

ATTITUDE OF REVIEWER

With respect to the competition, published in „Newspaper of State”, issue 36/03.05.2019 for occupying the academic position “Associate Professor” in professional field 4.2 “Chemical Sciences”, scientific research specialty “Chemical Kinetics and Catalysis” for the needs of the Institute of General and Inorganic Chemistry at the Bulgarian Academy of Sciences, Laboratory “Reactivity of Solid Surfaces”

Candidate: Assistant Professor Nikola Lyudmilov Drenchev

Member of the Scientific Jury: Prof. Yuri Kalvachev, Institute of Catalysis, Bulgarian Academy of Sciences

The only candidate in the competition is Assist. Prof. PhD Nikola Lyudmilov Drenchev, who works in the Laboratory „Reactivity of solid surfaces“ in the Institute of general and Inorganic Chemistry, BAS.

Nikola Drenchev graduated from the Faculty of Chemistry at Sofia University “St. Kliment Ohridski ”(present Faculty of Chemistry and Pharmacy) in 2004 as a Master of Chemistry. The following year he enrolled as a PhD student in the same Faculty after winning a competition and successfully defended educational and scientific PhD degree in November 2008. The topic of the PhD thesis was "Synthesis and hydrogen-sorption properties of alloys based on Mg₂Ni" under the supervision of Prof. DSc Tony Spasov. In the meantime, he joined the Institute of General and Inorganic Chemistry - BAS as a chemist in the group of Corr. Member Prof. Konstantin Hadjiivanov and grew as a researcher under his supervision. Since 2009, he has been selected as an assistant professor at the “Reactivity of Solid Surfaces” Laboratory at the same institute. He specialized for 18 months at University of Pardubice - Czech Republic in years 2012/2013.

The scientific interests of Assist. Prof. Dr. Nikola Drenchev are mainly in the field of material science - characterization of zeolites, metal-organic frameworks, metal oxides and other materials, mainly by IR spectroscopy and investigation of sorption and catalytic processes on them, using innovative experimental techniques.

The candidate Nikola Drenchev submitted 18 publications in the present competition, 5 of them included in the indicative index „Habilitation thesis“ (4 articles in Q1 journals and one article in Q2 journal). The other 13 articles are in journals such as J. Phys. Chem. C; RSC Advances; Phys. Chem. Chem. Phys. ; Chemical Communications - all of which are in the group of the first quartile - Q1, which shows a high scientific level. These works have found a wide presentation in the scientific literature - they have 166 citations in reputable international publications mainly by foreign authors. Seven of the works, which he submitted in this

competition have been cited more than seven times, which shows, once again, the high quality of the works and the relevance of the completed tasks. The papers submitted are original and relevant to the subject of the announced competition.

Information provided on the research work of Assist. Prof. Dr. Nikola Drenchev is complete and fully represents the applicant's contributions.

According to the Rules for the Implementation of the Law for the Development of the Academic Staff in the Republic of Bulgaria, they are divided into two groups of indicators - group "B" - habilitation work (indicator 4) and group „Г“ - Scientific publications, which are not included in the habilitation work (indicator 7). The contributions are in several areas, namely:

IR spectroscopic characterization of the oxidation state and coordination state of metal cations in zeolites, metal-organic frameworks and oxide systems; Determination of the nature of the adsorption centers and the geometry of the complexes formed; IR spectroscopic determination of surface acidity of OH groups; Use of isotope exchange and isotope-labeled molecules for the study of surface hydroxyl groups and compounds;

A list of participation in 26 international and national conferences and congresses in the field of catalysis, synthesis and application of zeolites, environmental protection and nanomaterials is presented. Assist. Prof. Dr. Nikola Drenchev has participated in 11 research projects - 9 with national and 2 with international funding.

I know the candidate personally and my impressions of him as a scientist and specialist are very good.

Evidences have been presented to cover the conditions of Art. 24, Para. 1, items 1 and 2 - diploma for educational and scientific PhD degree and a certificate from the Institute for occupation of the position of "assistant professor" for more than 2 years. The careful examination of the scientific publications submitted for participation of present competition convinced me that item 5 of the same legal norm (Art. 24, Para. 1) was fulfilled - lack of plagiarism in the applicant's scientific works.

I am convinced that Assistant Professor Nikola Lyudmilov Drenchev covers and exceeds the requirements of Art. 24, para 1, items 3 and 4 of the Law for the Development of the Academic Staff in the Republic of Bulgaria and Art. 27, para 2 of the "Regulations for acquisition of scientific degrees and for occupation of academic positions in IGIC - BAS". Based on the above, I propose Assistant Professor Nikola Lyudmilov Drenchev to be elected as Associate Professor at the Institute of General and Inorganic Chemistry, BAS.

August 27th, 2019

Sofia

Prof. Yuri Kalvachev