

ATTITUDE OF REVIEWER

**on the competition for the occupation of the academic position “Associate Professor”
in professional field 4.6. “Informatics and computer sciences” (informatics) according to the
announcement in the State Gazette № 32 on the 16th of April 2021
with candidate: Dr. Mariana Ilieva Atanasova, assistant professor in the Faculty of Mathematics
and Informatics, Sofia University “St. Kliment Ohridski”
Reviewer: Dr. Krassimir Angelov Temelkov, professor at the Georgi Nadjakov Institute of Solid
State Physics, Bulgarian Academy of Sciences**

1. General characteristic of the materials presented.

Total scientific production of Assistant Professor Dr. Mariana Ilieva Atanasova consists of 40 publications, of which 13 articles are published in scientific journals, while 27 articles – in conference proceedings. In the competition, Dr. M. Atanasova has submitted 9 publications in prestigious journals, namely Journal of Physics D: Applied Physics, IEEE Transactions on Plasma Science, Vacuum, etc.

The applicant meets the requirements of the indicator A with the diploma for educational and scientific doctoral degree that is evaluated with 50 points.

For the implementation of the indicator B4 3 publications have been submitted, as follows: an article in Journal of Physics D: Applied Physics, which is in the quartile Q2 in Web of Science and Q1 in Scopus; a paper in Journal of Physics: Conference Series, which is in the quartile Q3 in Scopus; an article in Plasma Medicine, which is in Scopus with SJR. The total number of points for the indicator B after the multiplication by the correcting coefficient 3 is 150 points with the required minimum of 100 points.

Under the indicator G7, 6 publications have been presented, as follows: an article in Journal of Physics D: Applied Physics, which is in the quartile Q1 in Web of Science and Scopus; a paper in Vacuum, which is in the quartile Q2 in Web of Science and Scopus; a publication in IEEE Transactions on Plasma Science, which is in the quartile Q3 in Web of Science and Q2 in Scopus; 3 publications in Journal of Physics: Conference Series, which are in the quartile Q3 in Scopus. The total number of points for the indicator C (Γ) after the multiplication by the correcting coefficient 3 is 330 points, which considerably exceeds the required minimum of 200 points.

A list of 37 citation of the candidate works has been also presented, of which 1 citation is in a book, while 4 citations are in foreign PhD theses. The rest 32 citing papers are referred in Web of Science (27 citations) and in Scopus (5 citations) and are scored with 256 points. The total number of points for the indicator D after the multiplication by the correcting coefficient 4 is 256 points, which significantly exceeds the required minimum of 50 points.

2. General characteristic of the scientific, applied and pedagogical activity of the candidate.

Assistant Professor Dr. Mariana Ilieva Atanasova is the only candidate in the competition for “Associate Professor” in the professional field 4.6. “Informatics and computer sciences” (informatics). She graduated with a master degree from the Faculty of Physics, Sofia University, “St. Kliment Ohridski” in 1998. From 2003 to 2007, she was a part-time lecturer and information service specialist, and from 2007 to 2011, she was a chief assistant in the Department of language education, Sofia University “St. Kliment Ohridski”. From 2009 to 2012, she was researcher in the field of modelling and numerical simulation of gas-discharge plasma at the University Libre de Bruxelles, Belgium. She defended her thesis on the topic “Modelling of argon plasma at atmospheric pressure” in 2013. From 2011 to 2017, she is assistant professor in the Department of language education, Sofia University “St. Kliment

Ohridski”, and since 2017, she has been an assistant professor in the Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski”.

Scientific and applied activity of Dr. M. Atanasova is in the field of modelling and numerical simulation of low-temperature non-equilibrium inhomogeneous plasma.

She is participant in 7 projects of Sofia University “St. Kliment Ohridski” with the Bulgarian National Science Fund, 2 national projects with the Bulgarian National Science Fund, one project under the Operational Programme “Science and Education for Smart Growth”, and one project with the European Union.

Pedagogical activity of the candidate is related to reading lectures and leading exercises in the Faculty of Mathematics and Informatics and in two other faculties of Sofia University “St. Kliment Ohridski”. Dr. M. Atanasova was supervisor of three students that were successfully graduated for master programmes of the Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski”.

3. Main scientific and/or applied scientific contributions.

I deem that the successful research work and the obtained scientific results of the candidate have substantial scientific and scientific-applied contributions in the field of plasma and gas-discharge physics, as well as their application in science and technologies for enrichment of the existed knowledge and theories and application of the scientific achievements in practice. I could summarized the scientific contributions as follows: development of a model including consistently connected electrodynamic description of surface wave and kinetic description of low-temperature non-equilibrium inhomogeneous argon plasma; development of a model consistently describing plasma dynamic and kinetics of radio frequency plasma jet. I would mark as scientific-applied contributions the use of the developed models in biomedical applications. I am convinced that the personal contribution of the candidate for the achievement of the theoretical result is significant. She is leading author in six of the nine papers, and second author – in two articles.

4. Critical remarks and recommendation to the material submitted.

I have no critical remarks to the materials submitted. I also have no recommendations to Dr. M. Atanasova and her scientific activity. I strongly believe that she is well accomplished expert in the field of plasma and gas-discharge physics having great theoretical experience.

5. Conclusion.

My assessment of the scientific activity and contributions of the candidate is very good. The materials presented in the competition exceeds the National requirements and the requirements recommended by the Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski” for the occupation of the academician position “Associate Professor”.

The obtained scientific results supported by the good publishing activity and citation, as well as the activity performed as a participant in a number of international and Bulgarian projects well-funded, gives me a reason to recommend to the esteemed members of the scientific jury to elect assistant professor Dr. Mariana Ilieva Atanasova for Associate Professor in the Faculty of Mathematics and Informatics, Sofia University “St. Kliment Ohridski” ” in the professional field 4.6. “Informatics and computer sciences” (informatics).

09.08.2021 г.

Reviewer:

/ prof. Dr. Krassimir Angelov Temelkov /