

STATEMENT
on application for conferral of academic position of Professor

by Assoc.Prof. Zdravka Yancheva Velkova, PhD, member of the academic jury,
Department of Chemical Sciences, Faculty of Pharmacy, Medical University – Plovdiv,

convened to render a decision on the conferral of the academic position “Professor” in accordance with the Classifier of the areas of higher education 4. Natural sciences, mathematics and informatics, professional field 4.2 Chemical sciences (Inorganic Chemistry), for the needs of the Department of Chemical Sciences at the Faculty of Pharmacy, Medical University – Plovdiv, by announced competition in the State Gazette, No. 111 of December 31, 2021, on an approved proposal of a scientific jury from the Faculty Council of the Faculty of Pharmacy at the Medical University - Plovdiv (Protocol No 2 of March 14, 2022) for conducting the competition and Order of the Rector of the Medical University - Plovdiv (No P-468 of 21.03.2022)

One candidate has submitted documents in this competition: Assoc. Prof. Kiril Blazhev Gavazov, PhD

1. Biographical data and career profile of the candidate

Assoc. Prof. Kiril Gavazov, PhD, graduated from the Faculty of Chemistry at Plovdiv University “Paisii Hilendarski”, with a Master’s degree in Chemistry and professional qualification of chemist and teacher of Chemistry and Chemical Technology.

From 1994 to 2010, he held the positions of Assistant Professor, Senior Assistant Professor and Chief Assistant Professor at the Department of General and Inorganic Chemistry, Faculty of Chemistry, Plovdiv University “Paisii Hilendarski. In 2001, after successfully defending his dissertation, the educational and scientific degree “doctor” was conferred on him by the Higher Attestation Commission in scientific specialty 01.05.02 - Inorganic Chemistry, and in 2010 he successfully acquired the academic position of Associate Professor in Inorganic Chemistry. Since 2017, he has been an Assoc. Prof. at the Medical University - Plovdiv, and since 2020 he has been the head of the Department of Chemical Sciences, Faculty of Pharmacy.

According to the submitted evidence of work experience (as of January 10, 2022), the total teaching experience of Assoc. Prof. Kiril Gavazov is over 28 years, of which over 12 years as Associate Professor.

The candidate is a member of the Faculty Council of the Faculty of Pharmacy, the Commission for Attestation of Academic Staff, and the Council for Research at MU - Plovdiv. Assoc. Prof. Kiril Gavazov is Faculty Coordinator for the Erasmus + Programme.

Since 2016, he has been a member of the Royal Society of Chemistry, and in 2018 joined the Editorial Board of the Earthline Journal of Chemical Sciences.

2. General description of the materials submitted for the competition

The package of materials presented to me, in electronic form, for acquiring the academic position of "Professor" is in accordance with the Act on Development of the Academic Staff of the Republic of Bulgaria, the Regulations for its implementation and the

Regulations for Academic Development of MU - Plovdiv (2021) and includes all necessary documents.

3. General characteristics of the candidate's activities

Evaluation of the candidate's scholarly activity

Assoc. Prof. Kiril Gavazov, PhD, has presented 28 scientific articles published in journals referenced and indexed in the world scientific databases Scopus and Web of Science, 7 of which presented as the equivalent to a monograph; 10 scientific articles published in unreferenced journals; one chapter of a book. The presented publications were not used in the National Center for Information and Documentation (NACID) for the acquisition of the educational and scientific degree "Doctor" and the academic position "Associate Professor".

The candidate for the academic position "Professor" has participated in 41 scientific forums - 21 national and 20 international. Participation is evidenced with relevant documents.

Group A indicators: Points required -50; Points accomplished -50

Indicator 1 The candidate has defended a dissertation thesis for awarding the educational and scientific degree "Doctor" entitled "Extraction of ternary ion-associated complexes of vanadium (IV, V) with tetrazolium salts."

Group C indicators: Points required - 100; Points accomplished - 100

Indicator 4 Habilitation work - Scholarly articles in journals referenced and indexed in the global databases of Scopus and Web of Science (equivalents to monograph)

Seven original scientific articles are presented, distributed as follows: 1 article in a scientific journal of quartile Q1, 3 articles in scientific journals of quartile Q3, and 3 articles in scientific journals with SJR.

Two of the presented articles summarize and systematize knowledge and research in the field of extraction spectrophotometry of ion-associated complexes and liquid-phase microextraction. The rest of the articles are devoted to research related to the complex formation and determination of extraction-spectrophotometric characteristics of seven systems for liquid-liquid extraction of Co (II), V (V) and Fe (III) ions. Some of the studies include poorly studied ionic extraction reagents, resorcinol derivatives - 6-hexyl-4-(2-thiazolylazo)- (HTAR) and 5-methyl-4-(2-thiazolylazo)-resorcinol (MTAR).

Group D indicators: Points required - 250; Points accomplished - 289

Indicator 7 Scientific articles in journals referenced and indexed in the global databases of Scopus and Web of Science

To fulfill the requirements of indicator D.7, Assoc. Prof. Gavazov has submitted 21 original publications. Three of them (D.19, D.20, and D.21) are included in the list of publications in the abstract for the acquisition of the educational and scientific degree "Doctor" under numbers 3, 4 and 6, but have not been used in NACID. The applicant pointed out that they do not carry any points. The other publications are distributed as follows: 1 – in scientific journal of quartile Q1, 2 – in scientific journals of quartile Q2, 11 – in journals of quartile Q3, 2 – in journals of quartile Q4, and 2 – in journals with SJR.

Indicator 8 Chapter of a book / collective monograph

A chapter from a book published in 2019: "Liquid-liquid extraction of ion-association complexes" is presented. In: Taylor JC, editor. *Advances in Chemistry Research*. 50. New York: New Science Publishers; 2019. p. 203-238. ISBN: 978-1-53614-808-4 “.

Ten publications are presented, completing the research profile of the candidate, distributed as follows: 2 articles, published in edited collective volumes, and 8 articles - in unreferenced journals with scientific peer-review, three publications are with cited references in Scopus and Web of Science.

The scholarly activity of Assoc. Prof. Kiril Gavazov falls within the field of chemistry of complex compounds and hybrid methods of analysis, in particular extraction spectrophotometry. Contributions can be classified as scientific and applied research.

Scientific Contributions

- New liquid-liquid extraction-chromogenic systems were studied, containing: vanadium (V), vanadium (IV, V), gallium (III), iron (III), cobalt (II), nickel (II); Azo derivatives of resorcinol and o-nitrophenols; Ion association reagents (xylometazoline hydrochloride, tetrazolium salts, tetrabutylammonium iodide, Aliquot 336, Astra Phloxine). The optimum conditions for metal ions extraction, composition of the extracted species, and equilibrium constants (association constants, distribution constants, and extraction constants) were found.
- A cloud point extraction-chromogenic system, containing copper (II), 1- (2-thiazolylazo)-2-naphthol (TAN), Triton X-100 was investigated. The optimal conditions for Cu (II) extraction, and the composition of the extracted complex were found.
- With the help of a quantum chemical approach, the geometric structure and stability of possible isomers have been clarified. Theoretical and experimental absorption spectra have been compared.

Applied Research Contributions

- For all studied liquid-liquid extraction systems, optimal conditions for conducting extraction-spectrophotometric measurements and analytical characteristics are established, which are of interest for analysis of metal ions in real objects.
- Flotation-spectrophotometric method for the determination of iron in soils and zinc-sulfides concentrates has been developed.
- For the first time an optical probe is proposed as the microdrop holder and simultaneously the measuring cell in a direct immersion single-drop microextraction (DI-SDME) procedure. The method was applied for analysis of thiocyanate ions in human saliva samples.
- A novel, sensitive and selective method for the spectrophotometric determination of the basic inorganic iodine species was developed based on the vortex-assisted liquid-liquid microextraction of an ion pair formed between colorless tetrabutylammonium cation and triiodide anion. The procedure was successfully applied for the determination of iodide, iodate, and iodine in salt, sea, and mineral water samples.

The contributions presented by Assoc. Prof. Prof. Gavazov are based on 77 own scientific papers and are presented on 13 pages (electronic folder 26). I believe that those based on the 11 publications presented in electronic folder 12, to which the candidate refers as quote, "Publications that will be used to obtain the degree of Doctor of Science (in the future)" should be excluded.

Group E indicators: Points required - 100; Points accomplished - 370

An important testimonial of the scientific achievements of Assoc. Prof. Kiril Gavazov is the number of positive citations of his publications. Assoc. Prof. Kiril Gavazov has included a list of 136 positive citations in Scopus and Web of Science databases. The applicant has reviewed 49 manuscripts for scientific journals referenced and indexed in Scopus and Web of Science.

Evaluation of the candidate's educational and pedagogical activity

Group F indicators: Points required - 150; Points accomplished – 294

Indicator 13 Assoc. Prof. Kiril Gavazov has supervised one successfully defended PhD dissertation. The procedure for the defense of the dissertation of a second PhD student is currently underway. Both dissertations are in the area of higher education 4. Natural Sciences, Mathematics and Informatics, professional field 4.2 Chemical sciences (Inorganic Chemistry).

Indicator 15 The candidate has participated in an education project of MU – Plovdiv (No BG05M20P001-2.009-0025, “DOCTORANT – 2”) funded by Operational Programme “Science and Education for Smart Growth”, partly funded by the European Union through the Structural and Investment Funds. He is currently a participant in the OMNIA project (No BG05M20P001-2.016-0007, procedure "Modernization of higher education institutions"), funded by the Operational Program "Science and Education for Smart Growth".

Indicator 17 The applicant was the supervisor, on the Bulgarian side, of an international project ("DNT/Slovakia 01/7 of 30.09.2016, Application of ion-associates in microextraction techniques: development of the methods for determination of selected analytes"), which was completed successfully.

Participation in projects is certified with a relevant official note.

Indicator 19 Assoc. Prof. Gavazov is a co-author of a school textbook - Chemistry and Environmental Protection for 11-th grade (specialized training). Module 2. Chemistry of Inorganic Substances, "KLETT BULGARIA" Ltd., 2020. ISBN: 978-954-34-4620-9.

Indicator 20 The candidate is a co-author of five university textbooks in Inorganic Chemistry, and one used in the school network. He is independent single author of 3 textbooks.

Group G indicators: Points required - 560; Points accomplished - 1636

The study workload (in the last two academic years) as presented by the report carries 436 points, and the academic position of associate professor carries 1200 points.

The total number of points of indicators A, C, D, E, F, and G is 2739, compared to the required 1210.

Based on the scientific indicators, his Hirsch index (h - index) is 9 (Scopus, Web of Science), which is significantly higher than the requirement of MU – Plovdiv (h - index ≥ 3).

4. Critical notes and recommendations

My comments are made within the text above.

5. Conclusion

Assoc. Prof. Kiril Gavazov, PhD, is a lecturer and scientist of undisputed scientific authority.

The presented scientific and educational activities meet and exceed the mandatory and specific criteria for the academic position "Professor" pursuant to the Law on the Development of the Academic Staff of the Republic of Bulgaria, the Regulations for its implementation and the Regulations for Academic Development of MU - Plovdiv (2021).

On the basis of the above arguments and evidence, I give my positive evaluation and strongly recommend that the distinguished members of the scientific jury vote in favour of conferring the academic position “Professor” on Assoc. Prof. Kiril Gavazov, PhD, in higher education area 4. Natural sciences, mathematics and informatics, professional field 4.2 Chemical sciences (Inorganic Chemistry).

Reviewer:



/Assoc. Prof. Zdravka Velkova, PhD/

April 17, 2022