

Statement

from

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Department of Physical Chemistry

Subject: competition for a professor position in the professional field 4.2. Chemical Sciences (Physical chemistry), State Gazette no. 21 from 15.03.2022; Order of the Rector of Sofia University St. Kliment Ohridski ПД – 38 – 174 / 01. 04. 2022 and decision of FS - FHF, protocol N 22 / 28.03.2022

Participant: one candidate participates in the competition, associate professor Dr. Vesselin Kostadinov Petrov, associate professor in the Department of Physical Chemistry, Sofia University St. Kliment Ohridski from 2017

Associate Professor Dr. Vesselin Kostadinov Petrov (51 years old) graduated in Chemistry, Faculty of Chemistry - Sofia University St. Kliment Ohridski in 1996 with the profile “Especially pure substances and materials based on them”. In 2006 he obtained the scientific and educational degree "Doctor" in the scientific specialty 02.22.01 "Ecology and Ecosystem Protection" and defended his PhD work on "Modern methods of experimental data processing". Vesselin Kostadinov Petrov was a senior assistant (2015-2017). Now he is associate professor in the Department of Physical Chemistry at Sofia University St. Kliment Ohridski from 2017.

The documents for participation in the competition of the candidate meet the requirements of the Regulations of Sofia University St. Kliment Ohridski and of Law on the Development of Academic Staff in the Republic of Bulgaria. His scientific and educational profile are in accordance with the requirements for a professor in the professional field 4.2. Chemical sciences (Physical chemistry). From the presented reference-declaration it can be seen that the scientific achievements of the candidate significantly exceed the minimum state and internal university requirements for participation in a competition for the academic position "Professor" in the field of higher education 4.2 Chemical Sciences. The candidate has correctly filled in data in the system of Sofia University "St. Kliment Ohridski THE AUTHORS and has a full registration in the NACID database, which is required to obtain the highest academic position (professor).

Associate Professor Dr. Vesselin Petrov is a co-author of a total of 47 referenced scientific publications, 43 of which are visible in the SCOPUS system with h-index = 14. The author's publications in the same database have been cited more than 840 times, and 250 of these citations are after 2017. The articles are in prestigious journals with impact factor in the fields of spectroscopy, physical chemistry, materials and organic chemistry.

Associate Professor Dr. Vesselin Petrov participated in this competition with 23 publications in prestigious journals with impact factor such as Journal of Physical Chemistry (IF = 3.18), Phytochemistry (IF = 3.21), Dyes and Pigments (IF = 3.47), PCCP = 4.04, Journal of Luminescence (IF = 3.59), Spectrochimica Acta - Part A (IF = 3.96), which are cited over 400

times, according to the SCOPUS system. The publications of Dr. Vesselin Petrov, related to his doctoral dissertation (2006) and his competition for the academic degree associate professor (2017), are not included in this competition - thus the requirements of Law on the Development of Academic Staff in the Republic of Bulgaria law are met.

The high scientific achievements of Vesselin Kostadinov Petrov are a consequence of his scientific development. He has been a research associate and post-doctoral fellow at prestigious European universities: Free University of Amsterdam and New University of Lisbon, where he specializes in physical organic chemistry, spectroscopy and data processing. In Portugal, Dr. Vesselin Petrov worked in the group of a famous spectroscopy scientist, Professor Fernando Pina. The candidate was a research associate at BAS – Institute of Organic Chemistry, Laboratory of Vibration Spectroscopy.

In the Department of Physical Chemistry, Associate Professor Vesselin Petrov since 2015 has been dedicated to the study of physicochemical processes, optical materials and host-guest interactions with spectroscopic methods in collaboration with colleagues from the Department, the Faculty of Chemistry and Pharmacy and the Bulgarian Academy of Sciences.

The scientific contributions of the candidate in the publications, presented in this competition are in optical and infrared spectroscopy and their application in the quantitative study of thermodynamics and kinetics of physical and chemical processes, characterization of dyes and mathematical processing of spectral data. The most visible topics in the publications of associate professor Vesselin Petrov are the spectral properties of synthetic flaviliums and the use of modern spectroscopic techniques for finding thermodynamic and kinetic constants in these systems. In this scientific field, which is related to the group of Prof. F. Pina, Vesselin Petrov is one of the world's leading scientists.

Other significant contributions to the candidate's research are in the field of optical properties of metal complexes and host-guest interactions in cyclodextrins. The habilitation work of the candidate in this competition, "Molecular metamorphoses", is also dedicated to the spectral properties of synthetic flavilium compounds. It is an in-depth physicochemical study at a high scientific level, which is written in an understandable and fascinating way.

With associate professor V. Petrov we are co-authors in two publications, in the Journal of Luminescence (2017) and Spectrochimica Acta - Part A (2020), which are included in the materials of this competition and are in the field of optical properties of metal complexes.

Associate Professor Veselin Kostadinov Petrov has the necessary project and teaching activities to hold the academic position of "Professor" in the Department of Physical Chemistry. The teaching activity of Associate Professor Dr. Veselin Petrov at Sofia University St. Kliment Ohridski includes lectures and seminars in Physical Chemistry - I and II, Non-equilibrium thermodynamics, Information Technology and Data Processing.

Associate Professor Petrov has experience in the management of PhD students, together with Prof. F. Pina in Portugal, in the field of spectral properties of flavilium compounds. Vesselin Petrov was also a scientific consultant for a PhD work in the Department of Organic Chemistry at Sofia University "St. Kliment Ohridski ", defended in 2019, also dedicated to the physicochemical

properties of flavilium derivatives. Vesselin Petrov is currently the head of a doctoral student and a working group within the European project (Marie Curie action) "Rheology of nanoemulsions and nanosuspensions".

I have known Dr. Veselin Kostadinov Petrov since 2016 as a respected and competent lecturer in the Department of Physical Chemistry, which I am currently managing. The computer and mathematical skills of the candidate in combination with a broad chemical culture are a prerequisite for the enrichment of the seminars and lectures available in the Department of Physical Chemistry. From our conscientious scientific work I am convinced that Associate Professor Veselin Petrov has a serious research potential and ability to expand the planned research, to interpret the results critically and to lead research activities.

Conclusion

In conclusion, I strongly believe that Associate Professor Dr. Vesselin Kostadinov Petrov meets all the requirements of the Law on the Development of Academic Staff in the Republic of Bulgaria and the Regulations on the terms and conditions for acquiring the academic position "Professor" at the Faculty of Chemistry and Pharmacy at Sofia University St. Kliment Ohridski. Based on my acquaintance with the presented scientific papers and the results in them, which exceed the requirements of the Regulations on the terms and conditions for acquiring the academic position "Professor" at the Faculty of Chemistry and Pharmacy at Sofia University St. Kliment Ohridski, I recommend Associate Professor Dr. Veselin Kostadinov Petrov for the academic position "Professor" in the professional field 4.2. Chemical sciences (Physical chemistry).

Sofia, June 26, 2022.

Prof. Dr. Stoyan Ivanov Gutzov

