

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	Assistant Professor	PhD	Dimitrina	Atanasova	Todorova	UCTM, Sofia, Bulgaria
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

5	Technical Sciences
code	name

Professional area:

5.10	Chemical Technologies
code	name

Scientific specialty:

Technology, mechanization and automation of the pulp and paper industry

The competition has been announced:

67	13.08.2021	Department of Pulp, Paper and Printing Arts	Chemical Technologies
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Associate Professor	PhD	Petar	Ninov	Velev	UCTM
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Assistant Professor	PhD	Dimitrina	Atanasova	Todorova
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.

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	X
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 research in the applicant's papers submitted for the post of Associated Professor is entirely in the field of the scientific area in which the competition is announced.

The main results published in the scientific papers with which the candidate participates in the competition for "associate professor", as well as the corresponding scientific contributions, are presented in 5 groups according to the topic of the problems studied.

The research is up-to-date, and the results obtained can be related to the enrichment of the scientific field with new knowledge, as evidenced by the considerable number of citations

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 objectives set in the various topics of the conducted research are realistic and substantiated. The results achieved on this basis are of considerable scientific and applied interest.

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.

- In the specialized literature with extreme rarity could be found studies characterizing the relationship between the type of the wood raw type of cellulose, which are part of the paper and its printability. Due to the extensiveness of the performed analyses, the results of the work in this direction are not only with applied contribution, but also have scientific value.
- The research conducted describing the kinetic dependences of aging of coated printing paper has a scientific contribution.
- The extensive research conducted on the effect of the enzymatic treatment of SFM and the use of production sludge in the composition of the paper is innovative and has a proven scientific and applied contribution.
- For the first time, the reactive dyes consumption range for paper production is being determined and their resulting colour coordinates are measured.
- The results on the research and optimization of sizing processes to improve the barrier properties of papers have a significant scientific contribution due to its comprehensiveness, in terms of emulsification rate and ratio in emulsification of sizing agent and starch, as there are currently a limited number of studies conducted by scientific teams independent of the manufacturing companies characterizing the emulsification processes of these two chemical additives.
- The results of the investigation and optimization of retention and drainage processes to improve the properties of paper suspensions and the clarity of the waters are scientifically applied.
- The conducted experiments for optimizing the properties of packaging materials with the addition of biopolymers - chitosan and rice starch have a significant scientific contribution.
- The characterized antibacterial properties of the obtained papers, treated with extracts of five species of essential oil plants and silver nanoparticles, allow optimal selection of type and application of antimicrobial agent for active wrapping papers, cardboards, wood composites, etc.
- The investigations on the properties of the most used in practice types of double and triple face corrugated cardboards help to predict the pressure resistance of the finished corrugated cardboard packaging during palletizing and transport.

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.

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	X
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.

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.

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	76
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
I recommend for the needs of the Department of Pulp, Paper and Printing Arts to be awarded to PhD Todorova the academic position "Associate Professor" in the professional field 5.10 Chemical Technologies scientific speciality „Technology, mechanization and automation of the pulp and paper industry“.

01.11.2021		
	The report was written by:	
date		signature