

ATTITUDE OF REVIEWER

on a competition for occupation of the academic position “Associate Professor” in the professional field 4.2. Chemical Science (Inorganic Chemistry) for the needs of Department of Inorganic Chemistry, Faculty of Chemistry and Pharmacy, Sofia University, announced in State Gazette, issue 21/13.03.2020

by Assoc. Prof. Boriana Venelinova Donkova, PhD,
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In the announced competition for Associate Professor in the professional field 4.2. Chemical Sciences (Inorganic Chemistry) the only candidate is Assistant Professor Martin Petrov Tsvetkov, PhD, member of Laboratory „Chemistry of rare and rare-earth elements” at Department of Inorganic Chemistry, Faculty of Chemistry and Pharmacy (FCP). The documents submitted by the applicant are in accordance with the Rules for the implementation of the Law on the Development of the Academic Staff in the Republic of Bulgaria and the specific requirements for occupation of academic positions at Faculty of Chemistry and Pharmacy, Sofia University.

The candidate's educational and scientific profile is fully in line with the objectives of the competition and scientific fields, developed and maintained in the Department of Inorganic Chemistry. Martin Tsvetkov graduated from Faculty of Chemistry and Pharmacy in 2011 as a Master in Nuclear Chemistry. In 2012 he started as a full-time PhD student at Department of Inorganic Chemistry, FCP-SU, and in 2016 he defended his PhD thesis on the topic „Mixed oxides of the type MFe_2O_4 ($M=Zn(II)$, $Ni(II)$, $Co(II)$) - synthesis, characterization, catalytic properties". In the period from 2011 to 2017 he worked as a chemist at Institute of Physical Chemistry, BAS in the Laboratory of X-ray Diffraction Methods and Computed Tomography. Since 2017 he has been assigned as an assistant professor at Department of Inorganic Chemistry, FCP-SU. The professional experience of Dr. Martin Tsvetkov is enriched by series of specific specializations (11.2016 - 10.2019) in one of the most reputed international research center - Joint Institute for Nuclear Research (JINR) at Dubna, Russia: two times as a Research Fellow in Laboratory of Nuclear Problems (for total period of 7 months), two times as guest researcher in Laboratory of Neutron

Physics of the same Institute (for total of 2 months). Furthermore, in the same period the candidate was guest-researcher in the National Institute of Chemistry, Ljubljana, Slovenia (for a month).

According to the materials presented, Dr. Tsvetkov is an author and co-author of 23 scientific publications. Based on the provided report from the „Authors” system the results were presented at 17 scientific forums. However, due to the insufficient bibliographic information it is not clear the type of the forums and the fact that the candidate delivered several oral presentations is neglected (required information, according to the recommended criteria for occupation of academic positions at Faculty of Chemistry and Pharmacy, Sofia University).

The latest scientometric reports (August 2020) from the SCOPUS and Web of Science databases show the corresponding publications from the provided by the applicant list. However, the difference in the reported articles in the two databases leads to discrepancies in the number of quotes and Hirsch index (h), respectively. Either way, the index of Hirsch is higher than the one reported by the candidate at the submission of the documents for the competition. Data is as follows: SCOPUS: 17 papers, 81 citations (excluding self-citation), respectively h=5; WoS: 18 papers, 85 citations, h=6.

To participate in the competition, Dr. Tsvetkov submitted 19 scientific papers. According to the journals' quartile they are categorized as follows: Q1 - 5, Q2 - 5, Q3 - 3, Q4 - 5; the last one is in the Proceedings of SPIE with SJR 0.22. In terms of authorship, 3 of the articles have two co-authors, 3 have three co-authors, and 13 have more than three co-authors. In 7 of the papers the applicant is the first author (should be noted that 2 of them are in *Catalysis Today* - $IF^{2019}=5,825$ and 1 in *Journal of Molecular structure* - $IF^{2019}=2.463$), and in other 2 papers naturally as first authors PhD students are appointed before the candidate.

The applicant has submitted “Author’s report on the contributions of the scientific papers” and “Habilitation work”. The last is based on 5 publications and titled “Advanced oxidation processes for removal of organic pollutants from waters”, which is too broad title considering, that the focus is on the photocatalytic activity of catalysts modified by gamma irradiation or by inclusion in nanocomposites (4 of the papers). Both the “Author’s report on the contributions of the scientific papers” and the “Habilitation work” are sorted by article. If the information was presented in a more systemized and summarized way it would put more light on the scientific contribution of the research papers and on the original scientific contribution of the applicant. This way, the acquired knowledge and experience of the candidate in the field of preparative chemistry,

phase and structural characterization (X-ray and neutron diffraction, UV-V is spectroscopy, photoluminescence) and photocatalysis would also be more visible.

Dr. Martin Tsvetkov develops an intensive project activity. For the period from 2016 to 2020 he declares participation or leadership in 7 research projects - 4 of which internal for the Sofia University and 3 with Bulgarian National Science Fund, Ministry of Education and Science. He is the leader of 3 projects from the first group and of 1 two-years long project from the second.

In the period from 2018 to 2019 Dr. Tsvetkov developed 4 lecturer courses (2 compulsory courses and 2 elective), 3 of which have actually been implemented during the academic 2019/2020 year. One of the courses is „General Chemistry” for programme „Teacher in natural science”, Faculty of Physics, Sofia University, and the remaining three are specializing courses to the Master’s degree programme „Inorganic and hybrid materials for modern technologies”, Faculty of Chemistry and Pharmacy. Furthermore, I would like to specifically point out the active out of the class room work with students performed by Dr. Martin Tsvetkov. He is the leader of 4 experimental course works and his enthusiasm towards his work attracts students who actively participate in the research and the project activities of the Laboratory of Chemistry of Rare and Rare-earth Elements.

In conclusion, the candidate’s achievements exceed the minimal national requirements for scientific and teaching activity in the field of higher education 4.2. Chemical sciences and meet the requirements for occupation of the academic positions "Associate Professor" at the Faculty. That is why, I give my positive evaluation and I recommend Ass. Prof. Dr. Martin Petrov Tsvetkov to be appointed as "Associate Professor" in the Department of Inorganic Chemistry at the Faculty of Chemistry and Pharmacy, Sofia University “St. Kliment Ohridski”.

21.08.2020

Signature:

/ Assoc. Prof. Borjana Donkova/