



OPINION/REVIEW

On the materials for participation in the competition for occupying the academic position "Associate Professor", field of higher education 4. Natural sciences, mathematics and informatics, NS 4.4 Earth sciences, academic speciality "Ecology and Ecosystems Protection" for the discipline "Technologies for remediation of disturbed soils and areas", announced by University of Forestry in State Gazette, issue 101/27.12.2019, code of procedure ELA- AsP- 1119-29.

The candidates for participation in the competition are:

1. Petar Gospodinov Petrov

Opinion prepared by: Professor Violina Angelova Rizova, PhD, Professor of Natural sciences 4.4 Earth sciences from University of Agriculture- Plovdiv

1. Brief biographical information about the candidate

Chief assistant Petar Petrov, PhD was born in 1977 in the town of Stara Zagora. He acquired the academic degree "Bachelor", speciality "Ecology and environment protection" in the University of Forestry- Sofia and in 2004 the academic degree "Master" in the speciality "Ecological monitoring and eco-management" in the same university. He acquired the academic and science degree (ASD) doctor in 2009 in the University of Chemical Technology and Metallurgy, city of Sofia in the speciality "Technology of use and treating waste" The topic of his dissertation is "Characterising of waste from „Svilozha" Thermoelectric Power Station and their ecological storage and use". From May 2005 to August 2007, he worked as assistant with Science and research sector (SRS) of University of Forestry- Sofia. Since 2005 until the present moment he has been chief assistant in the disciplines: Recultivation of disturbed areas" and "Recultivation of technogenic disturbed areas" with the department of Ecology, protection and restoration of environment" EPRS with the University of Forestry- Sofia.

The professional development of the candidate is related with increase of qualification, participation in courses and trainings in English language, in work with specific software and with analysers of particulates, ozone and nitrogen oxide.

It is also important to note that his development as a scientist and professional is influenced by the experience gained as a manager of the company "P- United" EOOD since 2009 till the present moment.

He knows English and Russian.

2. **Relevance of the submitted documents and materials of the candidate/s with the required ones according to the rules of Academic staff development in the University of Forestry;**

The documents presented by chief assistant Petar Petrov, PhD fully correspond in type and content to the regulatory requirements of the Academic Staff Development Act of the

Republic of Bulgaria and to the Rules on its application, as well as to the specific requirements for occupying academic positions pursuant to the Rules of academic staff development in the University of Forestry. The verification- self evaluation for fulfilment of the minimum national requirements pursuant to Article 2a and Article 60, paragraph 4, section 8 of the Rules of academic staff development in the University of Forestry contains correctly filled information of the scientific and the scientific- applied work of the candidate which exceeds the compulsory for the academic position indexes (group of indicators "A" - 50 points, group of indicators "B" - 100 points, group of indicators "D" - 294.62 points, group of indicators "D" - 87 points). The candidate participates in the competition with 531.62 points.

3. Evaluation of the scientific and teaching work of the candidate

Petar Petrov, PhD has been a chief assistant in the department of "Ecology, protection and remediation of environment" with the faculty of "Ecology and landscape architecture" of the University of Forestry since 2005. He is a titular of 6 disciplines – 1 in academic degree "Bachelor" – "Technologies for recovery of disturbed soils and areas" and 5 in the academic degree "Master" – "Biological monitoring", "Recultivation of disturbed areas", "Soil resources and urban systems", "Ecosystem services" (elective) and "Recultivation of disturbed areas" (elective). Chief assistant Petar Petrov, PhD is a supervisor of 2 diploma theses and reviewer of 7 diploma theses. He is a supervisor of 1 PhD candidate. He participates in the competition with 2 books, issued in joint authorship- "Methods of treating and use of solid domestic waste" and "Technologies for disposition in harmless way of resistant organic pollutants". Both books can be used in the educational process of students studying in the specialty "Ecology and Environmental Protection".

Dr. Petar Petrov has participated in the development and updating of 3 syllabuses "Technology for restoration of damaged soils and terrains", "Reclamation of disturbed terrains", and "Management of soil resources".

Besides his main teaching work, chief assistant Petar Petrov, PhD participated in commissions for preparation of materials for Post- Accreditation Monitoring and Control of professional field 4.4 Earth sciences and program accreditation of the professional field 4.4 Earth Sciences; for updating of the education programmes of the speciality Ecology and environment protection for the academic degrees "Bachelor" and "Master"; for the scientific work with the Faculty of Ecology and Landscape Architecture and in the organization committee for the open day realization of the speciality "Ecology and Environment Protection" in the University of Forestry in 2017.

The presented materials of chief assistant Petar Petrov, PhD, for teaching and pedagogical activity, gives reason to conclude that they are in accordance with the accepted scientometric requirements for occupying the academic position in the "Associate Professor" at the University of Forestry- Sofia.

4. Evaluation of the scientific, the scientific applied and publication work of the candidate/s

4.1. Participation in scientific, scientific applied and education projects

Chief assistant Petar Petrov, PhD has participated in 13 scientific and scientific applied competitions, carried out with the University of Forestry and the Science and Research Sector of the University of Forestry and namely: in 2 international scientific

and scientific-applied projects (he is in charge of one of them), 10 national scientific and scientific- applied project, of which he is in charge of 5 and 1 scientific project financed under the Science research fund with the Science and research sector of University of Forestry.

The candidate participated in the realization of 81 scientific, scientific applied projects and consultation projects in the field of the competition, developed in other organizations in that number: 3 international scientific and scientific-applied projects, of which he is in charge of 1, 38 national scientific and scientific-applied projects of which he is in charge of 8 and 40 consultation and applied projects of which he is in charge of 26. This is proof that chief assistant Petar Petrov, PhD is a specialist with developed research and creative qualities which he successfully applies both in science and in practice.

4.2. Characteristic of the published scientific results

For the purpose of the present competition for occupying the academic position of Associate professor, Chief assistant Petar Petrov, PhD has presented a list of 25 published research works (not including the ones for his PhD dissertation, which are presented in the List of publications , inventions and scientific- applied results), from which:

- 1 reviewed monograph (V3);
- 1 published book on the grounds of the defended dissertation thesis for acquisition of the academic and scientific degree "Doctor of Philosophy" (G6)
- 14 articles, published in scientific editions, referenced and indexed in world known databases.(G7);
- 7 articles and reports, published in non-referred scientific editions with scientific review (G8);
- 2 books in joint authorship;

The presented scientific production exceeds in qualitative and quantitative aspect the minimum national requirements under the Academic Staff Development Act, the rules on its implementig and the Rules on the development of the academic staff of the University of Forestry.

From the scientific publications, two are independent [7.10, 7.13], 19 are in joint authorship in 4 of them the candidate is in the first place from the group of authors, in 9 of them he is in the second place and in 6 of them he is in third and succeeding places. 14 of the publications are published in English language [7.2 - 7.14, 8.2], 5 in Bulgarian language [7.1, 8.2 - 8.7] and 1 in Russian language [8.1]. Chief assistant Petar Petrov, PhD has participated in 12 scientific forums in Bulgaria, Slovakia, Greece, the Czech Republic. His paper "Assessment of ecosystem restoration in reclaimed terrains damaged by copper mining" presented at Enviroinvent 2009, Romania was distinguished with silver medal.

His monography work is with topic: "Approaches to recultivation of East spoil bank" mine "Elatsite", ISBN 978-619-239-295-6, issued by publishing house "Avangard Prima" and corresponds to the requirements for monograph.

4.3. Impact from the scientific work of the candidate in literature (Quoted publications)

The appraisal of the acknowledgement of the candidate in the scientific environment are the quotations, denoted in the competition documents. According to the reference presented by the candidate 12 quotations in scientific editions are noticed, referenced and indexed in world known

databases with scientific information (D10), 3 quotations in monographs and group volumes with scientific review (D11) and 9 quotations in non-referenced editions with scientific review (D12).

This information gives me the reason to conclude that the candidate is a recognized author in the scientific environment, having published in significant scientific magazines in the field of the competition. Pursuant to the minimum national requirements for occupying the position of Associate Professor in the University of Forestry, the presented information is completely sufficient and prove good level of impact of the scientific production of chief assistant Petar Petrov, PhD over the research work of Bulgarian and foreign authors.

4.4. Contribution in the research work of the candidate (scientific, scientific- applied, applied)

I accept the presented by the candidate authors' reference with the scientific and scientific-applied contributions. The main scientific and scientific- applied contributions in the research works with the participation of Chief Assistant Petar Petrov, PhD are in two main directions as follows:

- (1) Research of disturbed soils and damaged areas and development of technologies for soils remediation and
- (2) Assessment of the remediation processes of eco-systems, research of the biological diversity and measurements development for their management and remediation.

The more important scientific and applied scientific contributions to the scientific works are related to the development of a scientifically based approach and methodology for the reclamation of mining sites disturbed; ecological conditions of greatest importance for biological reclamation (microclimatic features of the area, technical preparation of the terrain, ameliorative measures for reducing acidity, mineral fertilization, selection of plant species in accordance with the natural ones for the area); cost effective and environmentally friendly norm the introduction of a by-product of gasification of biomass in the remediation of acidified and organic-poor sites; a methodology including 3 stages of assessment of potentially contaminated territories has been developed, on the basis of which a guide has been developed for the registration and reporting of contaminated soil, an assessment of the ecosystems self-restoration at landfills for ash and landfill; characterization of biological and ecosystem diversity in protected areas; and characteristics of ornithofauna in commercial areas.

5. Evaluation of the personal contribution of the candidate

I consider the contributions of the candidate as his personal work and that they are sufficient and completely corresponding the topic of the competition. They show the candidate's systematic approach and persistency to solve problems related with the recultivation of disturbed soils and damaged areas and with assessment of the remediation processes of eco-systems. The achieved scientific results are of high scientific and scientific- applied value.

I believe that the qualitative and quantitative indicators and criteria for occupation the academic position of "Associate Professor" are met in accordance with the minimum national requirements for the relevant field of higher education and the requirements set in the Rules on development of academic staff in the University of Forestry.

6. Critical notes and recommendations

There are no critical notes regarding the candidate's work.

I recommend that Petar Petrov, PhD increases his publication activity in recognized foreign scientific magazines so that his research works find wider acknowledgement.

7. Personal impressions

I have no personal impressions from the candidate's work and my evaluation is based entirely on the presented materials.

8. Conclusion

On the basis of the conducted analysis of the scientific, scientific- applied and pedagogical work, I SUGGEST the candidate CHIEF ASSISTANT PETAR GOSPODINOV PETROV, PH.D. to occupy the academic position "Associate Professor" in the discipline " Technologies for remediation of disturbed soils and areas" in NS 4.4 Earth sciences

Opinion, prepared by:

/Prof. V. Rizova, PhD/

The opinion is submitted on: 13.4.2020 r.