

OPINION

on a competition for appointment on academic position "Professor" in the professional field
4.2. Chemical Sciences, Scientific specialty "Inorganic Chemistry", according to the
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Applicant: Dr. RENI STOILOVA IORDANOVA, Associated Professor in Institute of
General and Inorganic Chemistry (IGIC) – BAS

1. General characteristics of the presented materials

Dr. Reni Iordanova participates in the competition with a total of 37 scientific papers, all of them are indexed and referenced in the worldwide recognized databases of Web of Science and / or Scopus. Almost all of the scientific papers (34) have been published in Impact Factor (IF) journals and only 3 in Impact-ranked journals (SJR).

It's worth noting that most of the papers have been published in prestigious journals, such as *Journal of Non-Crystalline Solids*, *Optical Materials*, *Journal of Alloys and Compounds*, etc., which shows the high scientific quality and relevance of the research. Considering this, it is not surprising that Dr. Iordanova's papers have been cited over 1000 times, which proves the interest of the scientific community in the field in which she works. The Scopus database record (checked on 16th August 2019) shows 1023 citations and *H*-index of 15. For her entire scientific career, Dr. Reni Iordanova has participated in 65 scientific events, 46 of them are after her habilitation. There is no data on the type of reports - posters, orals, invited, etc.

In conclusion, it should be noted that Dr. Reni Iordanova not only meets the minimum national requirements, BAS requirements and the additional requirements of IGIC-BAS for occupying the academic position of "professor", but exceeds them.

2. General characteristics of the applicant's scientific, applied research and teaching activities

I qualify the scientific activity of Dr. Iordanova in the professional field of "Chemical Sciences" which fully corresponds to the announced topic of the competition. The obtained scientific results and contributions are mainly in the field of synthesis and structural characterization of two-, three- and multi-components tungsten, molybdate and selenite glasses,

development of structural models for describing the obtained amorphous networks and finding the mutual relationship between composition, structure and properties.

Dr. Iordanova was a project coordinator of 3 research projects funded by the NSF and a participant in the working teams of 6 others. In addition to the active scientific and applied research activity, Dr. Iordanova has been also effectively involved in the training of students. She was a supervisor of 2 PhD students, one already defended his thesis successfully, and a scientific advisor to 3 PhD students, all they have been already awarded a PhD degree. Dr. Iordanova was also the co-supervisor of the master's thesis of three foreign master students. She has supervised student practice at IGIC-BAS for students from the University of Chemical Technology and Metallurgy (UCTM) - Sofia under a project funded by OP "Human Resources Development", as well as she has conducted laboratory exercises in the disciplines "Advanced Glass Materials" and "Materials Science" at the UCTM - Sofia.

3. Basic scientific and / or applied scientific contributions, with an assessment of the extent to which they are a candidate's personal work

I characterize the scientific contributions as: *enriching existing knowledge and theories, development of new models and obtaining new results with the potential for further practical applications*. I will not discuss the applicant's achievements in details because they are very well described in the applicant's contributory references, which I fully accept. I will mention only some of them that I consider as the most important: the development of structural models describing the synthesized molybdate and tungstate amorphous networks; determination of the glass formation regions in 12 molybdate systems composed of MoO₃ glasses containing oxides of transition, heavy and rare-earth elements; the production of a new type of boromolybdate and borotungstate amorphous networks, with the participation of classical and non-classical glass formers; application of different synthesis approaches, such as sol-gel and mechanochemical activation, in order to obtain glasses with improved catalytic and optical properties.

Regarding the applicant's personal contribution, I have met Dr. Iordanova several times in relation to some administrative cases, but I have never collaborated scientifically with her. The detailed study of the materials submitted in the competition, the positive attitude of her colleagues and the fact that she is the first or corresponding author in 30% of the papers, give me the confidence that her personal contribution to the results obtained is significant.

I have no critical remarks.

4. Conclusion

After thorough study of the applicant's materials submitted in the competition, I can confidently conclude that Assoc. Prof. Dr. Reni Stoilova Iordanova is a well-established scientist in the field of inorganic chemistry. The results achieved are original and contribute positively in the field of synthesis, characterization and application of glass, glass/crystalline and polycrystalline materials. In addition, Dr. Reni Iordanova not only meets the minimum national requirements, the requirements of BAS and the additional criteria of the Institute of General and Inorganic Chemistry to occupy the academic position of "professor", but exceeds them. The successful supervision of research projects and training projects for undergraduate and doctoral students are evidences for excellent organizational and teaching skills of the applicant.

This gives me a confidence to support Dr. Iordanova's application and recommend to the respected members of the Scientific Council of The Institute of General and Inorganic Chemistry (IGIC) – BAS to award the academic position "Professor" in the professional field 4.2. "Chemical Sciences", specialty "Inorganic Chemistry" to Assoc. Prof. Dr. Reni Stoilova Iordanova.

Prof. Dr. Tsvetanka Babeva

19th August 2019