OPINION

On a competition to occupy academic position of Associate Professor
Professional field: 4.2. Chemical Sciences
Scientific specialty: Organic Chemistry
Requesting laboratory: Chemistry of solid fuels, Institute of Organic Chemistry
with Centre of Phytochemistry, Bulgarian Academy of Sciences
Announcement: State Gazette No. 27, 5 April 2022
Reviewer: Assoc. Prof. Nikolay Ivanov Velinov, PhD
Institute of Catalysis, Bulgarian Academy of Sciences, Sofia, Bulgaria

This opinion was prepared in accordance with Order No. РД-09-77/01.06.2022 issued by the Institute of Organic Chemistry with Centre of Phytochemistry (IOCCP) of the Bulgarian Academy of Sciences (BAS).

Assistant Professor Ivanka Stoycheva, PhD, being a member of the requesting lab at IOCCP-BAS, is a sole applicant. The candidate has submitted all the necessary documents in accordance with Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at IOCCP-BAS.

Ivanka Stoycheva graduated from University of Chemical Technology and Metallurgy in 2013, master degree in Natural and synthetic fuels. After that, she started as a doctoral student at IOCCP-BAS. In 2016, she defended her thesis entitled: Synthesis of carbon materials based on organic materials, and received her PhD degree. Since 2016, she has been working as an assistant, and in 2019 she was elected and appointed as Assistant Professor in the "Chemistry of Solid Fuels" laboratory at IOCCP-BAS.

Assist. Prof. Ivanka Stoycheva is co-author of 35 publications that have found significant repercussions in the specialized scientific literature with a total number of 80 citations. For participation in this competition, she submitted 20 publications of which are in impact factor (IF) or Scopus rank (SJR) issues. The entries included in the competition do not repeat those submitted for acquisition of the doctoral degree. As a habilitation thesis, the candidate has presented 6 publications (indicator *B*) corresponding to 104 points. The publications presented in indicator *Г* are 14 in number and correspond to 231 points. Applicant′s leading role and significant personal contribution to research and analysing results is supported by the fact that she is the first author of 8 publications. The citations of Assist. Prof. Ivanka Stoycheva, participating in the competition, that are not represented in other competitions for occupying academic positions and acquiring scientific degrees, collect almost double the number of points (138 points) of the required 70 points. The candidate has significant experience in participating in 12 national and international research projects. In addition, Assist. Prof.

Ivanka Stoycheva, is the head of two projects under programs of the Scientific Research Fund and the Ministry of Education and Science for young scientists and postdoctoral students.

Submitted information about fulfilment of minimum requirements under Article 5 of the aforementioned IOCCP-BAS Rules shows that Assistant Professor Stoycheva exceeds minimum points score requirement for each indicator to apply for the position of Associate Professor.

The publications submitted in the competition are in the field of Organic Chemistry, with a focus on environmental protection. The contributions of the presented research can be summarized in the development of methods for the conversion of organic waste from various industries (including RDF-fuel) to useful products – efficient nanoporous carbon adsorbents and liquid and gaseous energy sources, characterized by high calorific value. The following can be noted as specific contributions:

- A synthesis method was developed that allows the utilization of high-ash raw materials (RDF-fuel) through their conversion to a final product with good adsorption properties against various toxic pollutants;

- A method for the production of carbon foam with relatively ordered porous structure and high mechanical strength is developed;

- The obtained carbon materials are characterized with modern methods of analysis, as well as the chemical nature of the surface of the obtained carbon materials, which is essential in the use of the obtained carbon materials as carriers of catalysts, carbon adsorbents, etc.;

- Tests were made with a view to the application of the obtained adsorbents in the purification of water from various toxic pollutants (phenols, dyes, heavy metals) and the adsorption capacity of some carbon materials was found to be promising.

Conclusion: Applicant Assist. Prof. Ivanka Stoycheva meets the requirements to occupy an academic position of Associate Professor in accordance with Act for the Development of the Academic Staff in the Republic of Bulgaria, Rules for the Implementation of Act for the Development of the Academic Staff in the Republic of Bulgaria, and Rules on the Terms and Conditions for Acquisition of Academic Degrees and Occupation of Academic Positions at IOCCP-BAS. I give a positive assessment and strongly support Assistant Professor Ivanka Stoycheva, PhD, to occupy the academic position of Associate Professor in professional field 4.2. Chemical Sciences and scientific specialty Organic Chemistry at Institute of Organic Chemistry with Centre of Phytochemistry of the Bulgarian Academy of Sciences.

11.08.2022 Member of the Scientific Jury:
Sofia (Assoc. Prof. Nikolay Velinov, PhD)