OPINION

by Assoc. Prof. Dr. Paunka Stoyanova Novachka,
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regarding the materials submitted for participation in a competition for the academic position of Associate Professor at Paisii Hilendarski University of Plovdiv, field of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.2. Chemical Sciences (General and Inorganic Chemistry)

The competition for the academic position of Associate Professor, announced in the *State Gazette*, issue 96 of 11 November 2025, as well as on the website of Paisii Hilendarski University of Plovdiv, is intended to meet the needs of the Department of General and Inorganic Chemistry with Methods of Teaching Chemistry at the Faculty of Chemistry. The competition includes one candidate: Ch. Assist. Prof. Kirila Trifonova Stoynova, PhD from the same department.

1. General presentation of the candidate and the submitted materials

By Order No. RD-22-55 of 09 January 2026 of the Rector of Paisii Hilendarski University of Plovdiv, I have been appointed as a member of the scientific jury for the selection of a candidate for the academic position of Associate Professor in the above-mentioned professional field.

The candidate has submitted a complete and properly prepared set of documents in electronic format, fully compliant with the requirements of the Act on the Development of the Academic Staff in the Republic of Bulgaria, its Implementing Regulations, and the Regulations for the Development of the Academic Staff of Paisii Hilendarski University of Plovdiv. A declaration of originality and authenticity of the scientific results is also included.

The educational and scientific profile of Ch. Assist. Prof. Kirila Trifonova Stoynova fully corresponds to the objectives and thematic scope of the competition. She graduated from Paisii Hilendarski University of Plovdiv, obtaining a Bachelor's degree in "University Chemistry" with professional qualification "Teacher of Chemistry" (2008) and a Master's degree in "Medical Chemistry" (2009). In 2014, she successfully defended a doctoral dissertation entitled *"Investigation of ternary ion-associated complexes of gallium involving tetrazolium salts"* and obtained the educational and scientific degree Doctor (PhD).

For the purposes of the competition, the candidate has submitted 21 scientific publications that were not included in her doctoral dissertation nor in the previous competition for the position of Chief Assistant Professor. Of these, 8 publications correspond to Indicator B and 13 to Indicator G. The distribution of the journals by quartiles is as follows: Q1 – 2; Q2 – 1; Q3 – 12; Q4 – 6. All scientific papers have been published in refereed and indexed journals (Scopus and Web of Science), and in 10 of them Dr. Stoynova is the first author. The publications are in the field of general and inorganic chemistry and have received a total of 57 citations. Dr. Stoynova is also a co-author of two laboratory manuals for practical training in general and inorganic chemistry.

The candidate's overall scientific output includes 30 publications, 29 of which are published in refereed and indexed journals (Scopus and/or Web of Science). The results of her research activity have been presented at 36 national and international scientific forums. Her project activity includes participation in eight nationally funded research projects, five of which are supported by the Research Fund at Plovdiv University „Paisii Hilendarski".

2. Research topics and scientific contributions

Dr. Stoynova's research activity is focused on the synthesis and characterization of new coordination compounds and their application in various fields, including ecology and environmental protection, medicine, pharmacy, and applied inorganic chemistry. The conducted research has made a significant contribution to the development of coordination chemistry, the chemistry of extraction processes, and analytical chemistry.

The main scientific contributions include:

• Synthesis and characterization of new ion-associated complex compounds of transition and non-transition metals (Mo(VI), Ge(IV), Zn(II), Co(II), Ga(III), W(VI), Fe(III)) with bidentate and tridentate organic ligands bulky organic cations in liquid–liquid extraction systems.
• Determination of the conditions for complex formation, as well as the composition and structure of the complexes; proposal of interaction schemes and structural models confirmed by experimental data.
• Quantitative characterization of extraction equilibria through the determination of association, distribution, and extraction constants.
• Determination of spectrophotometric and thermodynamic characteristics of the studied systems, including the limits of applicability of Beer's law.

The applied scientific contributions include:

• Development of new extraction-spectrophotometric methods for the determination of metals with high sensitivity and selectivity.
• Demonstration of the applicability of these methods in the analysis of industrial, biological, medical, and pharmaceutical samples.
• Investigation of the influence of accompanying ions and proposal of effective approaches for their masking.

3. Teaching and organizational activity

Dr. Stoynova's teaching activity at Paisii Hilendarski University of Plovdiv covers the period from 2012 to the present and is characterized by high commitment and steadily increasing responsibility. She conducts lectures, seminars, and laboratory classes in fundamental disciplines in the field of general and inorganic chemistry for Bachelor's degree students. For the period 2015–2025, her teaching workload amounts to 5346 hours, which significantly exceeds the minimum requirement of 1080 hours of classroom teaching.

The candidate also has a substantial contribution to the administrative and organizational activities of the Faculty. Since 2019, she has been a member of the Quality

Assurance Committee of the Faculty of Chemistry, and during the period 2015–2025 she has participated in the organizing committees of nine scientific forums.

Dr. Stoynova actively develops her pedagogical competencies through participation in training courses on teaching in an academic environment, work with anti-plagiarism systems, and the implementation of modern educational technologies, including the use of artificial intelligence and a competence-based approach in education.

4. Compliance with the requirements of the Act on the Development of the Academic Staff

The submitted materials fully meet and exceed the quantitative and qualitative indicators laid down in the Implementing Regulations of the Act on the Development of the Academic Staff in the Republic of Bulgaria and in the internal regulations of Paisii Hilendarski University of Plovdiv.

5. Critical remarks and recommendations

I have no critical remarks regarding the submitted materials. I believe that the habilitation of Ch. Assist. Prof. Dr. Kirila Trifonova Stoynova will create additional opportunities for the development of her research activity, supervision of doctoral students, and participation as a principal investigator in research projects.

CONCLUSION

The research and teaching activities of Chief Assistant Professor Dr. Kirila Trifonova Stoynova fully meet the minimum national and additional faculty requirements for occupying the academic position of Associate Professor. The submitted scientific works contain original scientific and applied scientific contributions with international recognition.

Based on all of the above, **I give a positive evaluation** and propose that the scientific jury prepare a proposal report to the Faculty Council of the Faculty of Chemistry for the election of Chief Assistant Professor Dr. **Kirila Trifonova Stoynova** to the academic position of Associate Professor at Paisii Hilendarski University of Plovdiv in professional field 4.2. Chemical Sciences (General and Inorganic Chemistry).

20.02.2026 г.

Prepared the opinion:

/Assoc. Prof. Dr. Paunka Novachka/