

REVIEW

for the competition for the academic position of "associate professor" in the professional field 4.4. Earth Sciences (Mineralogy and Crystallography – Experimental Mineralogy) for the needs of the field "Structural Crystallography and Materials Science" at the Institute of Mineralogy and Crystallography "Acad. Iv. Kostov" (IMC) – BAS at the Institute of Mineralogy and Crystallography "Acad. Iv. Kostov" (IMC) – BAS, announced in the State Gazette, issue 36 of 29.04.2025.

Reviewer: Prof. Dr. Eng. Vilma Petkova Stoyanova, IMC-BAS, appointed as a member of the scientific jury by Order No. 379 RD-09/01.07.2025.

Candidate: Senior Assistant Prof. Dr. Hristina Ilieva Lazarova, IMC-BAS

In the competition for the academic position (AP) of "associate professor" in the professional field of 4.4. Earth Sciences (Mineralogy and Crystallography – Experimental Mineralogy) (State Gazette, issue 36 of 29.04.2025), one candidate participated - Senior Assistant Prof. Dr. Hristina Ilieva Lazarova from the field of "Structural Crystallography and Materials Science" at the Institute of Mineralogy and Crystallography "Acad. Iv. Kostov" (IMC) – BAS.

1. Brief biographical information about the candidate

Senior Assistant Professor Dr. Hristina Ilieva Lazarova graduated in 2011 from Sofia University "St. Kliment Ohridski", Sofia (Diploma, Series A-2010 SU, Registration No. 201675/2010) with a master's degree in Chemistry and a professional qualification as a Master of Medical Chemistry, graduating with good grades (thesis defense – Excellent 6.00). In 2021, he received the educational and scientific degree (ONS) "Doctor" in the scientific specialty "Organic Chemistry" (Diploma No. 001413/09.11.2021) in the professional field: 4.2. Chemical Sciences after successfully defending her dissertation on the topic: "Development of environmentally friendly catalysts for obtaining valuable chemicals and fuels through the utilization of biomass" as a doctoral student at the Institute of Organic Chemistry with a Center for Phytochemistry (IOHCF) - BAS, Sofia, under the supervision of Prof. Margarita Dimitrova Popova, PhD. In 2017, she was appointed as an assistant at IOHCF-BAS, and on 01.06.2022, after a competition, she was appointed as a senior assistant at the same organization. In 2022, she moved to the Institute of Materials Science at the Bulgarian Academy of Sciences and was appointed to the academic position of senior assistant in the field of structural crystallography and materials science, which she currently holds.

2. Compliance of the documents submitted for the academic position of "associate professor"

The commission reviewing the documents of the candidate for the position of associate professor certifies the regularity and compliance of the documents submitted by Senior Assistant Professor Dr. H. Lazarova. They were also reviewed at the first meeting of the scientific jury (appointed by Order 379 RD-09/01.07.2025) at the first meeting of the scientific jury (appointed by Order 379 RD-09/01.07.2025). They were also reviewed at the first meeting of the scientific jury (appointed by Order 379 RD-09/01.07.2025) at its first meeting on 04.07.2025 (under Order 386 RD-09/03.07.2025), which decided that the candidate, Senior Assistant Professor Dr. Hristina

Ilieva Lazarova, should be admitted to the evaluation for the academic position of "associate professor" at the Institute of Mathematics and Informatics - Bulgarian Academy of Sciences.

A review of the documents submitted by Dr. H. Lazarova for the competition for the academic position of "associate professor" establishes the following:

- 1. Set of documents:** Senior Assistant Professor Dr. H. Lazarova has submitted all the required documents for the academic position of "associate professor" in accordance with Art. 24, items 1-5 of the Law on the Development of Academic Staff in the Republic of Bulgaria (ZRASRB) (in force since 23.12.2022) and Art. 53, para. 1 of the Regulations for its application (PRAAS) (in force since 5 September 2023), as well as Article 2 (5), item 2 of the PRAAS of the IMK-BAS (in force since 15 May 2025). The candidate has submitted a certificate of academic position "senior assistant" from the Institute of Organic Chemistry with Centre of Phytochemistry at the Bulgarian Academy of Sciences and an official note from the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences for work experience in the field. I will take into account the Certificate from the Institute of Organic Chemistry with Centre of Phytochemistry at the Bulgarian Academy of Sciences, but not the Official Note from the Institute of Mathematics and Informatics at the Bulgarian Academy of Sciences. The documents for the competition for the academic position of "associate professor" do not require a document for general work experience.
- 2. Educational and scientific degree "doctor":** Senior Assistant Professor Dr. H. Lazarova is registered in NACID (<https://ras.nacid.bg/dissertation-preview/65512>) with a recognized educational and scientific degree "doctor" on the basis of Diploma№ /date: 001413 / 09.11.2021, issued by the Bulgarian Academy of Sciences, Sofia.
- 3. Requirement for experience as a "senior assistant":** According to Article 24 (1), item 2 of the ZRASRB (effective as of 23.12.2022), Article 53 (1), item 2 of the PPZRAS (effective as of 05.09.2023) and Article 18(2)(2) of the Regulations for the Implementation of the ZRASRB at the Institute of Mathematics and Informatics – Bulgarian Academy of Sciences (effective as of May 15, 2025), candidates are required to have held the academic position of "senior assistant" for more than two years. This is certified by Chief Assistant Professor Dr. Lazarova with a Certificate from the Institute of Organic Chemistry with Centre of Phytochemistry at the Bulgarian Academy of Sciences (Ref. No. 376/28.06.2022), the candidate's professional CV, and data from NACID, where Dr. Lazarova is listed as a senior assistant since 2022, thus satisfying the requirements of the aforementioned regulatory documents.
- 4. Duplication of publications:** The publications submitted for the competition do not duplicate the publications for the acquisition of the doctoral degree, with the exception of the publication: Vicente, A. I., Coelho, J. A. S., Simeonov, S. P., Lazarova, H. I., Popova, M. D., Afonso, C. A. M, Oxidation of 5-Chloromethylfurfural (CMF) to 2,5Diformylfuran (DFF), *Molecules*, 22 (2), (2017), 329. The above publication is submitted to NACID in the section: ONS "Doctor" - Bulgarian Academy of Sciences for the protection of the minimum requirements of 30 points for the indicators in group G for ONS "Doctor". In Dr. Lazarova's documents, the same publication is included in the list of publications in group G for AD "Associate Professor", which is unacceptable. I will not take this publication into account when reviewing the publications from group G for the current competition. This affects the numerical result for meeting the minimum national requirements, which decreases by 20 points.
- 5. Plagiarism data:** There is no data on established plagiarism in the scientific works of Senior Assistant Professor Dr. Lazarova for her participation in the current competition.

6. **Minimum national requirements:** Candidate Dr. Lazarova has submitted a report on the fulfillment of the minimum national requirements under Art. 2b, paras. 1 and 2 of the ZRASRB , as well as the increased criteria under Art. 11, para. 6 of the PPZRASRB of the BAS in connection with Art. 2b, para. 5 of the ZRASRB and Art. 18, para. 2 of the PPZRAS of the Institute of Mineralogy and Crystallography "Acad. Iv. Kostov", BAS.
7. **Analysis of the data provided** shows that Senior Assistant Professor Lazarova meets and, in some respects, exceeds the national requirements (ZRASRB *), as well as the higher criteria of the Bulgarian Academy of Sciences and the Institute of Mineralogy and Crystallography (BAS/IMC**) for the position of associate professor in professional field 4.4. Earth Sciences. The fulfillment of the indicators by points also corresponds to the latest changes in the calculation of scientometric indicators, adopted by Council of Ministers Decree No. 17/14.03.2025 and published in the State Gazette, issue 23/18.03.2025. The data is presented in the following table.

Group	Indicators	Doctor		Required points for the academic degree of "associate professor" by group		Candidate's points
		Min. Requirements	Points achieved	ZRASRB*	BAS/IMC**	BAS/IMC**
A	1. Dissertation for the award of an educational and scientific degree of Doctor	50	50	50	50	50
In	3. Habilitation thesis - scientific publications in journals that are referenced and indexed in WoS and Scopus	-	-	10	100	127 ²
G	7. Scientific publications in journals that are referenced and indexed in WoS and Scopus, outside the habilitation thesis	30	40	20	22	260 ^{3,4}
D	11. Citations in scientific publications, monographs, collective volumes, and patents, referenced and indexed in WoS and Scopus	-	-	50	60	135
	Total	80	90 ¹	400	430	572

* Law on the Development of Academic Staff in the Republic of Bulgaria

** Regulations on the conditions and procedures for acquiring scientific degrees and occupying academic positions at the Bulgarian Academy of Sciences / Regulations on the conditions and procedures for acquiring scientific degrees and occupying academic positions at the Institute of Mathematics and Informatics – Bulgarian Academy of Sciences

¹ In the information provided by Dr. Lazarova, the total number of points for the indicators for the academic degree of "doctor" is 159, but 90 points are recognized by NACID. Since no evidence has been provided to support the 159 points, I accept the total number of points from NACID.

² In the publications presented for group B, publication 4.5 is classified with quartile Q2. The reference in SJR Rank proves that ChemCatChem magazine falls within quartile Q1, resp. 25 points, not 20 points.

³ An article (indicator D, article 7.1) has been added to the publications in group D, which was used to defend 30 points for the doctoral degree in group D. Therefore, in this reference, this article is omitted and 20 points are deducted.

⁴ In the publications for group G, an article (indicator G, article 7.8) is classified in quartile Q2, but a check in SJR Rank shows that the journal Manufacturing Review falls within quartile Q1, therefore 5 points are added to the total score.

3. Description and analysis of the materials presented

The total number of publications by Senior Assistant Professor Dr. H. Lazarova is 18, according to the materials submitted for participation in the competition for the position of Associate Professor. Due to the duplication of one article in two categories, the total number is reduced from 18 to 17 publications. Dr. Lazarova has included all 17 publications in the competition, which I will take into account when preparing the review. The detailed scientometric report shows that 16 (94%) of the candidate's publications are in international journals and 1 (6%) in national publications. According to the list of publications for participation in the competition, all 17 scientific papers (100%) of Assoc. Prof. Dr. H. Lazarova are visible in global databases. According to the list of publications for participation in the competition, all 17 scientific works (100%) by Assoc. Prof. Dr. H. Lazarova are visible in the global databases WoS and Scopus with scientific information. The distribution of articles by quartiles for WoS and Scopus journals is as follows: 11 articles (B4.1, B4.5, B4.6, G7.2 - G7.8, G7.10) are in Q1 journals; 5 articles (B4.3, B4.4, G7.9, G7.11, G7.12) are in Q2 journals; 1 article (B4.2) is in a Q4 journal. Among the high-ranking journals are *Green Chemistry (Q1)*, *Journal of Hazardous Materials (Q1)*, *Microporous and Mesoporous Materials (Q1)*, *Water (Q1)*, *Molecules (Q1)*, *Energy Technology (Q1)*, *Crystals (Q2)*, etc.

In this competition, Senior Assistant Professor Dr. H. Lazarova participates with two publications in which she is the first author (in group "B" - No. 1 and 3), and in three other publications (B4.4, G7.8, G7.10) she is the second author, and in the remaining 13 publications, Assoc. Prof. Dr. H. Lazarova is the third and subsequent co-author. Most of the articles were published in 2019, 2020, and 2025 (10 articles).

The number of citations of Dr. H. Lazarova's publications for participation in the competition is 27 according to the information provided. All citations are in scientific publications, referenced and indexed in the world-renowned scientific information databases Scopus and WoS. The Hirsch index (h) is 13, without self-citations, according to the Scopus report (<https://www.scopus.com/authid/detail.uri?authorId=57190730060>). The total number of points from citations in scientific publications (according to Scopus and WoS), presented in the Report on the fulfillment of the minimum criteria, is 135. This result exceeds the required 60 points by more than two times, according to the increased requirements of the PPZRASRB of the BAS and the IMK-BAS.

Dr. H. Lazarova has presented data in her professional CV on participation in scientific forums and projects that fall within group E of the minimum national requirements. These are not mandatory for participation in a competition for the position of associate professor, but they demonstrate Dr. Lazarova's enviable activity, which should be noted and supported.

During the period 2014-2024, Assoc. Prof. Dr. H. Lazarova participated in 21 scientific forums: 2 prestigious international conferences in the 2nd Edition of International Conference on Catalysis, Mechanochemistry & Engineering, 15–17 July, 2024, Roma, Italy, and the 34th European Crystallographic Meeting, 26–30 August, 2024, Padova, Italy, in the 16th, 18th, 19th, 20th, and 21st International Seminar on Nanoscience and Nanotechnology in 2014-2019, the National Crystallography Symposium with international participation in 2021 in Varna, Bulgaria, as well as the National Conference "Personalized Innovative Medicine" (PERIMED) in Plovdiv, Bulgaria in 2023, forums for doctoral students and young scientists. Dr. Lazarova's participation in all scientific forums is with poster presentations and reports related to the topic of this competition. Dr. Lazarova's participation in all scientific forums includes poster presentations and reports related to the topic of this competition. Dr. Lazarova's activity in participating in scientific forums over a 10-year period is remarkable.

Dr. H. Lazarova actively participates in 9 scientific projects, leading 3 of them (one is a current COST action), with funding from the National Science Fund and the Ministry of Education and Science, with scientific topics close to those of the announced competition for the position of associate professor.

4. Main scientific and/or scientific-applied contributions

The contributory nature of the publications with which the candidate participates in the competition had to be considered in the two main categories of materials in accordance with the requirements of Article 2b, paragraphs 2 and 3 of the ZRASRB, and Article 18, paragraph 2, item 4 and paragraph 4, item 10 of the PPZRAS of the IMK-BAS: Habilitation author's report on the contributory nature of publications in category "B" and Author's report on the contributory nature of publications in category "D". The candidate, Senior Assistant Professor Dr. H. Lazarova, did not present her contributions to the publications separately for each of the categories "B" – group of articles 1-6 and "D" – group of articles 8-18, but in a single report. Looking at the topics of the publications, it's clear that the publications in the two categories are grouped more formally than thematically.

Presented in this way, the candidate's contributions do not meet the requirements of Annex 1 to Article 1a, paragraph 1 of the PPZRASRB, item 12, and the same annex of the PPZRASRB of the IMK-BAS, which describes in detail how the Habilitation and Author's Reports are prepared.

4.1. Summary of the publications presented

Dr. Lazarova's publications, which define this characteristic of her research, can be grouped into four categories according to her Author's Report:

1. Photocatalytic materials based on zeolite-like and MOF structures - No.№ B4.1, B4.3, B4.4, and B4.6
2. Catalysts for sustainable conversion of biomass waste -No.№ B4.5, G7.4, and G7.6
3. Utilization of cement dust, fly ash, and zeolite-like nanocomposites for CO₂capture and oxidation of light organic pollutants (VOCs) -No.№ B4.2, G7.5, G7.7, G7.8, G7.9, G7.10, G7.11 and G7.12
4. Organic synthesis and functionalization of nanomaterials with biological and catalytic applications - No.№ G7.1, G7.2, and G7.3

The first group of publications presents research on the formation of new functional materials for: i) photocatalysts based on zeolite-like materials of the ETS-4 and ETS-10 type with replacement of part of the Ti centers with Zr (No. B4.1 and No. B4.3). The aim is to increase their stability and photocatalytic activity. It has been established that these materials degrade over 90%

of Crystal Violet and Methylene Blue dyes under UV radiation in less than 60 minutes; ii) MOF - A new zinc-based metal-organic framework MOF with a trigonal structure (P-31c) has been synthesized (No. B4.4). The synthesized material demonstrates high adsorption capacity and photocatalytic activity, decomposing up to 93% of Methyl Orange; iii) Fluorine-treated mordenite: The effect of post-synthetic fluorine treatment on the porous structure of zeolite-mordenite has been investigated (No. B4.6). Post-synthetic treatment with HF and NH₄F increases the porosity and catalytic activity of zeolite in reactions such as m-xylene isomerization, without changing the Si/Al ratio.

The scientific and applied contributions are related to the creation of new zeolite-like structures and MOF networks with increased photocatalytic activity and high adsorption capacity towards various organic dyes, such as Congo Red, Methylene Blue, Methyl Orange, and Rhodamine B. Post-synthetic modification of mordenite by fluoride treatment improves catalytic activity. The modification, performed with HF and NH₄F, aims to increase porosity and facilitate access to active acid sites.

The personal contribution of Assoc. Prof. Lazarova to the research of this group is related to conducting experiments involving the synthesis of materials, their characterization using various methods such as powder X-ray analysis and nitrogen physisorption, investigating photocatalytic degradation by UV-VIS spectroscopy with calculation of kinetic models, and evaluating catalytic activity by chromatographic analysis during m-xylene isomerization.

The second group of publications was developed in response to the need for sustainable catalyst system technologies for innovative solutions in the processing of waste () and biomass into valuable products. In one of the studies (No. B4.5), nickel-impregnated zeolites (Beta, Faujasite, Mordenite, ZSM-5) effectively catalyze the decomposition of polyethylene (LDPE) at only 250°C, with a hydrogen yield of up to 50% and selective formation of aromatic compounds and alkanes. Another study (No. G7.4) demonstrated the synthesis of biodegradable pentane-1,2,5-triol from furfuryl alcohol with almost complete conversion and high selectivity under mild conditions, thanks to nickel-platinum mesoporous catalysts. In addition, the esterification of 5-HMF with t-butanol (No. G7.6) leads to high-yield production of the bioadditive t-BMF using Preyssler acid and modified montmorillonite. These processes, characterized by high efficiency, economic feasibility, and compliance with the principles of green chemistry, open up prospects for sustainable processing of waste and renewable resources with a minimal environmental footprint.

The scientific and applied contributions of these developments are related to the development of catalyst systems that offer innovative and environmentally friendly solutions for the processing of waste and biomass into valuable products. Nickel-impregnated zeolites effectively decompose polyethylene at low temperatures (250°C) with high hydrogen yield (up to 50%) and selective formation of valuable organic compounds. The synthesis of biodegradable pentane-1,2,5-triol from furfuryl alcohol is achieved with complete conversion and high selectivity under mild conditions, and the process for producing the bioadditive t-BMF from 5-HMF demonstrates over 95% selectivity. These technologies, which comply with the principles of green chemistry, show high potential for sustainable processing of waste and renewable resources with minimal environmental impact.

The personal contribution of Assoc. Prof. Lazarova to the research in this group is related to experimental activities involving the synthesis and modification of catalysts (TS-1 KIT-6, SBA-15, functionalized with Ni, Pt, and Ni/Pt), their characterization by thermogravimetric analysis, thermoprogrammed reduction, and UV-VIS spectroscopy, as well as evaluation of their catalytic performance in the conversion of various substrates.

The third group of publications is related to studies on fly ash (FA) from the Maritsa East Thermal Power Plant, investigating its potential as a valuable raw material for the synthesis of highly functional zeolite-like materials with applications in environmental technologies. Publication (No. G7.5) describes the development of Cu-modified Na-X zeolites with a specific surface area of up to 396 m²/g, showing exceptional activity in the complete oxidation of volatile organic compounds (VOCs), with the surface dispersion of copper and the presence of iron identified as key factors. Publication (No. G7.7) presents innovative "dual-functional" materials based on fly ash, capable of simultaneously adsorbing CO₂ and catalysing the oxidation of VOCs, with 6% Co modification and control of the valence states of iron significantly increasing efficiency. The studies in (No. G7.11) investigate the influence of the aluminum support on the catalytic activity of Cu-Fe/Al₂O₃ catalysts, while (No. G7.8) proposes methods for the synthesis of stable nanocomposite materials with applications in thermo-oxidative processes and CO₂ adsorption. Publications (No. G7.9) and (No. G7.10) investigate, respectively, the sensor potential of FA-based thin films and the influence of calcium on the stability and sorption capacity of materials. Innovative plasma modification with CHF₃ and SF₆ gases (No. G7.12) significantly increases catalytic activity, offering an alternative to expensive noble metals. Additionally, a study (No. B4.2) demonstrates the potential of cement waste for CO₂ capture through mineral carbonation (). These results provide a solid basis for the development of sustainable technologies for air purification, carbon dioxide capture, and the implementation of circular economy principles in the industrial sector.

The research conducted contributes significantly to the development of sustainable technologies for industrial waste processing and the reduction of harmful emissions. They demonstrate innovative approaches to the synthesis and application of fly ash zeolites, positioning them as promising materials for the green economy. Future research could be related to industrial implementation and integration into existing technological lines, which determines the scientific and applied contributions of these developments.

Within the scope of publications (No. B4.2, G7.5, G7.7, G7.8, G7.9, G7.10, G7.11, G7.12), Senior Assistant Professor Dr. Hristina Lazarova conducted a series of experimental activities, including the synthesis and modification of catalysts (Cu-FAZ, Co-modified materials, CuO modifications), their physicochemical characterization by differential scanning calorimetry, thermogravimetry, temperature-programmed reduction, nitrogen physisorption, and UV-VIS spectroscopy, as well as evaluation of their catalytic activity in the oxidation of volatile organic compounds (toluene, acetone, hexane, 1,2-dichlorobenzene) and investigation of their adsorption properties towards CO₂.

The fourth group of publications (№ G7.2 and№ G7.3) presents innovative nanomaterials with applications in medicine and green chemistry. In (G7.2), silver-modified silicates (MCM-41 and SBA-15) with stabilized nanoparticles (5–15 nm) are developed as carriers of propolis, offering potential for antimicrobial dermal formulations. Publication (G7.3) demonstrates the high efficiency of SnO₂-modified zeolite catalysts (TOHCLI and sulfated STOHCLI) in the esterification of levulinic acid, with STOHCLI achieving complete conversion thanks to optimized acid sites. The catalysts remain stable during repeated use, despite partial pore blockage, which offers opportunities for future optimization.

The personal contribution of Assoc. Prof. H. Lazarova in publications (G7.2) and (G7.3) is related to experimental activities involving the synthesis and modification of porous silicates (MCM-41, SBA-15) with silver nanoparticles, their characterization by nitrogen physisorption and thermogravimetry, investigation of in vitro propolis release, as well as conducting catalytic tests for esterification of levulinic acid with modified zeolite catalysts.

4.2. Scientific contributions

The research activity of Assoc. Prof. Dr. Hristina Lazarova develops in contemporary areas of materials science, focusing on the design, synthesis, and characterization of new functional materials with high catalytic activity, sustainability, and potential for application in the circular economy and ecology. The main areas that have emerged as a result of the research are:

- **Synthesis and modification of porous materials:** Catalytically active materials based on silicate supports (SBA-15, SBA-16, MCM-41, KIT-6, TS-1) and their modifications with transition metals such as Cu, Ni, Pt, Co, Ag, Mn, V, including the creation of bifunctional catalysts, have been developed.
- **Evaluation of catalytic activity:** The catalytic properties of the synthesized materials were investigated in a variety of reactions, including isomerization of aromatic hydrocarbons, total oxidative catalysis of volatile organic compounds (VOCs), photocatalytic degradation of pollutants, CO₂ conversion, and in vitro controlled release of bioactive substances.
- **Comprehensive physicochemical characterization:** Each material was analyzed in detail using a combination of analytical techniques such as powder X-ray diffraction (PXRD), nitrogen adsorption/desorption, thermogravimetric analysis (TGA), differential scanning calorimetry (DSC), temperature-programmed reduction (TPR), and UV-Vis spectroscopy.

Based on the research conducted, innovative and effective catalytic systems have been proposed. The materials developed demonstrate significant potential for implementation in strategically important sectors such as energy, environmental protection, medicine, and the processing industry.

5. Critical comments and recommendations

The materials I reviewed for the competition for the position of associate professor of Dr. H. Lazarova left an excellent impression of her qualities as an experimenter and scientist who knows how to plan and organize her research activities. Remarkable results have been achieved in interdisciplinary research on the creation of new functional materials with photocatalytic activity and other valuable properties for purification. Remarkable results have been achieved in interdisciplinary research on the creation of new functional materials with photocatalytic activity and other valuable properties for water purification, VOC oxidation, and many other environmental areas. Therefore, I cannot accept the inaccuracies in the preparation of the materials for the competition, such as incorrectly determined scientometric indicators and erroneous calculations, the duplication of articles from different categories when determining the minimum national requirements, the presentation of only one summary report, etc. I am left with the impression of neglect and a lack of seriousness towards her own achievements and efforts. I would recommend that Dr. Lazarova take a more serious and thorough approach to the performance of administrative and organizational tasks.

I would recommend that Dr. Lazarova take on a greater leadership role in organizing and planning her future research, in accordance with the requirements of the position of associate professor. I wish her success in her future endeavors, in which I am fully confident.

6. Conclusion

The documentation submitted by Senior Assistant Professor Dr. Hristina Ilieva Lazarova for participation in the competition meets the requirements of the ZRASRB and PPZRAS of the IMC-BAS for the competition and corresponds to the topic of the announced competition for the academic degree of "associate professor." The evidence presented corresponds to 572 points and exceeds the minimum requirements set out in the regulatory documents.

I give a positive assessment of the materials presented in the competition and recommend that the Scientific Jury propose to the Scientific Council of the Institute of Mineralogy and Carbon Sciences at the Bulgarian Academy of Sciences (IMC-BAS) that the candidate, Senior Assistant Professor Dr. Hristina Ilieva Lazarova, be elected to the academic position of "associate professor" at IMC-BAS in the professional field 4.4. Earth Sciences (Mineralogy and Crystallography – Experimental Mineralogy) for the needs of the field "Structural Crystallography and Materials Science" at IMC-BAS.

Sofia

04.09.2025

Reviewer:

**Заличено
съгласно чл. 2 от
ЗЗЛД**

(Prof. Dr. V. Petkova)