

REPORT

**by Prof. Dr. Eng. Petar Todorov Todorov,
from University of Chemical Technology and Metallurgy - Sofia, Department of
Organic Chemistry
on the materials submitted for participation in a competition for the academic position
of "Associate professor" by professional area 4.2. Chemical sciences (Organic
photochemistry) for the needs of the Faculty of Chemistry and Pharmacy of SU "St.
Kliment Ohridski" announced in State Newspaper No. 103 of 12.12.2023**

The lone participant for the advertised competition is Ch. Assistant Professor Dr. Stanislava Borisova Yordanova-Tomova of the Faculty of Chemistry and Pharmacy of SU "St. Kliment Ohridski, Department of Organic Chemistry and Pharmacognosy." The candidate has provided all of the documentation required by the Regulations for the Implementation of the Law on the Development of Academic Staff in the Republic of Bulgaria.

Ch. Assistant Professor Dr. Stanislava Yordanova-Tomova completed her education at the Faculty of Chemistry of the SU "St. Kliment Ohridski" in 2011 as a Master of Chemistry, specialty "Organic materials in high technologies". In 2014, he successfully defended his PhD dissertation on "Molecular devices driven by light for rapid environmental monitoring" under the supervision of Prof. Ivan Petkov and Prof. Dr. Ivo Grabchev.

After defending her PhD in 2014, she was hired as an assistant in the Department of Organic Chemistry and Pharmacognosy. He has been the department's main assistant since 2015 and also teaches there.

Ch. assistant professor Dr. Stanislava Yordanova-Tomova teaches practical seminar classes for the FHF's Chemistry, Ecochemistry, and Pharmacy specialties at SU "St. Kliment Ohridski" as well as all majors in the Faculty of Biology who study Organic Chemistry. The candidate also conducts exercises in Organic Chemistry Part I and II.

From 2015 to 2019, six diploma theses were successfully defended under her guidance. It should be noted that in 2017, the applicant earned an award named after Academician Ivan Yuhnovski for "Outstanding Young Scientist in the Field of Organic Chemistry".

The candidate has submitted a list of a total of 23 scientific papers, of which 22 are in journals with an impact factor, 1 in journals without an impact factor, and 2 of the articles were used to defend a dissertation for obtaining a scientific degree "Doctor". In the competition for

associate professor, the candidate participated with 19 scientific publications, all indexed and referenced in the world databases SCOPUS/Web of Science.

The scientific results received and published by ch. assistant professor Dr. Stanislava Yordanova-Tomova has been well reflected in the scientific literature. The total number of citations is 147, excluding all co-authors' self-citations (SCOPUS data). The H-index of Ch. assistant Stanislava Yordanova-Tomova is 9, although she gave 7.

For his participation in the current competition, assistant professor Stanislava Yordanova-Tomova presented a 26-page habilitation thesis. However, the candidate did not provide a topic or an explanation for which of her scholarly papers the habilitation thesis was based on. The work focuses on the synthesis and characterization of novel derivatives of 4-chloro-7-nitrobenzofurazan and 1,8-naphthalimides, as well as dendrimers from various generations. The study is interesting and up-to-date, and it has significant implications for biology and biomedicine, namely for tagging peptides, proteins, and other biomolecules in living cells as fluorescent sensors.

The candidate participated in the competition with a total of 19 scientific works, which were not used in the defense of her dissertation for the "doctor" (2014). Two of the articles were published in journals with Q1, 8 of the articles were published in journals with Q2, and the remaining 9 with Q3 and Q4, respectively. Among the journals where the candidate has published her works on the topic of the competition are the prestigious Beilstein Journal of Organic Chemistry (Q1, SCOPUS), Dyes and Pigments (Q1, SCOPUS), Journal of Photochemistry and Photobiology A: Chemistry (Q2, SCOPUS), Luminescence (Q2, SCOPUS), Inorganica Chimica Acta (Q2, SCOPUS), etc. The research reflected in the peer-reviewed scientific papers can be thematically related to the field of organic photochemistry and molecular spectroscopy.

The candidate's scientific achievements can be broadly described in the following 4 areas:

1) Investigation of the photophysical characteristics of newly synthesized compounds in solvents of different polarity - publications No. 15, 18.

2) Investigation of the sensory properties of the newly synthesized compounds to various metal ions - publications No. 1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 14, 15, 17, 19.

3) Investigation of the influence of the pH of the medium on the absorption and fluorescence intensity - publication no. 7.

4) Investigation of microbiological, antimicrobial, and antibacterial properties of the newly synthesized complexes, as well as of their copper and zinc complexes - publications No. 2, 3, 4, 5, 6, 8, 9, 11, 14, 17.

Fulfillment of the minimum requirements according to the Recommended criteria of the FHF - SU "St. Kliment Ohridski" from Ch. Assistant Professor Stanislava Yordanova-Tomova is as follows:

According to indicators group A(1): 50 points (required 50 points);

According to indicators group B(4): 112 points (necessary 100 points);

According to indicators group D(7): 220 points - the candidate gave 230 points, but the journal "*Journal of Chemical Technology and Metallurgy*" is a publication with SJR, without IF, and cannot be counted with Q3 (15 points), but for 10 points! (220 points required);

According to indicators group D(11): 200 points (necessary 70 points);

According to indicators group F (21,23,25): 100 points (necessary 70 points).

I do not personally know Ch. assistant Yordanova-Tomova, but the theme of her work is clearly outlined, which is constantly evolving. As a remark, I will mention the discrepancy in the values of some of the indicators given in the documents - indicators B and D, the number of citations, the poorly presented habilitation thesis, and the overall documentation of the competition. I would recommend Dr. Yordanova-Tomova to be a little more critical in presenting and summarizing her research and teaching activities.

Conclusion: Based on the above and the overall research and teaching activity, and the implemented quantitative indicators from the Recommended criteria of the FHF - SU "St. Kliment Ohridski" I believe that the only candidate for the announced competition ch. assistant professor Dr. Stanislava Borisova Yordanova-Tomova fully meets the requirements of the Law on the Development of the Academic Staff in the Republic of Bulgaria for holding the academic position "Docent". Therefore, I give my *positive assessment* and recommend to the respected members of the Scientific Jury to prepare a report-proposal to the Faculty Council of FHF for the election of **ch. assistant professor Dr. Stanislava Borisova Yordanova-Tomova** for the academic position "Docent" in professional direction 4.2. Chemical sciences, scientific specialty Organic photochemistry at the Department of "Organic Chemistry and Pharmacognosy" of the FHF at SU "St. Cl. Ohridski".

18.03.2024

Sofia,

Prepared the report :

/ Prof. Dr. Eng. Petar Todorov Todorov /