

STATEMENT

within the call for Professor in the Field

**4.2. Chemical Sciences (Theoretical Chemistry - Computational Chemistry)
to the Faculty of Chemistry and Pharmacy of SU "St. Kliment Ohridski"
announced in the Bulgarian State Gazette vol. 21 from 15.03.2022**

by Prof. DSc Roumen Tsvetanov Tsekov, Department of Physical Chemistry

Dr. Galia Kostova Madjarova is the only candidate applied within the call for Professor in the Field 4.2. Chemical Sciences (Theoretical Chemistry - Computational Chemistry), who is currently an Associate Professor at the Department of Physical Chemistry of the Faculty of Chemistry and Pharmacy (FCP) of the Sofia University "St. Kliment Ohridski" (SU). Galia Madjarova graduated as a Master of Chemistry (Chemical Physics and Theoretical Chemistry) at the SU Faculty of Chemistry in 1995. Afterward she obtained the qualification as a Teacher of Chemistry and Chemical Technology in 1997. During the period 1996-1999 she was a doctoral student in Theoretical Chemistry at the Department of Physical Chemistry, and successfully defended her PhD thesis entitled "Structure of 1D Polymers with Magnetic Properties". In 2001 Dr. Madjarova was elected as an Assistant Professor of Theoretical Chemistry at the Department of Physical Chemistry, where she continuously advanced to Senior and Main Assistant Professor before achieving her present position as an Associate Professor in 2013. She specialized at the University of Leipzig (1998), the Institute of Fundamental Chemistry in Kyoto (2000), the Institute for Surface Chemistry in Mulhouse (2004), the University of Hull (2005) and the Max Planck Institute for Microstructural Physics in Halle (2014).

Teaching activity. During the last twenty years Dr. Madjarova was actively involved in teaching the lecture courses Structure of Matter, Quantum Chemistry and Spectroscopy, Theoretical Chemistry, Molecular Design, Applied Computational Chemistry, Quantum Chemistry and Molecular Mechanics, and Molecular Modeling of Functional Materials, where the last course was offered by her. Galia Madjarova was a research supervisor in 2 BSc and 2 MSc diploma theses and co-supervisor of 1 doctoral student, scientific consultant of 6 MSc theses and 1 doctoral dissertation, reviewer of 5 master theses, as well as active leader of a computer cluster in the Laboratory of Quantum and Computational Chemistry. She is a member of the Faculty Council of

the Faculty of Chemistry and Pharmacy and of the study councils of the Chemistry and Informatics and Pharmacy majors, being the chairperson of the latter. She is also a member of the University Educational Committee and the head of the specialization on Physical Chemistry and Molecular Modeling for chemists. Since 2019, Associate Professor Madjarova has been elected as the Deputy Dean of FCP for Academic Affairs of the specialty Pharmacy and SDK.

Scientific activity. The total number of Galia Madjarova's publications is 41, 20% of which were published in Bulgarian journals. In the current competition, she participated with 11 scientific works, which were published after being elected as an Associate Professor and they were not included in her doctoral dissertation. All journals are indexed in Scopus and have an average impact factor of 3.43, with nine of them in quartile Q1 and the remaining two in quartiles Q2 and Q4. Currently, 86 citations have been noticed for these articles, and for all publications the citations are 331 in total. The scientific contributions of the selected 11 publications, participating in the present competition, are in the fields of supramolecular structural organization, spontaneous aggregation on series of salts on bilious acids in water solution, mechanism of bounding of systems for active delivery on drugs and application on time-dependent theory on the density functional (TDDFT) for calculation the spectra of molecular crystals and 1D polymers. These and other results of hers have been presented at 69 international and national forums as reports and posters. Galia Madjarova participated in 32 national and international research projects, being the head of 10 of them.

The proposed habilitation thesis "Design on New Hard Magnetic Materials without Use of Rare Earths Elements" is a deep independent scientific study with a review character, which reveals the candidate 's high scientific potential not only in the field of magnetic properties of materials, but also in terms of the most modern methods for complex analysis of big data, such as Machine Learning. It was published as a monograph in the University Publishing House "St. Kliment Ohridski" and thus represents the 12th publication participating in the present competition.

Conclusion. Based on the above statement I strongly recommend the Honorable Jury to elect Assoc. Prof. Dr. Galia Kostova Madjarova as a Professor in the Field 4.2. Chemical Sciences (Theoretical Chemistry - Computational Chemistry), as she meets all the requirements of the Law for the occupation of this position:

1. She holds the scientific and educational degree Doctor.
2. She held the academic position of an Associate Professor for more than two years.
3. She has presented sufficient publications in specialized scientific journals as well as a habilitation thesis.
4. She has extensive teaching experience for holding the position of Professor.
5. She managed scientific projects.
6. She has presented results at national and international scientific forums.
7. She has fulfilled the minimum national requirements of NACID, as well as all additional criteria adopted by FCP.
8. In the presented documents for the call, it is not discovered plagiarism, according to Art. 29, para. 1, item 6 of ZRASRB.

Sofia, July 5, 2022,

Signature: