

ATTITUDE OF REVIEWER

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Member of the Academic Jury set to render a decision on the competition for filling the academic position of an Associate Professor in the Professional Field 4.2. Chemical Sciences according to the Classifier of the Areas of Higher Education and the Professional Fields (Scientific Specialty "Organic chemistry")

1. Evaluation of the documents in the procedure

This attitude of a reviewer is prepared in response to a procedure for the academic position of "Associate Professor", published by IOCCP-BAS in the Newspaper of State, issue 55 of 15.07.2022. The position is open in Laboratory "Organic reactions of microporous materials", the only candidate is Dr. Gloria Issa. The scientific and administrative documents submitted by the candidate are in a compliance with the Regulations for the development of the academic staff and meets the criteria of IOCCP-BAS for the academic position of "Associate Professor". Dr. Issa participate in the competition with a habilitation thesis, in Bulgarian and English, based on 2 scientific publications Q1, 2 scientific publications Q2, 1 scientific publications Q3, 1 scientific publications Q4 and 1 with SJR (indicator B). According to indicator Γ , the candidate has presented 5 scientific publications Q1, 1 scientific publications Q2, 1 scientific publication Q3 and 5 scientific publication Q4. Under indicator Δ , Dr. Issa holds 131 citations of her scientific publications. According to indicator \mathcal{K} , a check in the Scopus database shows that Dr. Issa holds an h factor of 8 (self-citations excluded), which meets the criteria of the IOCCP-BAS for the academic position. Apart from the required minimum of scientific contributions for the position, the candidate provides a list of 9 research projects she was/is involved in. From those, she is a PI in two projects. Dr. Issa also presented a list of over 30 conferences and several internships abroad.

2. Brief biographical data

Dr. Gloria Issa, obtained her bachelor's degree in "Organic Chemistry". at Sofia University, Faculty of Chemistry and Pharmacy. In 2011, she was awarded a master's degree in "Medicinal Chemistry" at the same university. In the period 2012-2015, Gloria Issa was a PhD student at IOCCP-BAS, where in 2017 she obtained her PhD degree. In the same year, she held the academic position of an assistant professor at IOCCP-BAS, where she has been working until now.

3. General characteristics of the candidate's research activity

The main research interests of the candidate are focused on the development of new catalysts and catalyst carriers based on nanostructured mesoporous metal oxide composites, their characterization and application. New approaches have been developed for the preparation of bi and tri composite catalysts based on a diverse set of oxides of Mn, Ce, Ti, Zr, etc. The obtained materials were subjected to a complex characterization of the structural, textural, surface, electronic and oxidation-reduction properties by using appropriate modern techniques. The effects of the composition of the composites on their catalytic properties were studied in the following areas:

1. Removal of toxic emissions by oxidation of volatile organic compounds (ethyl acetate).
2. Use of methanol as a precursor of hydrogen towards alternative fuel.
3. Degradation of surrogates of P- and S-containing chemical weapons.

The contribution of the candidate in these studies is undoubted, which is supported by the fact that in several scientific publications she is appointed a first author. Mainly, these publications are focused on the development of composite catalysts for the oxidation of volatile organic compounds and the production of hydrogen from methanol.

4. Critical notes and recommendations

I have no significant remarks to the candidate. At the end of the habilitation work Dr. Gloria Issa summarized her future research plans wherein she described the continuation of her current research. A good impression is delivered by the new research areas that the candidate pointed out, namely, the development of new adsorbents for CO₂ capture and the highly relevant nowadays reduction of CO₂ to methane and methanol.

6. Conclusion

The presented documents and merits of Dr. Gloria Issa are in compliance with the Development of Academic Staff in the Republic of Bulgaria Act (DASRB), the Rules for the Application of the Development of Academic Staff in the Republic of Bulgaria Act, the Rules of BAS and with the Rules set at the IOCCP-BAS, for applying the Acts aforementioned.

The high quality of the scientific contributions and qualification of the candidate are undoubted and exceed the basic requirements of IOCCP-BAS for the position "associate professor".

Based on the abovementioned and after careful evaluation of the materials and scientific papers presented in the procedure, I express my positive recommendation and I would like to propose to the members of the distinguished Scientific Jury to give their support for Dr. Gloria Issa and to propose to the Scientific Council of IOCCP-BAS to elect her for the academic position of "Associate Professor" in the professional field 4.2 Chemical Sciences, scientific specialty "Organic Chemistry".

November 15, 2022

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(Assoc. Prof. Dr. Svilen Simeonov)