



Amin Fatoni <aminfatoni@unsoed.ac.id>

A manuscript number has been assigned to Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode - [EMID:c74f311d3ad96014]

Results in Chemistry <em@editorialmanager.com>
Reply-To: Results in Chemistry <support@elsevier.com>
To: Amin Fatoni <aminfatoni@unsoed.ac.id>

13 May 2022 at 18:35

CC: "Wahyu Widanarto" aminfatoni@gmail.com, "Mekar Dwi Anggraeni" mekar.anggraeni@unsoed.ac.id, "Dian Windy Dwiasi" aminfatoni@hotmail.com

Dear Dr. Fatoni,

Your submission entitled "Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode" has been assigned the following manuscript number: RECHEM-D-22-00293.

You will be able to check on the progress of your paper by logging on to Editorial Manager as an author.
The URL is <https://www.editorialmanager.com/rechem/>.

Thank you for submitting your work to this journal.

Kind regards,

Reeshma Paraman
Administrative Support Agent – ASA
Results in Chemistry

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Amin Fatoni <aminfatoni@unsoed.ac.id>

Your Submission - [EMID:e052c395e2f95c9b]

2 messages

Results in Chemistry <em@editorialmanager.com>

30 May 2022 at 12:36

Reply-To: Results in Chemistry <support@elsevier.com>

To: Amin Fatoni <aminfatoni@unsoed.ac.id>

Ref.: Ms. No. RECHEM-D-22-00293

Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode
Results in Chemistry

Dear Dr. Fatoni,

Reviewers have now commented on your paper. You will see that they are advising that you revise your manuscript. If you are prepared to undertake the work required, I would be pleased to reconsider my decision.

For your guidance, reviewers' comments are appended below.

If you decide to revise the work, please submit a list of changes or a rebuttal against each point which is being raised when you submit the revised manuscript.

Your revision is due by Jun 20, 2022.

To submit a revision, go to <https://www.editorialmanager.com/rechem/> and log in as an Author. You will see a menu item call Submission Needing Revision. You will find your submission record there.

Yours sincerely

Yi-Lun Ying, Ph.D.
Editor-in-Chief
Results in Chemistry

Comments from the Editors and Reviewers:

Reviewer #1: The authors presented a modified GOx-AC- NiFe₂O₄/CPE electrode for glucose biosensing. They investigated the loading ratio of carbon and NiFe₂O₄ nanoparticles as well as the concentration and pH of the buffer solution. After incorporating the glucose oxidase enzyme, the as fabricated glucose sensor showed similar performance in the detection of glucose in blood samples as the standard methods. The comments are shown below.

Major points to address:

1. As our journal specifically asks for new knowledge presented in the article, I didn't see the description of what new contribution the authors made to the community. As far as I know, there have been reports on the use of activated carbon for the application in biosensor. What's the difference?
2. The authors claimed that the presence of NiFe₂O₄ nanoparticles improve the electron transfer rate. However, the authors didn't study the NiFe₂O₄ alone. What about the performance of NiFe₂O₄ without active carbon? The authors may want to add control experiments here.

Minor points to address:

1. In the study of buffer concentration, from the figure 6b, it seems that the buffer concentration from 0-200 mM does not have much impact on the oxidative peak current. The authors may want to double check if their conclusion remains valid.
2. Even though the authors compare the performance of their biosensor with the standard method and the results are quite similar. I was wondering what about other parameters like stability and cost when compared with well established methods.

Based on the comments above, therefore I recommend this manuscript to be published after major revisions.

Reviewer #2: In this work, the authors proposed a new glucose biosensor. Although the main idea of the work is visible, but manuscript is poorly written and prepared and the overall quality of the manuscript is low. The motivation and

novelty of the work are poorly indicated, the introduction and literature review are scarce, the experimental part inconsistent, and the results and discussion are presented implicitly, and their description is scarce and inconsistent. The authors need to do a lot of work on highlighting the motivation of the work and the novelty of the proposed results, as well as more clearly present the results of the manuscript. In present form, it cannot be recommended for publication. The following is a list of major issues and concerns, as well as minor issues, which must be eliminated before further consideration of the possibility of accepting the article.

The list of major issues and concerns:

- * It is necessary to give the principle of electrochemical analysis for glucose content and indicate the gross reactions. It is also necessary to describe the device of such sensors, their composition, indicating the role of each component.
- * It is necessary to give examples of existing sensors and indicate the motivation for this work - indicate why certain components of the device are used and what are its advantages and novelties over analogues.
- * It is necessary to more accurately describe the description of cyclic voltammetry (equipment and technique). It is necessary to indicate the concentration of KCl in which the electrode is immersed, since this affects its potential. It is also necessary to indicate the geometric dimensions of both the working and counter electrodes (active surface area).
- * On cyclic voltammograms, it is traditionally customary to give not the absolute value of the current, but the current density normalized to the area of the electrode. The potential is given not just in volts, but in volts relative to a given reference electrode.
- * It seems like the maximum current range of the potentiostat used in this work is 1 mA. Presenting cyclic voltammograms with current surpassing device range (Figure 4) is unacceptable. It is necessary either to measure them again in a different range, or to remove a part of the curve that goes beyond the instrument sensitivity range. Another option is to use electrodes with a smaller active area in further works.
- * In figure 5, it is impossible to distinguish individual curves, and there is no legend on it. Also on the voltammogram, you can indicate the area at which the current was selected.
- * Probably, when analyzing the obtained cyclic voltammograms, it makes sense to provide the current not at a specific potential, but at the peak of the redox reaction. If the registration conditions change, the reversibility of the redox-reaction may change, which will appear in the form of an increase in the potential difference between the peaks.
- * In Figure 6, you can also show the current at the peak of the curve. It is also necessary to draw clearer conclusions on this graph about the conditions for the applicability of the sensor.
- * The statement "The concentrations of the buffer solution indicated the number of ions involved in the electrochemical reaction" is unclear.
- * The authors state that oxidation peaks are more sensitive to glucose concentration. But there is no clear reduction peak on the cyclic voltammogram. Therefore, it is obvious that the current at positive potentials will be more sensitive than at negative potentials.
- * The cyclic voltammogram in Figure 7 is not very informative. It is desirable to increase it and mark the areas of applicability and inapplicability of the analysis. Graphs d,c and d don't much informative and they could be replaced by one graph with two y-axes (for positive and negative currents at different potentials).
- * It is necessary to specify the conditions of applicability of the sensor and provide the requirements for sensors for real-life applications.
- * The conclusions are sparse. It is necessary to clearly describe the advantages of the described approaches, the measurement accuracy and the conditions for the applicability of the sensor, including in comparison with analogues.

The list of minor issues and comments:

- * The sequence of references in the manuscript is incorrect.
- * Abbreviations are used without description.
- * Some points of the experimental part are redundant due to the description of the motivation of the experiments. For example, in paragraphs 2.10 and 2.11, it would be enough to indicate in the paragraph about cyclic voltammetry to write that the curves were measured for different values of pH and at different buffer concentrations.
- * The temperature for burning coconut shells is incorrect.
- * If the results of the glucose concentration analysis are compared with a standard method, then a reference to this method or standard should be provided.

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Amin Fatoni <aminfatoni@unsoed.ac.id>
To: Results in Chemistry <support@elsevier.com>

30 May 2022 at 13:51

Dear Editor of Results in Chemistry,

Yi-Lun Ying, Ph.D.

Thank you for your email. I will revise and submit to the system before the deadline.

Best regards,
Dr. Amin Fatoni
[Quoted text hidden]



Amin Fatoni <aminfatoni@unsoed.ac.id>

Track the status of your submission to Results in Chemistry

1 message

Track your Elsevier submission <no-reply@submissions.elsevier.com>

2 July 2022 at 15:32

To: aminfatoni@unsoed.ac.id

Manuscript Number: RECHEM-D-22-00293

Manuscript Title: Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode

Journal: Results in Chemistry

Dear Amin Fatoni,

Your submitted manuscript is currently under review. The peer review process can take a while, so we are trying out a new service that allows you to track the peer review status of your submission in more detail. You can access the service here:

<https://track.authorhub.elsevier.com?uuid=5e60ce88-32b7-42aa-8191-abb3b4842073>

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Amin Fatoni <aminfatoni@unsoed.ac.id>

Submission Confirmation for RECHEM-D-22-00293R2 - [EMID:7bbee46f9b11b0d6]

1 message

Results in Chemistry <em@editorialmanager.com>
Reply-To: Results in Chemistry <support@elsevier.com>
To: Amin Fatoni <aminfatoni@unsoed.ac.id>

30 June 2022 at 20:08

Ref.: Ms. No. RECHEM-D-22-00293R2

Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode

Dear Dr. Fatoni,

Results in Chemistry has received your revised submission.

You may check the status of your manuscript by logging onto Editorial Manager at (<https://www.editorialmanager.com/rechem/>).

Kind regards,

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Amin Fatoni <aminfatoni@unsoed.ac.id>

Your Submission - [EMID:b7d83e0d21d3512c]

2 messages

Results in Chemistry <em@editorialmanager.com>

4 July 2022 at 16:00

Reply-To: Results in Chemistry <support@elsevier.com>

To: Amin Fatoni <aminfatoni@unsoed.ac.id>

Ref.: Ms. No. RECHEM-D-22-00293R2

Glucose Biosensor based on Activated Carbon – NiFe₂O₄ Nanoparticles Composite modified Carbon Paste Electrode
Results in Chemistry

Dear Dr. Fatoni,

I am pleased to tell you that your work has now been accepted for publication in Results in Chemistry.

It was accepted on Jul 04, 2022

Comments from the Editor and Reviewers can be found below.

Thank you for submitting your work to this journal.

With kind regards

Yi-Lun Ying, Ph.D.
Editor-in-Chief
Results in Chemistry

Comments from the Editors and Reviewers:

Reviewer #1: The manuscript has been improved a lot.

Reviewer #2: All of my comments to the Authors have been taken into account. Now this manuscript can be accepted for publication.

One comment to the authors on reference list issue (that I mentioned in the previous revision): even though the Authors used automatic reference manager, the order of references appearance is somehow failed; for example, in the second sentence of the Introduction - "According to WHO, approximately 43% of the 3.7 million deaths caused by diabetes mellitus occur before the age of 70 years, with the percentage of these deaths being higher in developing countries [28] ." - reference number should be [1], not the [28]. I recommend to authors to fix this inconsistency before the article production. Probably, if you erase all the references mentions, reinsert it and refresh the reference list, the problem will be fixed.

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Amin Fatoni <aminfatoni@unsoed.ac.id>

4 July 2022 at 21:17

To: Results in Chemistry <support@elsevier.com>

Dear Yi-Lun Ying, Ph.D.
Editor-in-Chief
Results in Chemistry

Thank you for the good news.

I am sorry about the inline citation error, since the trouble while editing the manuscript using Mendeley changed to Zotero in different laptop. However, now I have fixed the problem by changing the style to name-year and change back to elsevier vancouver. The revised manuscript attached.

Best regards<

Amin Fatoni

[Quoted text hidden]



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972K



Amin Fatoni <aminfatoni@unsoed.ac.id>

Proofs of [RECHEM_100433]

1 message

Elsevier Ltd, Editorial-Production Department <Corrections.esch@straive.com>

6 July 2022 at 23:39

To: aminfatoni@unsoed.ac.id

PLEASE DO NOT ALTER THE SUBJECT LINE OF THIS E-MAIL ON REPLY

Dear Dr. Amin Fatoni,

Thank you for publishing with Results in Chemistry. We are pleased to inform you that the proof for your upcoming publication is ready for review via the link below. You will find instructions on the start page on how to make corrections directly on-screen or through PDF.

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