



REVIEW

by

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Regarding

the application for the academic position of Associate Professor, announced in the State Gazette, issue 87/19.10.2021, Area of Higher Education 4. Natural Sciences, Mathematics and Informatics, Professional Field 4.2 Chemical Sciences, scientific specialty: Ecology and Environmental Protection (Ion exchange and bioelectrochemical methods for water purification), for the needs of the Department of Ecology and Environmental Protection, Faculty of Natural Sciences, "Asen Zlatarov" University of Burgas.

By order № ПД-322 from 22. 11. 2021 signed by the Rector of Asen Zlatarov University of Burgas I'm appointed as a member of the scientific jury. At its first meeting on 22th December 2021 I was chosen to write a review, which is in accordance with The Regulation on the Terms and Procedure for Acquisition of Academic Degrees and the Occupation of Academic Jobs at University of Burgas.

Sen. Lect. Blagovesta Midyurova, PhD is the sole applicant for the academic position of Associate Professor announced in the State Gazette, issue 87/19.10.2021. I have received electronically and as hard copy all materials for the competition.

Brief Biographical Data

Blagovesta Midyurova, PhD was awarded a Master Degree in 2001 in Chemical Engineering (Materials Technology) at Asen Zlatarov University of Burgas. In the period from 2007 till 2015 she is a technician at the Department of Ecology and Environmental Protection, Faculty of Natural Sciences, Asen Zlatarov University of Burgas. In 2016 she was awarded with a Doctoral Degree in Technology of water purification at University of Burgas. PhD dissertation of Blagovesta Midyurova was on Application of proton exchange membranes in fuel cells. Since 2016 she is part of the academic staff of the Department of Ecology and Environmental Protection at the Faculty of Natural Sciences, Prof. Assen Zlatarov University

of Burgas, first as Assistant (2016-2017), and since 2017 Dr. Blagovesta Midyurova is a Chief Assistant at the Department Ecology and Environmental Protection.

Teaching Activities

The submitted reference shows that the teaching activities of Chief Assistant Blagovesta Midyurova significantly exceed the teaching workload at Prof. Assen Zlatarov University of Burgas per academic year. The total teaching experience of Dr. Midyurova exceeds 5 years. For example, last year (2020-2021 r.) her teaching workload was of 780 hours: 450 hours to Bachelor Degree Students, and 330 hours to Master Degree Students. Sen. Lect. Blagovesta Midyurova, PhD delivers lectures and seminars to Bachelor Degree Students in: Climatology and Hydrology, Fluids Purification, Water Pollution. She delivers lectures and seminars for Master Degree Students in Marine Ecology, Water Pollution, Management of Waters, Environmental Management and others. All mentioned teaching courses for Bachelor and Master Degree Students are for 2 specialties: Ecology and Environment, and Ecology and Ecological Management at the Department of Ecology and Environmental Protection, Faculty of Natural Sciences, Asen Zlatarov University of Burgas. According to the application documents Dr. Midyurova developed 6 new teaching programs for Bachelor Degree Students, and 5 new teaching programs for Master degree students. She also developed a course for international students in „ ERASMUS +“-program. In the period from 2019 till 2021 Dr. Midyurova has been and advisor of 4 graduate students in the specialty Ecology and Environmental Protection

Scientific Activities

The scientific interests of Sen. Lect. Dr. Midyurova are in the field of Ecology and Environmental Protection: Ion exchange and bioelectrochemical methods for water purification. It should be noted that all application documents, incl. all scientific works of candidate strictly correspond to the academic position of Associate Professor at Burgas University and announced in the State Gazette, issue 87/19.10.2021.

At the present time water pollution and its effect on the ecosystems is one of the most actual scientific activity of our time. The presented scientific publications are multidisciplinary. These works are in three of priority areas of "National Bulgarian strategy of research till 2030", as well as in accordance with "Strategy of development of scientific work at Asen Zlatarov University Burgas, 2017-2025". These priority areas are:

- Environment (waters, soils, air) and biodiversity;

- Energy efficiency and alternative energy sources
- Mathematic modeling and computer simulations

All scientific documents of Dr. Midyurova are focusing in these three priority areas. The scientific contributions of candidate can be separated in four basic directions:

- Ion exchange methods for purification of natural waters
- Application of bioelectrochemical systems for purification of waste waters
- Methods for evaluation of pollution of surface waters, and
- Application of neural networks in bioelectrochemical systems. Mathematical models and computer simulations

The application folder of candidate includes (Annex 1):

- 1 single author monograph – Group indicator *B*;
- 17 Publications (5 single author) in scientific journals indexed in Scopus and /or Web of Science;
- 2 single author publications in Conference Proceedings with SJR;
- List of 54 citations scientific journals indexed in Scopus and /or Web of Science is presented (Group indicator *A*)
- 5 participations as a researcher in national scientific or education projects, which are in the area of competition
- 3 participations in a research team in international scientific or education projects, which are in the area of competition

Dr. Midyurova also participate in several international collaborative research teams and her application in this competition is supported by four international scientific organizations: *American University of Sharjah, Tekirdag Namik Kemal University, Cyprus Science University и University of Kragujevac*. The candidate also has been a member of organization committee of one international and one national scientific conferences.

Meeting the Minimum National Requirement

The set of materials submitted by Dr. Midyurova is in compliance with The Regulation on the Terms and Procedure for Acquisition of Academic Degrees and the Habilitation Procedure at "Asen Zlatarov" University of Burgas and includes all administrative and scientific documents required.

Group A Indicators presents the applicant's PhD dissertation on "Application of proton exchange membranes in fuel cells", № 0041 / 30.05.2016. (**50 points**)

In **Group B** a monograph is presented: Blagovesta Midyurova, Ion exchange conditioning of natural waters, "Asen Zlatarov" University of Burgas, LIBRA SKORP, (2019), ISBN 978-954-471-572-4. (**100 points**)

In **Group Г** Sen. Lect. Blagovesta Midyurova, PhD submits for the completion a total list of 19 publications (Web of Science и Scopus, SJR). It should be noted that seven of these publications are single author publications.

According to the regulations procedures in professional field 4.2 Chemical sciences involve quartiles Q1, Q2, Q3 and Q4 according to the metrics SJR. In this regard Dr. Blagovesta Midyurova, submitted 13 publications Q3 (195 т); 3 publ. Q4 (36 т.) and 3 publ. in Conference Proceedings with SJR (30 т) – (total **261 p**) т.

Group Д consists of 54 citations presented (in Web of Science and Scopus, such as *Journal of Power Sources*, Impact Factor - 9.127; *International Journal of Hydrogen Energy*, Impact Factor - 5.816; *Bioelectrochemistry*, Impact Factor - 5.373, *RSC Advances*, Impact Factor - 3.390; *Journal of Power Sources*, Impact Factor - 9.127, *International Journal of Hydrogen Energy*, Impact Factor - 5.816; *Bioelectrochemistry*, Impact Factor - 5.373; *RSC Advances*, Impact Factor - 3.390)- **108 points**.

It should be noted that for Indicator Д Minimal Requirements of "Asen Zlatarov" University - Burgas (100p.) are two times higher than Minimal National Requirements (50p.)

For **Group Indicators E** Sen. Lect. Blagovesta Midyurova, PhD presents a list with 5 participations as a researcher in national scientific or education projects, which are in the area of competition, and 3 participations in a research team in international scientific or education projects, which are in the area of competition (**110 points**)

Total Number of Points = 629 (see the Table below).

According to the analysis of the results the minimum number of points in each group of indicators required for the academic position of "Associate Professor" in the professional field 4.2 Chemical Sciences, according to the Minimal National Requirements, and Regulations for the development of the academic staff of "Asen Zlatarov" University of Burgas are met.

Group Indicators	Minimal National Requirements	Minimal Requirements according to the Regulations of "Asen Zlatarov" University of Burgas	Total points achieved by candidate Bl. Midyurova, PhD
A	50	50	50
B	0	0	0
B	100	100	100
Г	200	200	261
Д	50	100	108
E	0	100	110
Total Number of Points	400	550	629

CONSLUSION

Once I have read the materials and scientific publications submitted and have made an analysis of their significance and the scientific contributions contained in them, I think that the sole candidate: Sen. Lect. Blagovesta Midyurova, Ph.D. has accomplished all the minimal national requirements set in the Development of Academic Staff in the Republic of Bulgaria Act, The Regulation on the Terms and Procedure for Acquisition of Academic Degrees and the Occupation of Academic Jobs at "Asen Zlatarov" University of Burgas, and all other relative normative documents. I find it worthwhile **to give my positive assessment** and to recommend to the Scientific Jury to make a report to the Faculty Council of the Faculty of Natural Sciences to ask them to grant the academic rank **Associate Professor to Sen. Lect. Sen. Lect. Blagovesta Midyurova, Ph.D.** at "Asen Zlatarov" University of Burgas in the Area of Higher Education 4. Natural Sciences, Mathematics and Informatics, Professional Field 4.2 Chemical Sciences (Ecology and Environmental Protection).

17.02.2022

Scientific Jury Member:

(Prof. Christomir Christov, DSci)