



REPORT

by

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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 "Ecology and environmental protection (Ion exchange and
bioelectrochemical methods for water purification)",
announced in SG, issue 87/ 19.10.2021

This Report is prepared in response to Order № RD-322/ 22.11.2021 issued by the Rector of "Prof. Dr. As. Zlatarov" University -Burgas. The Report is in compliance with Development of Academic Staff in the Republic of Bulgaria Act (DASRBA), the Rules for the Application of the Development of Academic Staff in the Republic of Bulgaria Act, the Rules of "Prof. Dr. Assen Zlatarov" University – Burgas, for applying the Act aforementioned.

1. Biographical information about the candidate

Chief Assistant Professor Dr. Blagovesta Midyurova graduated in 2001 as a master in "Materials and Materials Science", and later - in 2016 - received the educational and scientific degree "Doctor". During the period 2007-2016 she worked in the Department of Ecology and Environmental Protection as a chemist. The candidate's academic career began in 2016 successively holding the positions of assistant and chief assistant at the University "Prof. Dr. As. Zlatarov". Nowadays she is a chief assistant in the Department of "Ecology and environmental protection" and teaches students of Bachelor's and Master's degrees. She leads the lecture courses in the "Climatology and Hydrology", "Water pollution and impact on ecosystems", "Project (water purification)" and the laboratory exercises on "Water management", "Specific technologies for limiting the anthropogenic pressure on hydrosphere", "Marine Ecology", "Environmental Management" and "Water Pollution and Purification".

2. Assessment of the scientific and research accomplishments

The documents presented by Dr. Blagovesta Midyurova in connection with the announced competition define her as a scientist and researcher with well-defined scientific goals in the professional field and the scientific specialty of the competition procedure. The requirement for indicator A for possession of PhD degree gives her 50 points. According to indicator B (3) the candidate presents a monographic work: Blagovesta Midyurova, Ion-exchange conditioning of natural waters - scientific monograph, University "Prof. Dr. Asen Zlatarov", 2019, ISBN 978-954-471-572-4, which brings her 100 points. The sum of points on the indicators of group G is 261,

assessing the effect of polluted air on ecosystems. An original method for calculating the Trophic Index (TRIX) based on measured physicochemical and biological parameters in surface aquatic ecosystems has been applied, which will be used to prevent them from potential future pollution.

- Application of neural networks and fuzzy sets in bioelectrochemical systems. Mathematical modeling and computer simulations.

The results of this area are described in 3 articles, published in journals in the international database Scopus. The behavior of a microbiological fuel cell based on artificial neural networks has been predicted. Statistical analysis was performed by modeling data on carbon emissions from the inlet and outlet of the primary precipitator from the Wastewater Treatment Plant - Lukoil, Burgas. An important element of the conducted systematic research is the possibility to apply the model to another type of polymer and catalyst.

3. Opinions, notes and recommendations

Dr. Blagovesta Midyurova has participated in the Organizing Committees of the I, II, III, III, IV and Vth Conference for Pupils and Students "Think Ecologically for the Future". She is also membership in numerous committees and tutor of students. Dr. Blagovesta Midyurova has a certificate of specialized training, which prove her profile as a hard-working, ambitious and capable young man, with impressive erudition, practical experience and scientific indicators.

An indisputable attestation for her excellent work are the four positive reviews she has presented four positive recommendations from leading scientists in the professional field of the competition presented. The presented documents are precisely arranged and structured, and fully meet the requirements set in the Rules of "Prof. Dr. Assen Zlatarov" University – Burgas. I have no critical comments on the publications submitted for participation in the competition. I have excellent personal impressions of the candidate as a scientist and university lecturer.

4. Conclusion

According to Art. 26(3) of the DASRBA, on the grounds of the documentation presented by the candidate, on her publications reviewed and the above assessment, I recommend to the Scientific Jury to support the election of Dr. Blagovesta Mydurova at the Academic position of an Associate Professor in the professional field 4.2. Chemical Sciences "Ecology and Environmental Protection (Ion exchange and bioelectrochemical methods for water purification)" at the "Prof. Dr. Assen Zlatarov" University - Burgas.

Date: 18/02/2022

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Member of the Academic Jury