

Hasanudin, Hasanudin ao-2022-04647z - Manuscript Submission to ACS Omega 22-Jul-2022

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> 22 Juli 2022 19.29 Balas Ke: support@services.acs.org Kepada: hasanudin@mipa.unsri.ac.id Cc: hasanudin@mipa.unsri.ac.id, wanryanryan@gmail.com, lolaandini0@gmail.com, fatechafj@unsri.ac.id, mararachman@gmail.com, fitrihadiah@ft.unsri.ac.id, zainalf313@unsri.ac.id

22-Jul-2022

Journal: ACS Omega Manuscript ID: ao-2022-04647z Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Authors: Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal Manuscript Status: Submitted

Dear Dr. Hasanudin:

Your manuscript has been successfully submitted to ACS Omega, a multidisciplinary, open access journal for the publication of original and scientifically valid research. The journal offers expedited editorial decision-making and immediate open availability. Authors can rapidly publish their important research results and broadly distribute them to the global scientific community. Please note that there are publishing charges associated with this journal. Details can be found at http://acsopenscience.org. Should your manuscript be accepted, you will be required to pay for the Article Publishing Charges prior to publication. Authors may qualify for discounts. Article Publishing Charges are waived for invited Editorials and Perspectives.

Please reference the above manuscript ID in all future correspondence. If there are any changes in your contact information, please log in to ACS Paragon Plus with your ACS ID at http://acsparagonplus.acs.org/ and select "Edit Your Profile" to update that information.

You can view the status of your manuscript by checking your "Authoring Activity" tab on ACS Paragon Plus after logging in to http://acsparagonplus.acs.org/.

Journal Publishing Agreement and Copyright

Upon acceptance, ACS Publications will require the corresponding author to sign and submit a Journal Publishing Agreement. This agreement gives authors a number of rights regarding the use of their manuscripts. At acceptance, the corresponding author will receive an email linking through to the Journal Publishing Agreement Wizard, which helps you select the most appropriate license for your manuscript.

For more information please see: https://pubs.acs.org/page/copyright/journals/jpa_faqs.html

ACS Authoring Services

Did you know that ACS provides authoring services to help scientists prepare their manuscripts and communicate their research more effectively? Trained chemists with field-specific expertise are available to edit your manuscript for grammar, spelling, and other language errors, and our figure services can help you increase the visual impact of your research.

Visit https://authoringservices.acs.org to see how we can help you! Please note that the use of these services does not guarantee that your manuscript will be accepted for publication.

Thank you for submitting your manuscript to ACS Omega.

Sincerely,

Dr. Krishna Ganesh and Dr. Deqing Zhang ACS Omega

https://mail.google.com/mail/u/1/?ik=0aea05735f&view=pt&search=all&permthid=thread-f%3A1739055953751514171&simpl=msg-f%3A1739055... 1/2

11/4/22, 3:24 PM

Email Sriwijaya University - Hasanudin, Hasanudin ao-2022-04647z - Manuscript Submission to ACS Omega 22-Jul-2022

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the sender immediately by e-mail, and delete the original message.

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at <u>pubs-comms-unsub@acs.org</u> if you do not want to receive these. Note, you will still receive updates about your manuscripts, reviews, or future invitations to review.



Hasanudin, Hasanudin ao-2022-04647z Assigned to Editor 25-Jul-2022

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> 26 Juli 2022 00.37 Balas Ke: Zhang-office@omega.acs.org Kepada: hasanudin@mipa.unsri.ac.id Cc: hasanudin@mipa.unsri.ac.id, wanryanryan@gmail.com, lolaandini0@gmail.com, fatechafj@unsri.ac.id, mararachman@gmail.com, fitrihadiah@ft.unsri.ac.id, zainalf313@unsri.ac.id

25-Jul-2022

Journal: ACS Omega Manuscript ID: ao-2022-04647z Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Author(s): Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal Manuscript Status: Associate Editor Assigned

Dear Dr. Hasanudin:

Thank you for submitting your manuscript to ACS Omega, a multidisciplinary, open access journal for the publication of original and scientifically valid research. The journal offers expedited editorial decision-making and immediate open availability. Authors can rapidly publish their important research results and broadly distribute them to the global scientific community. Please note that there are publishing charges associated with this journal. Details can be found at http://acsopenscience.org. Should your manuscript be accepted, you will be required to pay for the Article Publishing Charges prior to publication. Authors may qualify for discounts. Article Publishing Charges are waived for invited Editorials and Perspectives.

"Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" has been assigned to the following editor:

Dr. Deqing Zhang Coeditor ACS Omega Phone: +86-10-62639355 Fax: (202) 559-0879 Email: Zhang-office@omega.acs.org

Please address all future correspondence regarding this manuscript to the above editor.

Submission of a manuscript to ACS Omega implies that the work reported therein has not received prior publication and is not under consideration for publication elsewhere in any medium, including electronic journals and computer databases of a public nature. This manuscript is being considered with the understanding that it is submitted on an exclusive basis. If otherwise, please advise.

Also please note that according to ACS Ethical Guidelines to Publication of Chemical Research, all authors must have reviewed and approved the submission of their manuscript. If you are a coauthor and approve its submission, no action is necessary. Similarly coauthors must approve the appointment of a Corresponding Author to select and execute the appropriate ACS publishing agreement, and should be informed by the Corresponding Author of the terms and conditions of that agreement. If you do not approve its submission to ACS Omega or the selection of Corresponding Author, please let us know as soon as possible. Refer to the manuscript number listed above in any correspondence, or you may simply reply to this message leaving the subject line intact. For more information on ethical responsibilities of authors, see the Ethical Guidelines to Publication of Chemical Research at http://pubs.acs.org/page/policy/ethics/index.html.

In publishing only original research, ACS is committed to deterring plagiarism, including self-plagiarism. ACS Publications uses Crossref Similarity Check Powered by iThenticate to screen submitted manuscripts for similarity to published material, and other software to screen previous submissions to ACS journals. Note that your manuscript may be screened during the submission process.

Sincerely,

Dr. Deqing Zhang Coeditor ACS Omega Phone: +86-10-62639355 Fax: (202) 559-0879 Email: Zhang-office@omega.acs.org

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the sender immediately by e-mail, and delete the original message.

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or publications, topications.com, top



Hasanudin, Hasanudin ao-2022-04647z - Manuscript Revision Request 08-Aug-2022

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> Balas Ke: Zhang-office@omega.acs.org Kepada: hasanudin@mipa.unsri.ac.id 9 Agustus 2022 00.46

08-Aug-2022

Journal: ACS Omega Manuscript ID: ao-2022-04647z Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Author(s): Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal

COVID-19 Support: Please visit the following website to access important information for ACS authors and reviewers during the COVID-19 crisis: https://axial.acs.org/2020/03/25/chemists-covid-19-coronavirus/

We are flexible in these unprecedented times affecting the global research community. If you need more time to complete authoring or reviewing tasks, please contact the editorial office and request an extension.

Dear Dr. Hasanudin:

Thank you for submitting your manuscript to ACS Omega, a multidisciplinary, open access journal for the publication of original and scientifically valid research. The journal offers expedited editorial decision-making and immediate open availability. Authors can rapidly publish their important research results and broadly distribute them to the global scientific community. Please note that there are publishing charges associated with this journal. Details can be found at http://acsopenscience.org. Should your manuscript be accepted, you will be required to pay for the Article Publishing Charges prior to publication. Authors may qualify for discounts. Article Publishing Charges are waived for invited Editorials and Perspectives.

"Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" has been examined by expert reviewers. In its current form, your manuscript is not suitable for publication in ACS Omega. The reviewers have raised points that require significant consideration. However, with an adequate point-by-point response and the appropriate revisions, your paper may become acceptable for publication.

We would like to receive your revision no later than 29-Aug-2022. The revision should address the reviewers' comments and include a point-by-point response. Your manuscript will be subject to further peer review.

Please note that you will receive a follow-up message within 24 hours describing the non-scientific changes you must make to your manuscript before you submit the revision.

To revise your manuscript, log into ACS Paragon Plus with your ACS ID at http://acsparagonplus.acs.org/ and select "My Authoring Activity". There you will find your manuscript title listed under "Revisions Requested by Editorial Office." Your original files are available to you when you upload your revised manuscript. If you are replacing files, please remove the old version of the file from the manuscript before uploading the new file.

When submitting your revised manuscript through ACS Paragon Plus, you will be able to respond to the comments made by the reviewer(s) in the text box provided or by attaching a file containing your detailed responses to all of the points raised by the reviewers.

Please upload manuscript file that is free of any annotations or highlights.

Funding Sources: Authors are required to report ALL funding sources and grant/award numbers relevant to this manuscript. Enter all sources of funding for ALL authors relevant to this manuscript in BOTH the Open Funder Registry tool in ACS Paragon Plus and in the manuscript to meet this requirement. See http://pubs.acs.org/page/4authors/funder_options.html for complete instructions.

ORCID: Authors submitting manuscript revisions are required to provide their own validated ORCID iDs before completing the submission, if an ORCID iD is not already associated with their ACS Paragon Plus user profiles. This iD may be provided during original manuscript submission or when submitting the manuscript revision. You can provide only your own ORCID iD, a unique researcher identifier. If your ORCID iD is not already validated and

https://mail.google.com/mail/u/1/?ik=0aea05735f&view=pt&search=all&permthid=thread-f%3A1740616002014614464&simpl=msg-f%3A1740616... 1/3

Email Sriwijaya University - Hasanudin, Hasanudin ao-2022-04647z - Manuscript Revision Request 08-Aug-2022

associated with your ACS Paragon Plus user profile, you may do so by following the ORCID-related links in the Email/Name section of your ACS Paragon Plus account. All authors are encouraged to register for and associate their own ORCID iDs with their ACS Paragon Plus profiles. The ORCID iD will be displayed in the published article for any author on a manuscript who has a validated ORCID iD associated with ACS Paragon Plus when the manuscript is accepted. Learn more at http://www.orcid.org.

In publishing only original research, ACS is committed to deterring plagiarism, including self-plagiarism. ACS Publications uses Crossref Similarity Check Powered by iThenticate to screen submitted manuscripts for similarity to published material, and other software to screen previous submissions to ACS journals. Note that your manuscript may be screened during the submission process.

We look forward to seeing your paper in ACS Omega.

Sincerely,

Dr. Deqing Zhang Coeditor ACS Omega Phone: +86-10-62639355 Fax: (202) 559-0879 Email: Zhang-office@omega.acs.org

Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation: Publish after major revisions.

Comments:

This manuscript prepared by Hasanudin Hasanudin and co-workers reported the synthesis of acidic nickel phosphate supported zeolite catalyst for isopropyl alcohol conversion to diisopropyl ether. The natural zeolite was used as a support and the nickel species were loaded by the impregnation method. Sufficient characterizations were proceeded for the structure and property investigation of both the zeolite support and the Ni-loaded catalyst. The obtained nickel phosphate-based modified zeolite catalyst showed an enhanced performance in isopropyl alcohol conversion and ether yield selectivity. Basically, the demonstrated study is of interest to the synthesis and catalytic application of natural zeolites as a catalyst. However, some discussions as well as conclusions are insufficiency of evidences. In view of this, I can't accept the manuscript to be published in current state but recommend a major revision, and the following comments are listed for the authors to make further improvements.

1. The type of the zeolite (topology, and IZA code) used in this work should be clearly represented. Based on Table 2, the zeolite sample showed a deflected textural property comparing with the conventional zeolite materials. 2. As shown in Fig.1, the diffraction peaks ascribed to the zeolite (a) in the XRD pattern (c) of zeolite-Ni(H2PO4)2

2. As shown in Fig.1, the diffraction peaks ascribed to the zeolite (a) in the XRD pattern (c) of zeolite-Ni(H2PO4)2 changed a lot (some peaks even dispeared, but some peaks were strengthened). Please explain.

3. The claim and discussion about the morphology transformation based on Fig. 2 are totally unacceptable. 4. In Table 1, the Si/Al ratios between zeolite-Ni and zeolite-Ni(H2PO4)2 are almost the same, but the Si/Ni ratios changed a lot, why ?

5. What is the load amount of Ni species ?

6. The catalytic performance of the unmodified zeolite should be provided as a contrast. And how about the regenerability of the demonstrated catalyst ?

Additional Questions:

Is the technical quality of the research reported within valid and appropriate?: In Part (Please Elaborate in Your Review)

Please evaluate the degree of novelty and originality of the research reported: Fair

Are the conclusions adequately supported by the data presented?: No

Are the literature references appropriate and up to date?: Yes

Reviewer: 2

Recommendation: Publish after minor revisions.

Comments:

Comments to the Author

In this work, the zeolite was modified with nickel and nickel phosphate by impregnation method, and the modified zeolite was successfully applied in the experiment of converting isopropyl alcohol to diisopropyl ether. And then, by changing the nickel metal loading on the zeolite, the influence of different loading on the catalyst performance was explored. The physical properties analysis of the studied modified zeolite revealed that the catalyst modified with nickel phosphate had high acidity, and showed that the catalyst has high catalytic activity for isopropanol conversion. I believed following modification will be required.

1. In the introduction, "including supercapacitors, photocatalysts, ... photocatalysts" here are repeated words, please correct the related problems.

2. In the results and discussion, "Moreover, ..., the Ni(H2PO4)2 phase, was successfully incorporated into the zeolite framework." The new crystalline phase may be tacked on the zeolite surface, and which covered part of the original zeolite crystal phase. However, the XRD data presented in the article do not indicate that nickel phosphate incorporate the zeolite framework. Please pay attention to the wording and modify it.

3. What kind of the zeolite is used in the article?

4. In the XRD pattern, a large amount of nickel phosphate is dispersed on the surface of zeolite, which may cover the original zeolite crystal phase, but SEM shows that the crystal appearance of zeolite modified by nickel phosphate is far smoother than that of unmodified zeolite, and the morphological characteristics of nickel phosphate (hydrothermal synthesis method) of other scholars are also presented here. However, it cannot explain the reasons of the morphology formation of the modified zeolite catalyst prepared by impregnation method in this paper. Could you add the XRD analysis and SEM morphology results of pure nickel phosphate here? Please explain it.

Generally speaking, when acidic materials are impregnated on zeolite without acid, the acidity of the catalyst becomes stronger and stronger. Moreover, the nickel phosphate used in this paper is acidic itself. Even if the original acidic site of nickel phosphate is covered, the acidity of the modified catalyst should remain high acidic rather than decrease. In addition, some of the references cited in this paper are not found, and some do not explain the reason for the decrease in acidity caused by impregnation of the same acidic substance with acidic substance (metal loading capacity 8-10meq /g). Please show the characterization of unmodified zeolite and explain the related problems.
 The BET analysis results do not show the results of the analysis of different nickel phosphate loading, whether could you study the influence of different load on catalyst void fraction.

Additional Questions:

Is the technical quality of the research reported within valid and appropriate?: Yes

Please evaluate the degree of novelty and originality of the research reported: Good

Are the conclusions adequately supported by the data presented?: No

Are the literature references appropriate and up to date?: Yes

FOR ASSISTANCE WITH YOUR MANUSCRIPT SUBMISSION PLEASE CONTACT: ACS Publications Customer Services & Information (CSI) Email: support@services.acs.org Phone: 202-872-4357 Toll-Free Phone: 800-227-9919 (USA/Canada only)

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the sender immediately by e-mail, and delete the original message.

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, or future invitations to receive these. Note, you will still receive updates about your manuscripts, reviews, or future invitations to review.



Hasanudin, Hasanudin ao-2022-04647z - Manuscript Formatting Request - Non-scientific changes

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> Balas Ke: journalsupport@omega.acs.org Kepada: hasanudin@mipa.unsri.ac.id 10 Agustus 2022 19.31

10-Aug-2022

Manuscript ID: ao-2022-04647z Manuscript Type: Article Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Author(s): Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal

Dear Dr. Hasanudin:

You recently received a Revision Request from Dr. Deqing Zhang. In addition to addressing the Editor's concerns and the requests of the reviewers, please complete the following before submitting your revision:

* In case your current addresses differ from the research affiliations they should be included as footnotes. (affiliations in the system and MS must match)

* Please update the abstract upon submission of your revised manuscript to match the manuscript file.

- The corresponding author(s)' contact information should be placed in the 'Author Information' section before the references

- Please include email addresses from all authors and full mailing addresses of institutional affiliations in a separate Author information paragraph in the manuscript file (after Acknowledgment and before References) but keep the first page of the MS file as it is.

- Acknowledgment section is missing. This is a mandatory section.

- Please use full words when labeling figures and tables (instead of Fig. 1 please use Figure 1, instead of Tab. 1 please use Table 1, etc.)

- Please note that Figure 4 is missing a in the caption.

- TOC graphic should be labeled "for Table of Contents use only "and this item should be appended to the last page of the manuscript.

Please use highlighting, bolding, italics, or marking of any type within the manuscript to indicate changes made in response to the reviews of your manuscript, and upload the marked-up copy as "Supporting Information For Review Only".

We look forward to receiving your revised manuscript, so that processing of your manuscript may proceed without further delay. Thank you for considering ACS Omega as a forum for the publication of your work.

Sincerely,

Marko Vucic Peer Review Analyst

FOR ASSISTANCE WITH YOUR MANUSCRIPT SUBMISSION PLEASE CONTACT:

ACS Publications Customer Services & Information (CSI) Email: support@services.acs.org Phone: 202-872-4357 Toll-Free Phone: 800-227-9919 (USA/Canada only)

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the

https://mail.google.com/mail/u/1/?ik=0aea05735f&view=pt&search=all&permthid=thread-f%3A1740777419351682314&simpl=msg-f%3A1740777... 1/2

11/4/22, 3:29 PM Email Sriwijaya University - Hasanudin, Hasanudin ao-2022-04647z - Manuscript Formatting Request - Non-scientific changes

sender immediately by e-mail, and delete the original message.

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, topics or products and services from the American Chemical Society. Please email us at publications, or future invitations to receive these. Note, you will still receive updates about your manuscripts, reviews, or future invitations to review.

: Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst

Manuscript ID : ao-2022-04647z

Thank you for giving us the opportunity to submit a manuscript titled "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" for publication in the ACS Omega. We appreciate the time and effort that you dedicated to providing feedback on our manuscript and are grateful for the insightful comments and valuable improvements to our paper. We have incorporated the suggestions made by the reviewers. Those changes are written in yellow highlight text within the manuscript.

Reviewer 1

Title

This manuscript prepared by Hasanudin Hasanudin and co-workers reported the synthesis of acidic nickel phosphate supported zeolite catalyst for isopropyl alcohol conversion to diisopropyl ether. The natural zeolite was used as a support and the nickel species were loaded by the impregnation method. Sufficient characterizations were proceeded for the structure and property investigation of both the zeolite support and the Ni-loaded catalyst. The obtained nickel phosphate-based modified zeolite catalyst showed an enhanced performance in isopropyl alcohol conversion and ether yield selectivity. Basically, the demonstrated study is of interest to the synthesis and catalytic application of natural zeolites as a catalyst. However, some discussions as well as conclusions are insufficiency of evidences. In view of this, I can't accept the manuscript to be published in current state but recommend a major revision, and the following comments are listed for the authors to make further improvements.

No	Comment from Reviewer	Responses
1	The type of the zeolite (topology, and IZA code) used in this work should be clearly represented. Based on Table 2, the zeolite sample showed a deflected textural property comparing with the conventional zeolite materials.	Thank you for pointing this out. In this study, according to the XRD results, the zeolite was classified as a mixture of clinoptilolite and mordenite zeolite. The deflected textural property of zeolite was presumably due to it being taken from nature as natural bentonite, not synthetic zeolite. The optimization of the N_2 physisorption instrument, as well as the preparation, might also affect the

		deflection. However, the textural properties of natural zeolite
		desorption type as well as the hysteresis phenomenon.
2	As shown in Fig.1, the diffraction peaks ascribed to the zeolite (a) in the XRD pattern (c) of zeolite-Ni(H2PO4)2 changed a lot (some peaks even dispeared, but some peaks were strengthened). Please explain.	Thank you for pointing this out. The vanishing or suppression of relative peaks of natural zeolite after modification by Ni(H ₂ PO ₄) ₂ was presumably due to the stress formation by the dissimilarity in ionic size between natural zeolite and Ni(H ₂ PO ₄) ₂ ions. This condition was also reported by Olegario et al. ¹ when preparing metal oxide/Philippine natural zeolite (MOPNZ), the suppressing and/or vanishing of PNZ appeared on the Cu/PNZ and Fe/PNZ XRD diffractogram. References (1) Olegario, E. M.; Mark Pelicano, C.; Cosiñero, H. S.; Sayson, L. V.; Chanlek, N.; Nakajima, H.; Santos, G. N. Facile Synthesis and Electrochemical Characterization of Novel Metal Oxide/Philippine Natural Zeolite (MOPNZ) Nanocomposites. Mater. Lett. 2021, 294, 129799. https://doi.org/10.1016/j.matlet.2021.129799.
3	The claim and discussion about the morphology transformation based on Fig. 2 are totally unacceptable.	Thank you for pointing this out. We have deleted the claim regarding the SEM analysis as the reviewer's concern. The main thing we want to pay attention to is the morphology change of natural bentonite after being impregnated by Ni and Ni(H ₂ PO ₄) ₂ . Furthermore, the phosphate ions were likely affecting the structure of the parent natural zeolite since the zeolite-Ni and zeolite-Ni(H ₂ PO ₄) ₂ relatively had different surface morphology. We also have marked

		morphological changes in Figure 2 in order to make the SEM image interpretation clearer.
4	In Table 1, the Si/Al ratios between zeolite-Ni and zeolite-Ni(H2PO4)2 are almost the same, but the Si/Ni ratios changed a lot, why ?	The change of Si/Ni ratios on zeolite-Ni $(H_2PO_4)_2$ is due to the presence of another matrix, such as phosphate, which affects the EDX calculation.
5	What is the load amount of Ni species ?	Thank you for pointing this out. The load amount of Ni species was 8 mEq/g.
6	The catalytic performance of the unmodified zeolite should be provided as a contrast. And how about the regenerability of the demonstrated catalyst ?	Thank you for pointing this out. We have provided the catalytic performance of the natural zeolite. The catalytic activity of natural zeolite towards isopropyl alcohol dehydration was low than Ni- zeolite and Ni(H ₂ PO ₄)-zeolite due to a low acidic site. The revised text as follows: "As shown in Figure 6, natural zeolite generated 20.2% towards isopropyl alcohol conversion and increased to 30.57% when using a zeolite-Ni catalyst. Natural zeolite only had a low acidic site derived from zeolite's aluminosilicate matrix. This increase in isopropyl alcohol conversion was presumably due to the increase in the acidic site of the catalyst, which originated from Ni as a lewis acid site. ² The Ni species on natural zeolite promotes the catalytic activity towards isopropyl alcohol conversion."

study suggested that the zeolite-Ni(H₂PO₄)₂ catalyst was still active and had adequate catalytic activity stability towards isopropyl alcohol after the third cycle reused.

The revised text as follows:

"The reusability study of 8 mEq/g zeolite-Ni(H₂PO₄)₂ catalyst was performed to see their stability towards isopropyl alcohol dehydration. This catalyst was employed because it exhibited the highest catalytic activity towards isopropyl alcohol dehydration. Figure 7 represents the catalyst reusability performance at three consecutive runs. It can be seen that in the first cycle, isopropyl alcohol conversion decreased to 39.21%, whereas the DIPE yield and selectivity also decreased to 79.32% and 21.96%, respectively, which implied that there was a decrease in the catalytic performance to 2.79% on the isopropyl alcohol conversion, 3.82% and 3.61% on the DIPE yield and selectivity, respectively. Furthermore, the catalytic performance towards isopropyl alcohol dehydration gradually decreased in three consecutive runs. This issue was most likely caused by the leaching of the catalyst's active site during the regeneration process.³ The reusability study suggested that the zeolite-Ni(H₂PO₄)₂ catalyst was still active and had adequate catalytic activity stability towards isopropyl alcohol after the third cycle reused."

	Reviewer 2 In this work, the zeolite was modified with nickel and nickel phosphate by impregnation method, and the modified zeolite was successful applied in the experiment of converting isopropyl alcohol to diisopropyl ether. And then, by changing the nickel metal loading on th zeolite, the influence of different loading on the catalyst performance was explored. The physical properties analysis of the studied modified zeolite revealed that the catalyst modified with nickel phosphate had high acidity, and showed that the catalyst has high catalytic activi for isopropanol conversion. I believed following modification will be required.	
No	Comment from Reviewer	Responses
1	In the introduction, "including supercapacitors, photocatalysts, photocatalysts" here are repeated words, please correct the related problems.	Thank you for pointing this out. We have deleted the repeated word of 'photocatalysts' accordingly.
2	In the results and discussion, "Moreover,, the Ni(H ₂ PO ₄) ₂ phase, was successfully incorporated into the zeolite framework." The new crystalline phase may be tacked on the zeolite surface, and which covered part of the original zeolite crystal phase. However, the XRD data presented in the article do not indicate that nickel phosphate incorporate the zeolite framework. Please pay attention to the wording and modify it.	Thank you for pointing this out. We have agreed with the reviewer that the use of the incorporate term seems not appropriate, hence we delete it. The nickel phosphate likely dispersed towards the surface and/or pore surface of natural zeolite. The revised text as follows: "Moreover, the absence of the nickel oxide phase in Figure 1c indicated that the new phase, i.e., the Ni(H ₂ PO ₄) ₂ phase. This condition was confirmed as a new diffraction peak revealed at 2θ of 12.25°, 16.41°, 18.88°, 20°, 22.64°, 26.22°, 30.87°, and 33.12°, which corresponded to the nickel phosphate phase (JCPDS Card 46– 1388). ⁴ These peaks were relatively difficult to observe, presumably due to the highly dispersed Ni(H ₂ PO ₄) ₂ on the zeolite surface or pore surface. ^{5,6} "

3	What kind of the zeolite is used in the article?	Thank you for pointing this out. In this study, we used a natural zeolite from Bayan, West Java. The natural zeolite was crushed and subsequently sieved to a 200-mesh, as we mentioned in the preparation of the natural zeolite section. We also want to clarify regarding the typo we have made, the natural zeolite from this research was from Bayan instead of Bayah. We have corrected it.
4	In the XRD pattern, a large amount of nickel phosphate is dispersed on the surface of zeolite, which may cover the original zeolite crystal phase, but SEM shows that the crystal appearance of zeolite modified by nickel phosphate is far smoother than that of unmodified zeolite, and the morphological characteristics of nickel phosphate (hydrothermal synthesis method) of other scholars are also presented here. However, it cannot explain the reasons of the morphology formation of the modified zeolite catalyst prepared by impregnation method in this paper. Could you add the XRD analysis and SEM morphology results of pure nickel phosphate here? Please explain it.	Thank you for pointing this out. We have marked morphological changes in Figure 2 in order to make the SEM image interpretation clearer. In order to clarify this statement, we show the SEM image at different magnifications (5000 ×).



At 5000 × magnification, it can be seen that there was a change on the morphological surface of natural zeolite (top) compared with zeolite-Ni(H₂PO₄)₂ (bottom), which presumably indicated the phase of Ni(H₂PO₄)₂ on the surface of the zeolite.

The morphology formation of nickel phosphate prepared by Wang et al.²⁷ seems irrelevant since it was not a metal-supported catalyst system. Hence, we delete it. Regarding the XRD analysis and SEM morphology results of pure nickel phosphate, it would have been interesting to explore this aspect. However, in our study, this would not be possible due to limited funds. Furthermore, it takes a relatively long time to be analyzed with a long queue in our region.

		The sample must be sent to the outer region, which takes a relatively long time.
5	Generally speaking, when acidic materials are impregnated on zeolite without acid, the acidity of the catalyst becomes stronger and stronger. Moreover, the nickel phosphate used in this paper is acidic itself. Even if the original acidic site of nickel phosphate is covered, the acidity of the modified catalyst should remain high acidic rather than decrease. In addition, some of the references cited in this paper are not found, and some do not explain the reason for the decrease in acidity caused by impregnation of the same acidic substance with acidic substance (metal loading capacity 8-10meq /g). Please show the characterization of unmodified zeolite and explain the related problems.	Thank you for pointing this out. We have added the acidity features of natural zeolite, which showed that the acidity value of natural zeolite was lower than modified zeolite. The previous study also reported that at higher metal loading than 8 mEq/g, the catalyst acidity of bentonite-ZrN relatively decreased. ⁷ Higher metal loading could make the agglomeration which reduces the acidity catalyst. These acidity features were also consistent with the result of catalytic activity towards isopropanol alcohol which showed that the metal loading of 8 mEq/g provided the best catalytic activity. References: (7) Hasanudin, H.; Asri, W. R.; Zulaikha, I. S.; Ayu, C.; Rachmat, A.; Riyanti, F.; Hadiah, F.; Zainul, R.; Maryana, R. Hydrocracking of Crude Palm Oil to a Biofuel Using Zirconium Nitride and Zirconium Phosphide-Modified Bentonite. <i>RSC Adv.</i> 2022 , <i>12</i> (34), 21916–21925. https://doi.org/10.1039/d2ra03941a.
6	The BET analysis results do not show the results of the analysis of different nickel phosphate loading, whether could you study the influence of different load on catalyst void fraction.	Thank you for pointing this out. It would have been interesting to explore this aspect. However, in our study, this would not be possible due to limited funds. Furthermore, it takes a relatively long time to be analyzed with a long queue in our region. The sample must be sent to the outer region, which takes a relatively long time. It is very interesting and necessary to explore the effect of different metal phosphate loading on the textural features and the catalyst void fraction in the other study.

: Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst

Manuscript ID : ao-2022-04647z

Title

Thank you for giving us the opportunity to submit a manuscript titled "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" for publication in the ACS Omega. We appreciate your dedicated time and effort in providing feedback on our manuscript. We have incorporated the concerns made by the editor. Those changes are written in yellow highlight text within the manuscript.

No	Comment from Editor	Responses
1	The corresponding author(s)' contact information should be placed in the 'Author Information' section before the references	Thank you for pointing this out. We have moved the corresponding author contact information to the 'Author information' section.
2	Please include email addresses from all authors and full mailing addresses of institutional affiliations in a separate Author information paragraph in the manuscript file (after Acknowledgment and before References) but keep the first page of the MS file as it is.	Thank you for pointing this out. We have followed the suggestion.
3	Acknowledgment section is missing. This is a mandatory section.	Thank you for pointing this out. We have added an Acknowledgment section. The revised text as follows: "ACKNOWLEDGMENT The author thanks Biofuel Research Group, the Faculty of Mathematics and Natural Science, Universitas Sriwijaya for the collaborative work and facilitating this research. We also acknowledge National Research and Innovation Agency (Badan

		Riset dan Inovasi Nasional) for providing instrumental analysis
		access.
4	Please use full words when labeling figures and tables (instead of Fig. 1 please use Figure 1, instead of Tab. 1 please use Table 1, etc.)	Thank you for pointing this out. We have changed the 'Fig. 1' to the 'Figure 1' accordingly.
5	Please note that Figure 4 is missing a in the caption.	Thank you for pointing this out. We have added the caption of (a).
6	TOC graphic should be labeled "for Table of Contents use only "and this item should be appended to the last page of the manuscript.	Thank you for pointing this out. We have changed label of "TOC GRAPHIC" to "for Table of Content use only".



Hasanudin, Hasanudin ao-2022-04647z.R1 <mark>- Revised Manuscript Submission to ACS Omega 22-Aug-2022</mark>

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> 22 Agustus 2022 13.27 Balas Ke: support@services.acs.org Kepada: hasanudin@mipa.unsri.ac.id Cc: hasanudin@mipa.unsri.ac.id, wanryanryan@gmail.com, lolaandini0@gmail.com, fatechafj@unsri.ac.id, mararachman@gmail.com, fitrihadiah@ft.unsri.ac.id, zainalf313@unsri.ac.id

22-Aug-2022

Journal: ACS Omega Manuscript ID: ao-2022-04647z.R1 Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Authors: Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal Manuscript Status: Submitted

Dear Dr. Hasanudin:

Your manuscript has been successfully submitted to ACS Omega, a multidisciplinary, open access journal for the publication of original and scientifically valid research. The journal offers expedited editorial decision-making and immediate open availability. Authors can rapidly publish their important research results and broadly distribute them to the global scientific community. Please note that there are publishing charges associated with this journal. Details can be found at http://acsopenscience.org. Should your manuscript be accepted, you will be required to pay for the Article Publishing Charges prior to publication. Authors may qualify for discounts. Article Publishing Charges are waived for invited Editorials and Perspectives.

Please reference the above manuscript ID in all future correspondence. If there are any changes in your contact information, please log in to ACS Paragon Plus with your ACS ID at http://acsparagonplus.acs.org/ and select "Edit Your Profile" to update that information.

You can view the status of your manuscript by checking your "Authoring Activity" tab on ACS Paragon Plus after logging in to http://acsparagonplus.acs.org/.

ACS Authoring Services

Did you know that ACS provides authoring services to help scientists prepare their manuscripts and communicate their research more effectively? Trained chemists with field-specific expertise are available to edit your manuscript for grammar, spelling, and other language errors, and our figure services can help you increase the visual impact of your research.

Visit https://authoringservices.acs.org to see how we can help you! Please note that the use of these services does not guarantee that your manuscript will be accepted for publication.

Thank you for submitting your manuscript to ACS Omega.

Sincerely,

Dr. Krishna Ganesh and Dr. Deqing Zhang ACS Omega

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at pubs-comms-unsub@acs.org if you

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the sender immediately by e-mail, and delete the original message.

11/4/22, 3:30 PMEmail Sriwijaya University - Hasanudin, Hasanudin ao-2022-04647z.R1 - Revised Manuscript Submission to ACS Omega 22-...do not want to receive these. Note, you will still receive updates about your manuscripts, reviews, or future invitations

Thank you.

to review.



10 Oktober 2022 20.11

Hasanudin, Hasanudin ao-2022-04647z.R1 - Manuscript Accepted 10-Oct-2022

1 pesan

ACS Omega <onbehalfof@manuscriptcentral.com> Balas Ke: Zhang-office@omega.acs.org Kepada: hasanudin@mipa.unsri.ac.id

10-Oct-2022

Journal: ACS Omega Manuscript ID: ao-2022-04647z.R1 Title: "Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst" Author(s): Hasanudin, Hasanudin; Asri, Wan; Andini, Lola; Riyanti, Fahma; Mara, Ady; Hadiah, Fitri; Fanani, Zainal Manuscript Status: Accept

Dear Dr. Hasanudin:

We are pleased to inform you that your manuscript has been accepted for publication in ACS Omega.

You will soon receive an email invitation from the ACS Journal Publishing Staff that contains a link to the online Journal Publishing Agreement. Please sign and submit the journal publishing agreement within 48 hours.

You will be contacted in approximately a week by the ACS Journal Publishing Staff regarding the proofs for your manuscript. Although production of your manuscript will start immediately, your manuscript will not be published until you pay the Article Publishing Charges, https://acsopenscience.org/open-access/pricing/. You may qualify for discounts. You will also be contacted shortly with information on how to pay your publishing charges. Article Publishing Charges are waived for invited Editorials and Perspectives.

After you submit corrections for your proofs and pay the article publishing charges, your manuscript will be published on the Web in approximately 48 hours. In view of this fast publication time, it is important to review your proofs carefully. Once a manuscript appears on the Web, it is considered published. Any change to the manuscript once it appears on the Web will need to be submitted to the journal office as a separate Addition & Correction manuscript via the ACS Paragon Plus environment.

Once your paper is published, you can track downloads and citations of your work by logging into the ACS Publishing Center (https://pubs.acs.org/publish/dashboard) and selecting "Published."

Sincerely,

Dr. Deqing Zhang Coeditor ACS Omega Phone: +86-10-62639355 Fax: (202) 559-0879 Email: Zhang-office@omega.acs.org

As an author or reviewer for ACS Publications, we may send you communications about related journals, topics or products and services from the American Chemical Society. Please email us at pubs-comms-unsub@acs.org if you do not want to receive these. Note, you will still receive updates about your manuscripts, reviews, or future invitations to review.

⁻⁻⁻⁻⁻

PLEASE NOTE: This email message, including any attachments, contains confidential information related to peer review and is intended solely for the personal use of the recipient(s) named above. No part of this communication or any related attachments may be shared with or disclosed to any third party or organization without the explicit prior written consent of the journal Editor and ACS. If the reader of this message is not the intended recipient or is not responsible for delivering it to the intended recipient, you have received this communication in error. Please notify the sender immediately by e-mail, and delete the original message.



Publication for ao-2022-04647z

1 pesan

support@services.acs.org <support@services.acs.org>
Kepada: hasanudin@mipa.unsri.ac.id, hasanudinkf@gmail.com

18 Oktober 2022 19.24

October 18, 2022

Journal: ACS Omega Manuscript No.: ao-2022-04647z (10.1021/acsomega.2c04647) Title: Enhanced isopropyl alcohol conversion over acidic nickel phosphate supported zeolite catalyst Authors: Hasanudin Hasanudin, Wan Ryan Asri, Lola Andini, Fahma Riyanti, Ady Mara, Fitri Hadiah, Zainal Fanani . Manuscript Status: Published

Dear Hasanudin Hasanudin,

Your article is now published on the ACS Omega website. The DOI assigned to this article is 10.1021/acsomega.2c04647, and is an accepted form of citation from publication to perpetuity. To view your article, please click on the DOI link below:

http://doi.org/10.1021/acsomega.2c04647

The link seamlessly directs readers to the full text version of the article on the ACS Publications website. Because ACS Omega is an open access journal, readers will have full and immediate access to your research paper.

To retrieve ACS Articles on Request links for any of your published ACS articles, login to the ACS Publishing Center (https://pubs.acs.org/publish/dashboard) and select 'Published'. You can then share any of your publications by clicking the 'Share full text' link below each of your publications. You may also find your ACS Articles on Request links on your ACS Paragon Plus Author Dashboard 24 hours after the ASAP Article is posted.

To order high-quality reprints of the article for convenient distribution, please click the link below:

http://pubstore.acs.org/file.aspx?&m=ao2c04647

You may order between 50 and 300 copies, and orders can be shipped globally.

Please note that ACS also offers a Citation Alert feature. Registering for an ACS ID allows you to, among other things, track all citations to your paper, lets you set your alert preferences, and gives you the option of maintaining a list of Favorite Articles and Saved Searches.

Thank you for choosing to publish with ACS Journals and ACS Omega.

If you have questions or require assistance, please contact the ACS Help Desk:

E-mail: support@services.acs.org Phone: +1 800-227-9919 (U.S. only) +1 202-872-4357 (outside the U.S.) 6:00 AM to 7:00 PM EST

Sincerely, ACS Publications Team Most Trusted. Most Cited. Most Read. https://pubs.acs.org