

[IJC] Submission Acknowledgement

Prof. Dr.rer.nat. Nuryono, MS <nuryono_mipa@ugm.ac.id>

Mon 12/9/2019 4:48 PM

To:Dr.Eng. Leny Yuliati, S.Si., M.Eng. <leny.yuliati@machung.ac.id>

Dear Leny Yuliati,

Thank you for submitting the manuscript, "Preparation of Green-Emissive Zinc Oxide Composites Using Natural Betacyanin Pigment Isolated from Red Dragon Fruit" to Indonesian Journal of Chemistry. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: <https://jurnal.ugm.ac.id/ijc/author/submission/52351>

Username: lyuliati

If you have any questions, do not hesitate to contact me. Thank you for considering this journal for publishing your valuable work.

Best regards,

Prof. Dr.rer.nat. Nuryono, MS

Indonesian Journal of Chemistry

Indonesian Journal of Chemistry

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[IJC] Editor Decision

Dwi Siswanta <dsiswanta@ugm.ac.id>

Mon 4/6/2020 12:05 PM

To: Dr. Eng. Leny Yulianti, S.Si., M.Eng. <leny.yulianti@machung.ac.id>

Dear Leny Yulianti,

We have reached a decision regarding your submission to Indonesian Journal of Chemistry, "Preparation of Green-Emissive Zinc Oxide Composites Using Natural Betacyanin Pigment Isolated from Red Dragon Fruit".

Our decision is: Revisions Required

Comments of the reviewers can be seen in the bottom part of this email.

The revised paper has to be completed with the responses for the reviewer's comments, point by point, in table form at the beginning of the page of the revised paper. It is also required to highlight the revised parts with a different color of letters.

The revised paper has to be resubmitted in the system within three weeks.

Thank you for your intending to contribute to the journal and for giving us to read your work.

Best regards,

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Reviewer A:

Additional Comment::

The authors reported the preparation of green-emissive zinc oxide composites using natural betacyanin pigment isolated from red dragon fruit. They used DR-UV, FT-IR, and fluorescence spectroscopy methods to characterize the zinc oxide composites materials. The manuscript will be interesting for the readers in the area of ZnO-based green emissive composite materials synthesis. However, some parts of the article were not clearly discussed, thus additional explanations are required to improve the quality of the article. Please consider the point-by-point comments below:

1. The importance of this work should be more emphasized. Mentioning that "the method to prepare the ZnO composites consisting of the betacyanin pigment from the RDF has not been developed yet" is not enough to attract much attention from the readers. What are the advantages of using betacyanin from red dragon fruit? Why is it promising compared to other natural

pigments?

2. The bandgap energy of the composite materials seems independent on the organic linker, but dependent on the order of betacyanin introduction. What is the reason for this phenomenon?
3. The bandgap energy of the composite materials is not significantly different from the unmodified ZnO. Taking consideration that one of the purposes of this work is to overcome the limitation of the ZnO materials to be utilized in the visible region, how can these composite materials be promising?
4. The authors should provide a comparison of the bandgap energy of the composite materials obtained in this work and the bandgap energy of the natural pigments-modified ZnO previously reported.
5. The immobilized betacyanin amounts on the RDF-APTMS/ZnO was found to be 100%. Does it mean no more betacyanin exists in the solution? How can it be confirmed?
6. Table 2 indicates that the order of betacyanin introduction strongly affects the percentage of immobilized betacyanin on the APTMS-modified ZnO, but not on CPTMS-modified ZnO. What is the reason for this phenomenon? Additional explanations should be provided.
7. This work shows the importance of using APTMS and the order to introduce the betacyanin onto the ZnO. However, no clear discussion is provided. Why does APTMS-based composite material show better betacyanin immobilization than the CPTMS-based one? Why does the betacyanin should be firstly reacted with the organic linker before immobilized on the ZnO to have a higher amount of immobilized betacyanin? These parts should be discussed in more detail.

Reviewer B:

Additional Comment::

The paper reports the preparation of composite materials consisting of ZnO and betacyanin pigment from Red dragon fruit. There are several aspects that are needed to be confirmed as mentions below:

1. Please emphasize the novelty of this research.
2. What are the significances of betacyanin over other compounds?
3. It was mentioned in the text that the bandgap energy between ZnO and composite materials was not significantly different because the betacyanin pigment was only immobilized on the surface of ZnO materials. Could the authors describe this statement in detail? What is the predicted interaction between the pigment, organic linker, and ZnO? Reading from this statement, it seems that the pigment was adsorbed on the surface of ZnO without the linkers.
Did the authors also check the ZnO-Linkers interaction such as with FTIR etc?
4. It was stated that the composite materials are potential to be used as a green-emissive material, but it does not mention clearly what is the significance of betacyanin for enhancing the light absorption ability?
5. Could the author correlate the characterization results of DR Uv-vis spectra and 3D fluorescence spectra?

6. Regarding the order of mixing organic linker with either ZnO or pigment, what is actually the determining process in this reaction? Is the formation of ZnO-Linkers affecting the number of active sites for the adsorption process?

Additionally, did the author control the concentration of betacyanin? Or was it purely extracted from RDF without further analysis of the pigment concentration? Therefore, it might affect bonding formation during the synthesis of the composite.

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[IJC] Editor Decision

Dwi Siswanta <dsiswanta@ugm.ac.id>

Tue 8/25/2020 4:43 PM

To: Dr. Eng. Leny Yulianti, S.Si., M.Eng. <leny.yulianti@machung.ac.id>

Dear Leny Yulianti:

We have reached a decision regarding your submission to Indonesian Journal of Chemistry, "Preparation of Green-Emissive Zinc Oxide Composites Using Natural Betacyanin Pigment Isolated from Red Dragon Fruit".

Our decision is to: Accept Submission

In accordance to the Journal policy, you are required to immediately pay the publication fee of IDR 2.500.000 by transfer to the following bank account:

Name of the account : UGM FPA KIM - Penerimaan IJC

Swift Code : BNINIDJXXX

Account No : 9888811052040792

Name of the Bank and address:

PT. BANK NEGARA INDONESIA (PERSERO) TBK

Address:

BNI UGM Branch, Sekip Utara Yogyakarta

55281, Indonesia

Please send the proof of remittance by email to the editorial office of the Indonesian Journal of Chemistry (email: ijc@ugm.ac.id).

After payment, in a few days, you will receive an email for the further process, i.e. copy-editing, lay-outing, and proofreading.

Thank you for your valuable contribution to the journal.

Best regards,

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