Appendix 12d

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	Sen. Ass. Prof.	PhD	Ani	Angelova	Stoilova	UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

4	Natural Sciences, Mathematics and Informatics
code	name

Professional area:

4.1	Physical Sciences
code	name

Scientific specialty:

4.1 Physical sciences (Electrical, magnetic and optical properties of condensed matter)

The competition has been announced:

14	18.02.2022	Physics	FCT
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Assoc. Prof.	PhD	Ivailo	Boyanov	Gugov	UCTM
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Sen. Assist. Prof.	PhD	Ani	Angelova	Stoilova
academic position	scientific degree	name	middle name	last name

1.1. Meeting the minimum requirements under the Regulations:

A) The candidate meets the minimum requirements	20 points	X
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.
After corrections, Dr. Ani Staneva has submitted lists of her scientific papers for participation in the competition, which correspond to or exceed the parameters of the minimum requirements of the PPPZAD, Annexes 2c and 2d, for a competition in the Scientific Field 4 "Natural Sciences", namely: for habiliting work – 10 publications in sourses that are referenced and indexed in world-renowned databases of scientific information (Web of Science and Scopus)), with a total of quality points of more than 100, other publications – 11, with a total of quality points of more than 200, and 39 citations from other authors (excluding direct and indirect autocitations), h-index 5 (Scopus).

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	
B) Research is relevant. Results from other authors are known for each of the topics and / or applications studied.	6 points	X
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 synthesis and study of the structure and properties of new bulk and thin-film amorphous and glass crystal halcogenide materials is an up-to-date task with scientific importance in the field of electronics, optics, optoelectronics, informatics and sensorics. The use of polymers and organic dyes in optoelectronic devices such as organic LED screens (OLED) and organic photovoltaic solar cells (OPV) is a rapidly evolving scientific and applied field. This makes the accumulated knowledge and skills in the field of obtaining and researching organic photosensitive thin-layer materials contemporary and promising. Polarization methods for the study of biological tissues are a promising method of diagnosis and examination of socio-significant diseases.

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 scientific and scientific/applied objectives described in the publications of Dr. Ani Stoilova are: 1. Synthesis of new chalcogenid glasses by melting into soldered quartz ampoules. 2. Synthesis of new thin chalcogenide layers by vacuum thermal evaporation. 3. Examination of the structure of glass and layers by experimental and theoretical methods. 4. Examination of the properties of glass and layers as a function of the composition and method of preparation. 5. Preparation of thin polymer films, including azoo-polymer by centrifugal method, by the electrospray method or by thermal evaporation. 6. Synthesis of new aso-dyes. 7. Preparation of composite polymer thin layers containing chalcogenid microparticles or azo-dyes. 8. Study of the optical properties of the composite layers and optical recording of information in them. 9. Development of new methods of examination of histological samples with polarized light.

The scientific and scientific/applied objectives set are realistic, achievable and of scientific interest. The methods and apparatus applied to achieve them are adequate to the objectives.

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	X
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.
New compositions of chalcogenide glasses and crystalline materials containing Se, Te, Ge, In, B and Cu are formulated and synthesized by melting into soldered quartz tubes. The structure of these materials has been studied as a function of their composition using experimental and theoretical methods (contribution of a fundamental nature). Thin layers of materials are obtained by vacuum evaporation. The kinetics of evaporation and condensation of these materials have been studied (contribution of a scientific/applied nature). The properties of the glass and layers as a function of their composition were examined (contributions of a fundamental and scientific/applied nature). Polymer thin layers including composite ones containing microparticles of chalcogenide materials or azoo-dyes are obtained by thermal evaporation, by centrifugal method and by electro-spray deposition (scientific/applied contributions). Through polarized light, imaging of histological samples with pathology due to socio-significant diseases was performed. After appropriate digital processing the images obtained with polarized light have been found to be of better contrast than those obtained with non-polarized light (contributions of a fundamental and scientific/applied nature).

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	
B) The candidate has at least an equal participation in most of the submitted papers	7 points	X

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.

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	
B) The candidate has sufficient pedagogical activity at the university. The textbooks issued satisfy the requirements of the Regulations.	6 points	X
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"

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.
Recommendation: The immersion method can also be used to prepare thin polymer films. Sometimes this allows relatively easy control of the film thickness.

1.8. Conclusion

A) The evaluation of the candidate's activity is **POSITIVE**	This evaluation is assigned to a total number of at least 50 points	X **71 points**
B) ~~The evaluation of the candidate's activity is **NEGATIVE**~~	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 report was written by:	
Date **10.06.2022**	**Assoc. Prof. Ivailo B. Gugov, PhD**	signature