

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	Metodi	Kirilov	Mladenov	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:

Influence of the ecological factors on the man and his protection from the harmful ecological factors

The competition has been announced:

108	22.12.2020	Fundamentals of Chemical Technology	Chemical Technologies
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

professor	PhD	Ivo	Vladimirov	Valchev	UCTM, Sofia, Bulgaria
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

assistant professor	PhD	Metodi	Kirilov	Mladenov
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.

The applicant participates with 27 scientific works in the competition. Ten of them are in the group of Index 4; 3 are in the group of Index 7; there are 14 papers in the group of Index 8 (6 presentations included). The applicant is leading author or equal one. There is a list of 54 citations noticed. The applicant Hirsch-index is 3.

The article # 3 of on index II. of assist. prof. Metodi Mladenov is a publication in the magazine "Forestry Thought", 1/2009 (37), 298-306. This journal is not indexed during this period and should not be reported in the indicator group 7, but in the indicator group 8.

Assist. Prof. Metodi Mladenov fully satisfies the minimum requirements for the academic position "Associate Professor", specified in the Law and the Rules of UCTM from 2019 in the Scientific area 5. Technical Sciences; Professional area 5.10. Chemical technologists. The points on the indicators: 3-4 (habilitation work or 10 equivalent publications) are a total of 315 (minimum number of 100 points and 10 articles required). The sum of the points on indicators 5-11 (after transferring an article II. 3.) are total 235 (minimum number of 200 points required). The sum of the points according to the indicators 12-15 is a total of 372 (minimum number of 50 points required). The sum of the points according to the indicators 16 - 25 is a total of 60.

The total number of points are 1032 with a required minimum of 400 points.

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.
<p>The research in the applicant's papers submitted for the acquisition of the academic position "Assist. Professor" is entirely in the field of the scientific specialty in which the competition is announced and relates mainly to I characterization of materials, waste and soils, in terms of environmental factors and alternative material and energy sources and modeling and simulations (papers I.1, I.2, I.3, I.5, I.6, I.7, I.8, I.9.,I.10, II.1, II.2, III.1, III.2., III3, III4, III.5, III.6, III.9, III.12); to II registration, analysis and control of pollutants and toxic substances affecting living organisms and humans (papers I.4, III.13, III.14) and to III investigation of the ecological and social factors, healthy and safe working conditions (papers 17, 24, 25); to IV research of possibilities for pollution reducing in the leather production and research of some properties of leather materials (papers 19 and 23) and V research in the field of rubber technology (papers I.10, II.3, III.5, III.7, III11).</p> <p>Undoubtedly, the research is relevant and enriches the knowledge of harmful environmental factors on humans and helps to more effectively protect the environment.</p>

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
<p>The goals set in the candidate's works are fully in line with the theme of the competition and are generally formulated as new methods for characterization and utilization of waste as a secondary material and energy resource, the simulation of natural processes and the creation of adequate mathematical models, the use of biosensor technology and chromatographic methods in primary screening of contaminants with hazardous substances, affecting living organisms and man and the study of the new direction related to "green" jobs.</p> <p>The objectives set according to the nature of the studies carried out are realistic and the results achieved on them are of considerable scientific and applied interest.</p>

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.
<p>The Scientific-applied contributions of the scientific papers submitted by the candidate are related to:</p> <ul style="list-style-type: none">- a matrix for forming glassy samples for wave-dispersive X-ray fluorescence analysis has been designed and fabricated, and compositions for secondary standard samples for characterization of molybdenum concentrate have been modeled;- a compositions for multicomponent mixtures with possibility of application in soil chemical practice is modeled in order to improve composition and properties of real soils;- It was cultivated fungus (<i>Pleurotus ostreatus</i>) on substrates of various organic wastes and composts, and application in the environment of solid waste products, as well as directly in the environment of contaminated soils, which is a perspective method for bioremediation. <p>The scientific contributions of the candidate are:</p> <ul style="list-style-type: none">- for the first time in the country, for conducting of wave-dispersive Xray fluorescence analysis, modeling of the composition of secondary standard samples, resembling the matrix composition of real soil was performed;- for the first time a simulation of the process of fluid flow through a porous medium, the boundary conditions of which correspond to the parameters of a natural soil system, has been performed;- the parameters of the combustion process and the energy value at different initial moisture content have been calculated.

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
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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	X (74 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
On the basis of the comments made on the scientific contribution and the accumulated point asset, I am convinced that I would like to nominate assist. prof. Metodi Kirilov Mladenov to be awarded the academic position " Associate Professor" in the scientific specialty "Influence of the ecological factors on the man and his protection from the harmful ecological factors" by professional field 5.10. Chemical technologies in the scientific field 5. Technical sciences.

03.05.2021	The report was written by:	
date	Professor Ivo Vladimirov Valchev, PhD	signature

