVA**, Ph.D. Eng in professional direction 5.1 Mechanical Engineering, study discipline "Materials Science and Technology of Materials", at the Department "Materials Science and Technology of Materials" Varna.

Sofia, 04/08/2024

**JURY MEMBER:....**  
/prof. E

Заличена информация  
по Регламент (ЕС)  
2016/679