

ATTITUDE OF REVIEWER

by Assoc. Prof. Dr. Svilen Plamenov Simeonov,

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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 91 of 02.11.2021. The position is open in Laboratory “Organic Synthesis and Stereochemistry”, the only candidate is Dr. Atanas Kurutos. 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. Kurutos participate in the competition with a habilitation thesis, in Bulgarian and English, based on 4 scientific publications Q1 (indicator B). According to indicator D, the candidate has presented 7 scientific publications Q1, 3 scientific publications Q2, 1 scientific publication Q4 and 2 chapters from a collective monograph (book). Under indicator D, Dr. Kurutos holds 50 citations of his scientific publications. According to indicator G, a check in the Scopus database shows that Dr. Kurutos holds an h factor of 6 (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, Dr Kurutos provides a list of 12 research projects he was/is involved in. From those, he is a PI in two projects for young scientists funded by the BNSF (one ongoing), as well as a postdoctoral project funded by the JSPS. Dr. Kurutos also presented a list of awards, including among others, Eureka Award for 2016, award from the Union of Scientists in Bulgaria for 2016 and 2021 award for “Outstanding Young Scientist in Organic Chemistry” Acad. Yukhnovski.

2. Brief biographical data

Dr. Atanas Kurutos received his Bachelor's degree in Chemistry in 2010 from Kingston University - London, UK. In 2013 he obtained a Master's degree in "Modern methods for synthesis and analysis of organic compounds" at the Faculty of Chemistry of Sofia University "St. Kliment Ohridski". Since 2016, Atanas Kurutos holds a PhD degree (4.2. Chemical Sciences - Organic Chemistry) from the Faculty of Chemistry and Pharmacy of Sofia University “St. Kliment Ohridski”. Since 2016 he holds a position of Assistant Professor at IOCCP-BAS. During the period 2017-2020 he has conducted several postdoctoral specializations abroad, at

the University of Friborg, Roskilde University, University of Copenhagen, and two years postdoc at Keio University (Department of Applied Chemistry Faculty of Science and Technology) in Tokyo, Japan

3. General characteristics of the candidate's research activity

The main research efforts of Dr. Atanas Kurutos are focused on the synthesis and photophysical properties of fluorescent organic compounds applied as biosensors. Within these studies, series of mono- and polymethane dyes with one or more positive charges in their chemical structure were synthesized, as well as styrene and azo dyes, whose absorption and emission maxima span the entire visible and part of the infrared region of the electromagnetic spectrum. In my opinion this is a promising scientific topic with a wide potential for practical application due to its cross points with biology and medicine. The main achievements of the candidate can be summarized as follows:

1. Preparation of cyanine dyes and complexes and their application as fluorescent markers for nucleic acid labeling and in confocal microscopy
2. Preparation of new mono- and polymethine dyes as potential markers for detection of pathogenic protein aggregates and amyloid fibrils.
3. Research in the field of new colorimetric pH-sensitive sensors as potential teranostic agents.
4. Preparation and research of aryl hydrazone molecular switches.

4. Evaluation of the personal contribution of the candidate

The candidate's contribution to these studies is undoubted, which is supported by the fact that in a major part of his scientific publications, Dr. Atanas Kurutos is the first and/or corresponding author. At the end of his habilitation thesis, the candidate summarizes his plans for a future research in several promising areas in the field of the chemistry of fluorescent organic compounds. The latter shows that the candidate has acquired the required knowledge and experience for the transition to an independent researcher, which is very important for the position of "Associate Professor".

I know personally Dr. Atanas Kurutos and although so far I have not been involved in an collaborative research work with him, I can describe him as a communicative and enthusiastic young researcher. I have no doubt about the quality of his scientific contributions to date, neither about his potential to develop independent research.

5. Critical notes and recommendations

I have no significant remarks to the candidate. However, I would like to point out that in my opinion, the habilitation thesis would be better organized if the personal contributions and in the 4 scientific publications presented under indicator B are clearly distinguished from the other scientific publications of the candidate.

6. Conclusion

The presented documents and merits of Dr. Atanas Kurutos 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. Atanas Kurutos and to propose to the Scientific Council of IOCCP-BAS to elect him for the academic position of "Associate Professor" in the professional field 4.2 Chemical Sciences, scientific specialty "Organic Chemistry".

March 4, 2022

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(Assoc. Prof. Dr. Svilen Simeonov)