#### **REPORT**

to occupy the academic position:

"Professor"	
"Associate Professor"	x
	one of the academic positions indicated shall be marked with the sign "X"

## Candidates to occupy the position:

1	Chief Assistant	PhD	Tina	Radmilova	Tasheva	UCTM
Nº	academic	scientific	name	middle	last name	workplace
	position	degree		name		

# Scientific area:

5.	Engineering sciences
code	name

#### Professional area:

5.6	Materials and materials science
code	name

# Scientific specialty:

"Silicate materials"	

## The competition has been announced:

64	05.08.2025 г	"Silicate Technology"	Metallurgy and materials science
in SG issue	date	for the needs of the Department	Faculty

# The report was written by:

Professor	PhD	Plamen	Kostadinov	Petkov	UCTM
academic	scientific	name	middle	last name	workplace
position	degree		name		

### 1. Report for the candidate:

Chief Assistant	PhD	Tina	Radmilova	Tasheva
academic	scientific	name	middle name	last name
position	degree			

#### 1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	х
B) The candidate doesn't meet the minimum requirements	0 points	
		one of the
		answers given
		is marked with
		the sign "X"

It must be filled in if answer B is marked. The publication activity of the candidate is analyzed. The response of the results achieved (quoted) is analyzed.

The attached documents are specified in a very well-organized order. From them, the following conclusion is unequivocally reached: The candidate fully satisfies the minimal requirements, according to the Regulations for the Application of the National, as follows:

- Total score 761 points;
- Indicators section (3 4) 162 points;
- Indicators section (5 -11) 208 points;
- Indicators section (12-15) 170 points;
- Indicators section (16-27) 171 points.

This result exceeds the required minimum almost twice. This opinion of mine fully correlates with the opinion of the University Commission for the evaluation of the documents of the candidates for the academic position at UCTM.

#### 1.2. Relevance of scientific and / or applied research:

A) The research is relevant. Part of the research is pioneering (no results are known on the topic by other authors)	8 points	х
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	
C) Most of the research is relevant, but also some results are presented that have no scientific and / or applied value	4 points	
D) The smaller part of the research is relevant	2 points	
E) Research is not relevant	0 points	

	one of the
	answers given
	is marked with
	the sign "X"

The evaluation of the relevance of the research must be substantiated.

The relevance of Dr. Tasheva's research is beyond doubt. The synthesis and characterization of new materials based on complicated oxide systems is a continuous process and an endless horizon. In addition to the purely fundamental basis, the accumulation of new scientific facts about the structure, dielectric, magnetic, physicochemical and mechanical properties of complex oxide systems, there is a practical need for new materials for a variety of applications - from microelectronics, optoelectronics to biocompatible materials. In this sense, the candidate's scientific activity is absolutely relevant, combining the modeling of properties and the characterization of new glasses and ceramics with a specific purpose.

### 1.3. Objectives of the research:

A) Realistic and of scientific and / or applied interest	8 points	X
B) Realistic, but not of scientific and / or applied interest	4 points	
C) Unattainable (unrealistic)	0 points	
		one of the answers given
		is marked with
		the sign "X"

#### Objectives must be specified. The type of the set objectives must be justified

The goals set for the realization of the scientific tasks are completely realistic, correctly selected and perfectly achieved. This is possible only on the basis of the modern methods of analysis used and their adequate interpretation and also thanks to the high chemical qualification of the candidate, as well as enviable knowledge in the field of condensed matter physics.

#### 1.4. Candidate research contributions:

A) With lasting scientific and / or applied response, they form the basis for new research and applications	20 points	
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	х
C) They are of scientific and / or applied interest	12 points	
D) Lack of significant contributions	8 points	

E) Lack of contributions	0 points	
		one of the
		answers given
		is marked with
		the sign "X"

Contributions must be specified. The type of results achieved must be justified.

The main results in the publications included in the competition relate to obtaining new multicomponent oxide glasses (Bi<sub>2</sub>O<sub>3</sub>, Nb<sub>2</sub>O<sub>5</sub>, TeO<sub>2</sub>, V<sub>2</sub>O<sub>5</sub>, MoO<sub>3</sub>, SiO<sub>2</sub> etc.) using traditional high-temperature techniques with subsequent quenching of the melt; complex characterization of the phase composition of glasses and glass-ceramics, the valence state and coordinations of the transition elements in the glass network, the structure and microstructure, as well as studying the electrical, mechanical, thermal and magnetic properties of the obtained systems. She is a co-author of a total of 25 articles in journals and books with impact factor and impact rank, and more than 190 citations have been noted so far (h index = 8 according to Scopus). A reference with 20 participations in international scientific forums is presented, most of the candidate presentations are oral presentations (very good language preparation). There are more than 25 national forums with the participation of Dr. Tasheva. In her scientific activity, Dr. Tasheva emerges as a young and promising scientist in the field of complex oxide systems. One direct proof of this opinion is the active participation of the candidate in the research process - leader or participant in 6 projects funded by the Bulgarian National Science Foundation and 3 such projects funded by the European Commission. As the candidate's main contribution, I would note the application of the "polarization method" proposed more than 30 years ago by Prof. Komatsu to a significant number of multicomponent glasses. In this approach, there is an awful lot of physics that remains to be clarified. Of course, not the least of the contributions is the fundamental knowledge of the synthesis, structure and properties of newly synthesized oxide systems.

#### 1.5. Participation of the candidate in the achievement of the presented results:

A) The candidate has at least an equal participation in the submitted papers	8 points	X
B) The candidate has at least an equal participation in most of the submitted papers	7 points	
C) The candidate has a secondary participation in most of the submitted papers	4 points	
D) The candidate participation is unnoticeable	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items C or D is marked.

Knowing well the scientific activity of Dr. Tasheva, especially in recent years regarding the work in my scientific group on the BiOrgaMCT project, I can safely state that she is the author not only of the ideology of the experiment but also mainly of the analysis of the achieved results. In this regard – in table 1.5. no such hypothesis is provided.

### 1.6 Pedagogical activity:

A) The candidate has effective and sufficient pedagogical activity at the university. The textbooks issued are modern and useful (they meet the requirements of the Regulations). The work with undergraduate and doctoral students is at a high professional level.	8 points	х
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	
C) The pedagogical activity and / or textbooks issued are insufficient (do not meet the requirements of the Regulations)	0 points	
		one of the answers given is marked with the sign "X"

Critical notes must be provided if one of the items B or C is marked.

Regardless of the modest point contribution of this criterion, I would like to comment on the candidate's pedagogical activity to date. Obviously, over the years, Dr. Tasheva has established herself as a good university lecturer.

She is currently the titular lecturer of three lecture disciplines: "Structural Analysis", "Instrumental Analysis of Raw Materials and Products in Silicate Production" and "Materials Science", and also lectures on 6 more disciplines for various specialties. She has also developed 7 curricula for the Bachelor's and Master's degree programs. In addition, she has also prepared and printed a teaching aid for students of all specialties: - Tina Tasheva, Guide to Exercises in Structural Analysis, UCTM, 2025, ISBN 978-954-465-177-0.

Taken together, these facts correlate only with the maximum possible score.

#### 1.7. Critical notes:

A) Lack of critical notes	8 points	x
B) Critical notes of a technical nature	7 points	

C) Critical notes that would partially improve the results achieved in a small part of the research	5 points	
D) Critical notes that would partially improve the results achieved in most of the research	3 points	
E) Significant critical notes	0 points	
		one of the answers given
		is marked with
		the sign "X"

Critical notes must be provided if one of the answers C, D or E is marked.

I have no critical remarks. Only one recommendation – in her publishing activities, she should focus on journals from the first or second quartile. (Save time and paper).

#### 1.8. Conclusion

A) The evaluation of the candidate's activity is <b>POSITIVE</b>	This evaluation is assigned to a total number of at least 50 points	76
B) The evaluation of the candidate's activity is <b>NEGATIVE</b>	This evaluation is assigned to a total number below 50 points	
		one of the answers given is marked with the sign "X"

#### To be filled in if requested by the member of the scientific jury

The high scientific qualification of the Shief assistant, Ph.D. Eng. Tina Tasheva in the field of synthesis of complex oxide systems, as well as the creative interpretation of known models for their characterization, is indisputable for me. She is a fully developed scientist with her own subject and a clear vision for its development, thus making a significant contribution to the development of scientific research and raising the authority of the UCTM and the Department of "Silicate Technology" in particular.

In terms of its volume and quality, the candidate's scientific and pedagogical activity definitely exceeds twice the requirements for occupying the position of "Associate Professor" according to the National Law and the Regulations for the Growth of the Academic Staff of the UCTM.

Based on all of the above, I recommend that the Scientific Jury propose to the FC at the Faculty of Mechanical Engineering - University of Technology of Bulgaria to elect Chief

Assistant, Ph.D. Eng. **Tina Radmilova Tasheva** to the academic position of **"ASSOCIATE PROFESSOR"** in professional field 5.6. "Materials and Materials Science", specialty "Silicate Materials" for the needs of the Department of "Silicate Technology" at the University of Chemical Technology and Metallurgy.

21.11.2025.	The report was written by:	
date		signature