

REPORT
to occupy the academic position:

"Professor"	X
"Associate Professor"	
	one of the academic positions indicated shall be marked with the sign "X"

Candidates to occupy the position:

1	Assoc. Prof.	Dr.	Andriana	Risk	Surleva	Analytical Chemistry Department of UCTM
№	academic position	scientific degree	name	middle name	last name	workplace

Scientific area:

4	Natural Sciences
code	name

Professional area:

4.2.	Chemical Sciences
code	name

Scientific specialty:

Analytical Chemistry

The competition has been announced:

64	05.08.2025	Analytical Chemistry	Faculty of Chemical Technology
in SG issue	date	for the needs of the Department	Faculty

The report was written by:

Prof.	Dr.	Dancho	Lyubenov	Danalev	Biotechnology Department of UCTM
academic position	scientific degree	name	middle name	last name	workplace

1. Report for the candidate:

Assoc. Prof.	Dr.	Andriana	Risk	Surleva
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.

In the contest for the academic position of "professor", the only candidate is Assoc. Prof. Dr. Eng. Andriana Risk Surleva, who presents **35** scientific publications for participation in the contest. The defended Ph.D. thesis on the topic "New generation of cyanide ion-selective membranes for flow-injection application" brings the candidate Assoc. Prof. Surleva **50** points under indicator A1. Of the publications submitted for participation in the competition, 10 publications are submitted under indicator V4 with a total point asset of **160** with a required minimum of 100 points according to the Act for development of the academic staff of the Republic of Bulgaria. The remaining 25 publications relate to indicator G7 and bring the candidate a total point asset of **289** points with a required minimum of 200 points, and on both indicators the publications presented significantly exceed the minimum criteria required according to the Act for development of the academic staff of the Republic of Bulgaria for the claimed academic position. Assoc. Prof. Surleva presents 138 citations under indicator D11, which gives her **276** points, with a minimum required of 100 points. The sum of indicators E includes supervision of four successfully defended doctoral students, one of whom is under co-heading, with a point asset of **175** points, supervision and participation in scientific projects with a point asset of **99** points and **30** points from one teaching aid and two patents, or a total of **294** points under indicator E, which also significantly exceed the required 150 points according to the Act for development of the academic staff of the Republic of Bulgaria. Thus, in conclusion, I deeply believe that the candidate for the academic position of "professor", Assoc. Prof. Dr. Eng. Andriana Surleva, not only covers, but also far exceeds the required minimum points for the claimed academic position in all scientometric indicators.

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>All presented scientific papers of Assoc. Prof. Surleva are in the field of the contest, and they can generally be systematized in 4 main areas:</p> <ul style="list-style-type: none"> - Development of a protocol for chemical analysis and characterization of industrial waste with the aim of their valorization and reduction of the ecological footprint - Development, optimization and validation/verification of methods for chemical analysis of environmental objects with the aim of obtaining up-to-date data for environmental risk assessment - Characterization of the analytical behavior of methods for chemical analysis of agricultural soils with the aim of determining plant-absorbable forms of nutritional components - Development, optimization and verification/validation of analytical methods and their application for the study of objects of human activity <p>All of presented studies are largely related to one of the main axes of the National Strategy for Scientific Research until 2030 - ecology and environmental monitoring, health and quality of life, which shows that Assoc. Prof. Surleva works in a traditional, but innovative and rapidly developing field, especially in the part of analytical practice and the challenges of analyzing components in complex, real matrices, by developing problems related to real practice from an analytical point of view.</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
All the goals set in the candidate's publications and developments are realistic and are related to solving analytical challenges in the research areas. All the researched problems are of an applied nature and as a result have been successfully solved, thereby solving

practical problems posed by the industry, as a number of analytical methods for the determination of target substances in complex matrices have been developed and validated.

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.

The contributions of the candidate in the individual areas in which the presented studies are presented can be systematized as follows:

- Tailings materials from tailings impoundments of copper processing plants and from coal-fired thermal power plants have been characterized as precursors for the production of geopolymers with a low carbon footprint and original data on tailings materials have been obtained, which can be used both for the production of geopolymer materials and for environmental assessment;
- For the first time, an assessment of the mobility and bioavailability of heavy metals and other potentially toxic components in geopolymer materials obtained from Bulgarian sources has been made;
- Geopolymer materials with a low carbon footprint have been obtained from precursors mine tailings and fly ash from coal combustion in Bulgaria, suitable for the production of classic and 3D-printed construction materials.
- An analytical protocol for assessing the condition of a tailings pond from polymetallic ore mining has been developed, which combines various chemical analysis methods and biological tests.
- New data have been obtained on the composition and current condition of the tailing's material, soils and waters from the Tarnitza-Suchava tailings pond area, Romania.
- New data have been obtained on the double isotope dilution method for the mass spectrometric determination of mercury in aquatic organisms, which are of interest to metrological institutes in the studies of a primary method of analysis.
- An ion-chromatographic method for the determination of standard anions and pollutants in natural waters has been validated.
- A comparative study of the effectiveness and uncertainty of the result of the determination of plant-available K in Bulgarian agricultural soils after extraction by 5 methods and flame AES was conducted

- The experimental conditions were optimized and the analytical characteristics of the spectrophotometric determination of phosphate ions by the molybdenum blue method in soil extract in the presence of acetatolactate reagent were studied, and it was found that the inhomogeneity of the sample and the repeatability of the extraction procedure are the factors that have a major contribution to the uncertainty.
- For the first time, an attempt was made for a correlation study between the acetatolactate method and Mehlich 1 for the determination of plant-available K and P in Bulgarian agricultural soils.
- A modified version of the turbidimetric method for the determination of water-soluble sulfates in soil after leaching was proposed. The proposed test protocol is cheap, fast and accessible, with characteristics suitable for the assessment of water-soluble sulfate in arable soils.
- SEM/EDS method for identifying traces of gunpowder burns has been optimized and validated;
- analytical control in a number of industrial productions has been improved
- a number of technologies for recycling and valorization of waste have been improved

All achieved results can be qualified as those with a lasting scientific and/or applied impact, as they represent a basis for new directions of research and applications. As a result, the presented developments have received a very high response in the scientific literature through their citations and have brought the candidate for the academic position of "professor" *h-index* 11, which is another proof of the significance of Assoc. Prof. Surleva's research. Last but not least, she is part of the teams of several international projects and teams, which shows that she is a sought-after partner for cooperation thanks to her scientific level.

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.

In 80% of the scientific publications presented for participation in the contest, Assoc. Prof. Surleva is the lead or last author, which shows both that she actively participates in the design and development of the submitted works, and that she is the designer of the topics submitted for participation in the contest.

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.
During her career so far as part of the Department of Analytical Chemistry of the University of Chemical Technology and Metallurgy, Assoc. Prof. Surleva has taught, in addition to all the basic courses in Analytical Chemistry and Instrumental Methods of Analysis for all specialties at the university, these courses in French for students of the Chemical and Biochemical Engineering specialty in French language. She has prepared a textbook Chimie analytique (Notes de cours et de travaux dirigés), also in French. All this leaves no doubt about her pedagogical knowledge, skills and competencies in the field of the professional field claimed in the contest.

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.
I have known Assoc. Prof. Surleva since the beginning of my career as a lecturer at the University of Chemical Technology and Metallurgy. I have had the opportunity to work with her on various tasks both in students' admission process and as an administrative leader in her role as Dean of the Faculty of Chemical Technology for the last two years. My personal impressions are that she is an extremely erudite scientist and lecturer, with an incredible approach to both candidate for students and students and colleagues at the university. She undoubtedly possesses all the necessary qualities of a leader, able to work in a team and actively participate in both scientific, pedagogical and administrative activities and motivate the people around her to develop and achieve high goals. I dare to say that under her leadership the Department of Analytical Chemistry, and later the Faculty of Chemical Technology, developed at a rapid pace towards establishing themselves as leaders not only within the university, but also among the international scientific and pedagogical community.

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
Based on the comprehensive analysis of the scientometric and pedagogical data presented by the candidate in the contest for the academic position of "professor", I firmly believe that Assoc. Prof. Surleva fully meets and significantly exceeds the necessary minimum state requirements for holding this academic position, according to legal and regulatory documents, I vote positively of awarding her the academic position of "professor" in the Field of Higher Education 4. Natural Sciences, Professional direction 4.2. Chemical Sciences (Analytical Chemistry) and I propose to the Faculty of Chemical Technology to approve this choice.

02.12.2025	The report was written by:	
date		signature