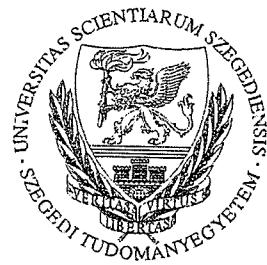


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Reviewer's opinion on the PhD Dissertation and Theses of **Ismael Bashdar** entitled
Iron and Manganese Complexes in Biomimetic Catalytic Oxidations

Firstly, let me state that on reading the dissertation and the theses booklet, it became clear that the *Applicant* worked on a scientifically important topic, performed sizeable amount of experimental work, and achieved meaningful results. These results have already been published in highly reputed scientific journals, thus, the publication requirements are met. Interesting though that in two papers, the *Applicant* is the third author only; nevertheless, in the two others, he is in the first place. It is also clear that the *Applicant* has acquired the competences required from a PhD holder. He knows how to plan experiments on a wide scale, to solve a complex project, and acquired the skills to be able to perform this plan. He became familiar with the techniques of retrieving and evaluating the preliminaries of a project, mastered a number of experimental techniques and learnt the ways of rationalising the experimental results.

Since I was the preliminary reviewer of the dissertation and the theses booklet, I am going to judge whether the *Applicant* has taken into account my remarks and suggestions during the revision of the dissertation and the theses booklet. In the versions for the preliminary defence he made fair attempts in summarising the details of the PhD project in the form of a dissertation and extracting the most important novel results in the form of a theses booklet, but there was much room for the improvements.

Let me start with the theses booklet, even though many of the problems I mentioned were valid for the dissertation as well. This document is more important than the dissertation. It is short, therefore, this will be read by many, therefore it has to be of good or even excellent quality. It contains the novel results: they have to be presented in succinct, but convincing way. The chemical structures have to be drawn in a nice way, the figures have to be of excellent qualities, and only the extremely important ones should be presented. Obviously, the English usage should also be appropriate. None of these requirements were met in the preliminary version.

Fortunately, the *Applicant* worked hard to improve the written works. The English usage was improved considerably. Most (but not all) of the typos, unnecessary capitalisations, misusage of words and phrases have been corrected both in the theses booklet and the dissertation.

The "Novel results" section (I suggested this title instead of the "Scientific results of the theses") was recomposed, now the thesis points are much better; they are strong and not too long scientific statements, emphasising novelty and written in bold

followed by short explanatory texts. The structural drawings are of much better quality than they were in the previous version. In my view, unnecessarily many graphs and tables were kept. Now, I can state that the thesis points can be accepted as novel scientific results.

Most (but not all) of the styling, drawing, English usage remarks were valid for the dissertation too, although the dissertation was significantly better composed than the theses booklet. Most (but not all) of the deficiencies I have mentioned in the preliminary review has been corrected, and now the *Applicant* ended up with a dissertation of considerably higher quality than the previous version was. The style in the "References" section was generally OK even earlier, and the suggested improvements were done.

Finally, let me emphasise that the scientific content was and remained fine, the linguistic quality, and the general look of the written works was improved considerably. Even more importantly, the novel scientific finding are now emphasised in the theses booklet.

To sum up, now we are having a high-quality dissertation and theses booklet in our hands, and, in my view, the *Applicant* should be awarded the PhD degree, obviously, after the successful defence.

Szeged, August 18, 2020

