

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	Senior assistant	PhD	Vesislava	Borislavova	Toteva	University of Chemical Technology and Metallurgy, Sofia
№	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 of natural and synthetic fuels

The competition has been announced:

67/2021	13.08.2021	Textile, Leather and Fuels	Chemical Technologies
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Professor	PhD	Temenuzhka	Krumova	Budinova-Petrova	Institute of Organic Chemistry with Centre of Phytochemistry, Bulgarian Academy of Sciences
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Senior Assistant	PhD	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 investigations included in the publications of the senior researcher Vesislava Toteva are in the following fields: producing of the fuels with low and ultra-low content of sulfur by using of alternative hydrodesulfurization methods, obtaining and application of biosorbents (activated carbons) on the base of the waste biomass, obtaining and application of modified nanocomposites for purification of waters, investigations performed in the laboratory industrial conditions of the influence of technological factors on the yield and quality of the products from of hydrocracking thermal processes. In addition various valuable high effective investigation as reduction of the amount of sulfur in the emissions from coal burning are performed. Investigations on the influence of additives on the improvement of properties of lubricants and investigations on the influence of the microorganism by physicochemical and operational properties of the petroleum fuels are performed too.

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.		
<p>Senior researcher Vesislava Borislavova Toteva participates in the concourse for Associate Professor with sufficient number of publications: All scientific papers represent the main investigations and the obtained scientific results correctly.</p> <p>The leading role of PhD Vesislava Toteva in the actual fundamental and practical investigations is following:</p> <ol style="list-style-type: none"> 1, Obtaining of the petroleum fuels with low and ultra-low content of sulfur by using of alternative hydrodesulphurising methods: oxidative desulfurization and adsorptive desulphurization of petroleum fuels and model mixtures with biosorbents. 2. Preparation and application of biosorbents (activated carbon) based on the base of waste biomass. 3. Desulphurisation of a liquid product from pyrolysis of used tires. 4. Laboratory and industrial conditions of the influence of technical factors on the yield and quality of hydrocracking; reactivity of heavy oils catalytic and thermal cracking. 5. Investigations of commercial additives to reduce of sediment formation in the ebullated vacuum residue H-oil hydrocracking. 6. Preparation, characterization and application of activated carbons from various sources ligninocellulosic biomass, coffee, algae obtained from biodiesel, etc. 7. Preparation and application of modified nanocomposite materials in water purification. <p>The senior researcher Vesislava Toteva has a valuable participation as co-author in the following scientific fields:</p> <ul style="list-style-type: none"> - The preparation of adsorbents from rice husks and their application towards removal of oil spills and water purification. - Investigation on catalyst conditions of sedimentation and conversion in ebullated bed vacuum residue H-Oil hydrocracking; effect of technical factors on the parameters of catalytic and thermal cracking. - Investigation of the influence of technical parameters on the yield and quality of the bitumens - Effect of commercial additives to reduce sediment formation in the ebullated vacuum residue H-Oil hydrocracking. - The overview of the resolving of the problems in oil refining. <p>The performed fundamental investigations in the publications of senior researcher PhD Vesislava Toteva are very important and valuable because they are connected with their application in different spheres of the industry.</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 main aims of the performed investigations are connected with release of various processes of liquid oil industry, decrease of the emissions at exploitation of the coals, change of the traditional energy sources with different waste materials from biomass for preparing of high effective carbon materials. The results of the performed investigations are promising and give possibility for resolving various ecological problems.</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	X
B) They are of significant scientific and / or applied interest, complete and / or summarize previous research	16 points	
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 and applied contributions of the presented for review publications can be systematized in the following directions:</p> <ul style="list-style-type: none"> - The preparation of fuel with low- and ultra-low content of sulfur by using of alternative and hydrodesulphurizing methods - The preparation and application of biosorbents (activated carbons) on the base of waste biomass - Obtaining and application of modified nanocomposite materials for removal of waters - Research in laboratory and industrial conditions of the influence of technological factors on the yield and quality of the products of hydrocracking; reactivity of heavy oils in catalytic and thermal cracking. - The achieved results of the performed investigations give possibility for using them in different branches of the industry and as well as for resolving of various ecological problems.

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.

The leading role of the candidate is represented in the most of the scientific publications.
There are scientific as well as applied contributions=

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.

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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

Having in the mind the important scientific fundamental achievements (38 publications), which can be applied in the industry, I propose to the Scientific Jury and Department Council to award Senior researcher PhD Vesislava Borislavova Toteva with the academic appointment "Associate professor".

26.11.2021	The report was written by:	
date	Prof. Temenuzhka Budinova	signature

