

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	assist.prof.	Dr.	Vesislava	Borislavova	Toteva	UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

5	Technical science
code	Name

Professional area:

5.10	Chemical technologies
code	Name

Scientific specialty:

Technology of natural and synthetic fuels

The competition has been announced:

67	13.08.2021	Textile, leather and fuels	FHT
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Professor	Doctor	Evgeni	Borislavov	Simeonov	UCTM
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

assist.prof.	Dr.	Vesislava	Borislavova	Toteva
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 candidate assist. prof. Vesislava Toteva has presented all the materials in the necessary kind and volume in compliance with the conditions and order defined by the Law for development of the academic staff and the Regulations for its application. 38 publications have been presented.

For indicator B4 there are 126 points whereas the required minimum is 100 points from at least 10 publications referenced and indexed in a world data base / Scopus Web of Science etc./ Scientific publications (articles and reports), published in journals, which are referenced and indexed in world renowned date base with scientific information – 165 points and 64 points, from works published in unreferenced journals with scientific reviewing or in edited collection volumes with minimum required 200 points. 60 cites and. 650 points are presented from citation, which is well above the required minimum of 50 points. One textbook has been presented 20 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 scientific publications, the main results reflecting the significance and actuality of the investigations, presented for acquiring the academic position “Assoc. Prof.” can be grouped in the following thematic directions: Production of low and ultra low sulfur fuels using alternative hydrosulfurization methods; Preparation and application of biosorbents (activated carbon) based on waste biomass; Preparation and application of modified nanocomposite materials in water purification. Research has been done in laboratory and industrial conditions of the influence of technological factors on the yield and quality of the products of the hydrocracking; reactivity of heavy oils in catalytic and thermal cracking. All scientific works are in the field of the scientific specialty of the competition. The actuality of the obtained results is without any doubt.</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 which have been set, refer to the present, having in mind the possibility for practical application of the obtained results and some of them are of a significant scientific interest. The more important ones are:</p> <ul style="list-style-type: none"> -Production of low and ultra low sulfur fuels using oxidative and adsorption desulfurization. - Preparation and application of biosorbents (activated carbon) based on waste biomass from rice husk, weeds and waste products from coffee. - Preparation and application of modified nanocomposite materials in water purification. - Defining the catalyst influence and the content of the raw material in laboratory and industrial conditions on the yield and quality of the products of the processes hydrocracking - Research in laboratory and industrial conditions of the influence of technological factors on the yield and quality of bitumen as well as some ecological problems in oil refining. - Reduction of sulfur content in the emissions of coal burning. - Additives influence on improving the properties of lubricants.

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 candidate's contributions are of significant and applied interest for the industry. The more important are:</p> <ul style="list-style-type: none"> - Production of low and ultralow sulfur fuels using alternative hydrodesulfurization methods by combining the oxidative desulfurization of diesel fractions with the process of extraction and adsorption including the development of biosorbents for extracting of sulfur compounds from oxidized model mixtures. - Obtaining and applying biosorbents (activated carbon) on the basis of waste biomass. The possibility for using pyrolysed rice husks as an absorbent in oil spill purification, has been proved. Investigating the kinetics and mechanism of oil and oil products sorption from aqueous surface by using kinetic models, Elovich equation and diffusion model. What has been obtained, characterized and proved is the possibility for application of activated carbon from lignocellulosic biomass for purification of waste waters. - Preparation and application of modified nanocomposite materials I water purification. Composite materials have been obtained by modification of cotton fabric with a layer of crosslinked glutaraldehyde chitosan, containing zink oxide particles. The sorption capacity in terms of dye, crude oil and oil products has been studied. - Defining in laboratory and industrial conditions of the influence of technological factors and the type and the characteristics of the catalyst on the yield and quality of the products of the hydrocracking; - A correlation has been established between the type and the content of the raw materials and the catalyst characteristics for optimization of the technological parameters. The data from the laboratory and industrial research in the refinery has been summarized, systemized and analyzed. - Additives influence on improving the properties of lubricants has been studied; as well as the influence of microorganisms on the physicochemical and exploitation properties of the oil fuels.

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	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	x
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
<p>From the presented materials and results and according to my personal opinion Doctor Vesislava Toteva meets all the quantity requirements, in accordance with the Regulations for acquiring scientific degrees and occupying academic positions at UCTM. All of these give me the grounds to evaluate positively the only candidate in the competition. I propose to the Faculty Committee of FHT of UCTM to choose Dr. eng. Vesislava Toteva for an "associate professor" in the field of higher education Technical sciences, professional direction 5.10 Chemical technologies (Technology of natural and synthetic fuels).</p>

23.11.2021	The report was written by:	
date	Prof. Dr. Eng. Evgeni Simeonov	signature

