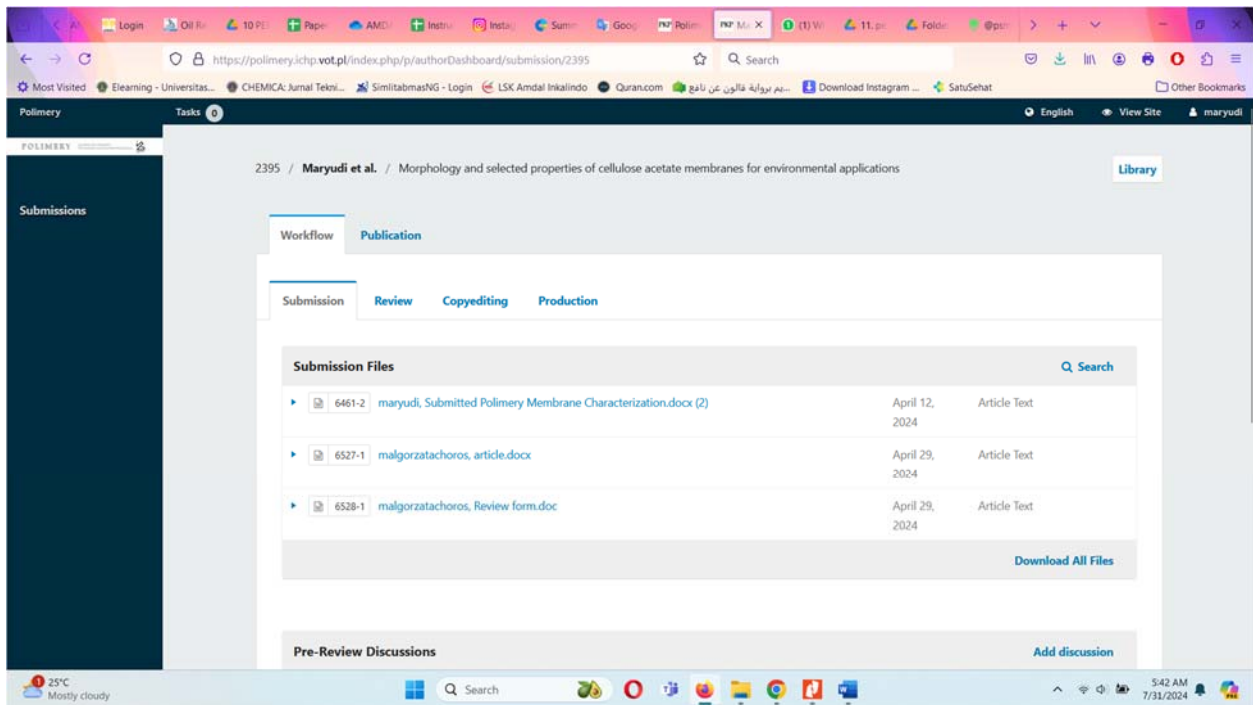
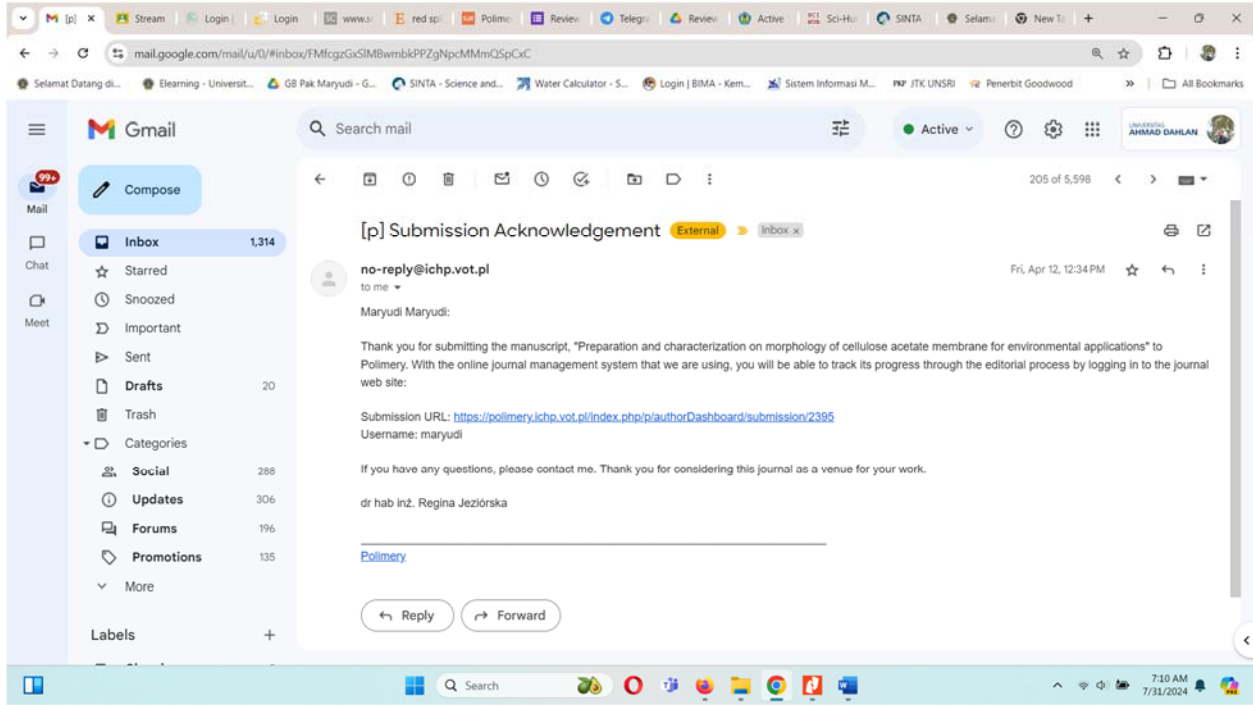


# Proses Review artikel: **Morphology and selected properties of cellulose acetate membranes for environmental applications**

**12 April 2024: submit**



## 15 April 2024: pre-review

**Article**

**Participants**

- Malgorzata Choroś (malgorzatachoros)
- Maryudi Maryudi (maryudi)
- Mateusz Borkowski (mateuszborowski)

**Messages**

Note	From
Dear Maryudi Maryudi,  We kindly inform you, that we have received your manuscript "Preparation and characterization on morphology of cellulose acetate membrane for environmental applications".  Please send proposals of the four reviewers for your article with their email addresses. I have to inform you, that the reviewer of a paper can not be a person from the same institution as the authors, the reviewer should be different from another country than authors.  Please provide ORCID numbers ( <a href="https://orcid.org/">https://orcid.org/</a> ) for the authors of the article (if they have).  Please, conform the text to the Editorial Requirements (Enclosure) moving Figures out of the text, double spacing between rows, properly saved references - DOI numbers.  Please send figures in editable format (preferred formats: Excel or Origin) and original photos in the highest possible resolution (jpg over 300 dpi).	mateuszborowski 2024-04-15 12:38 PM

## 22 Mei 2024: review

**[p] Editor Decision** (External) → Inbox

no-reply@ichp.vot.pl  
to me, Dhias, Amillia

Wed, May 22, 2:24 PM

Dear Maryudi Maryudi, Dhias Cahya Hakika, Amillia Amillia:

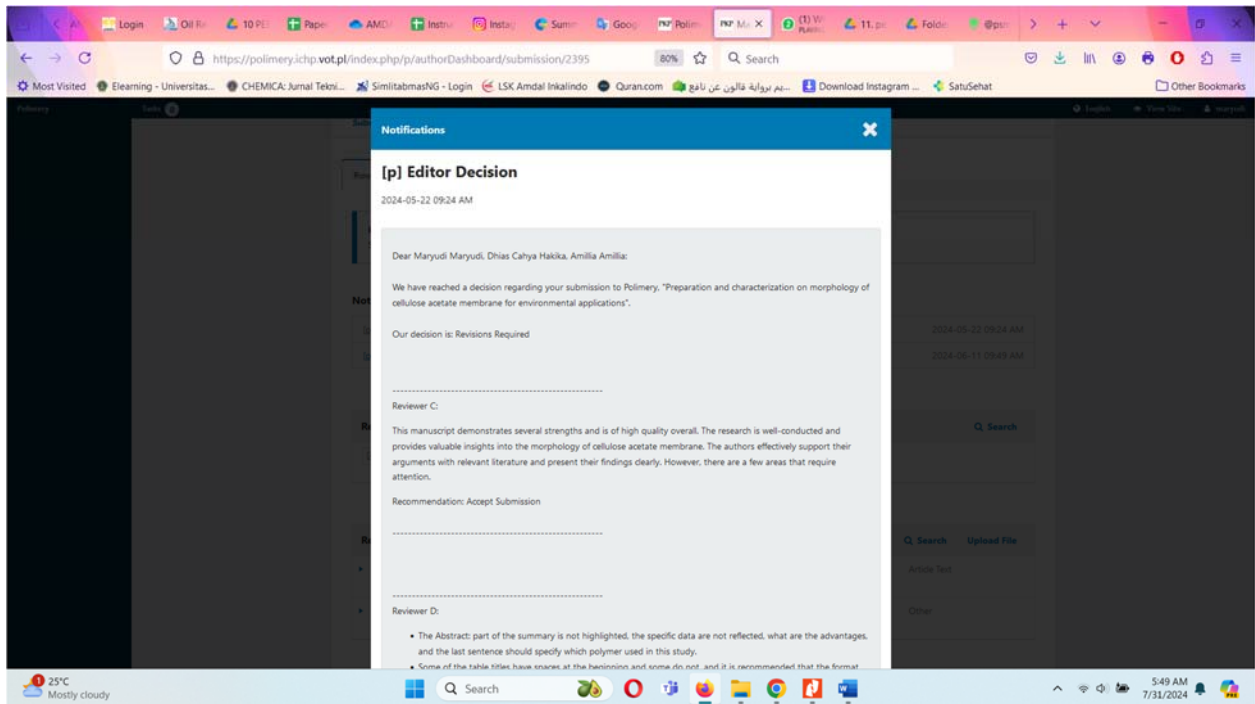
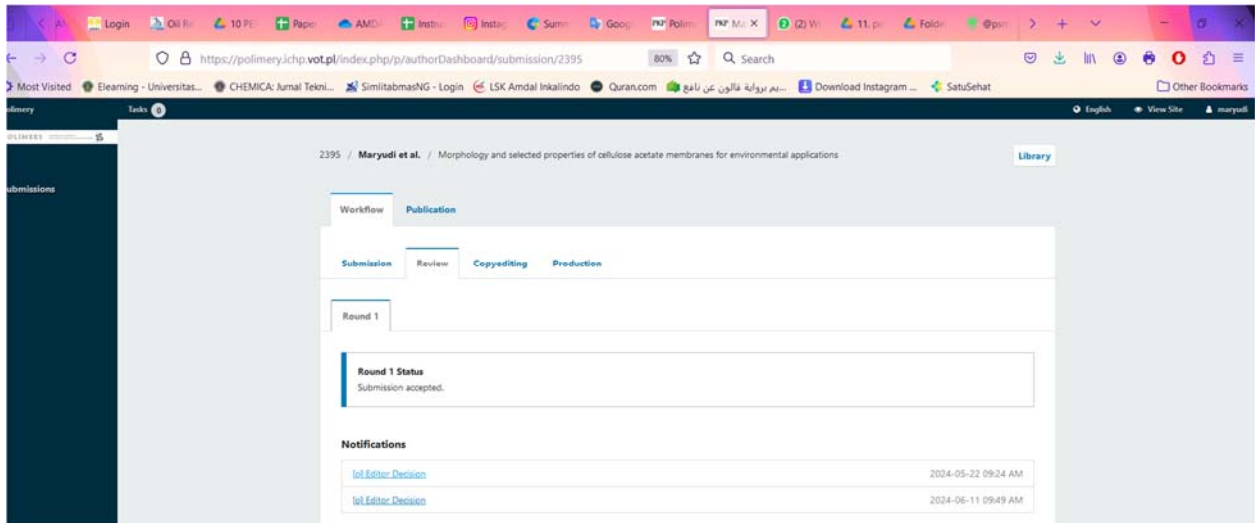
We have reached a decision regarding your submission to Polimery, "Preparation and characterization on morphology of cellulose acetate membrane for environmental applications".

Our decision is: Revisions Required

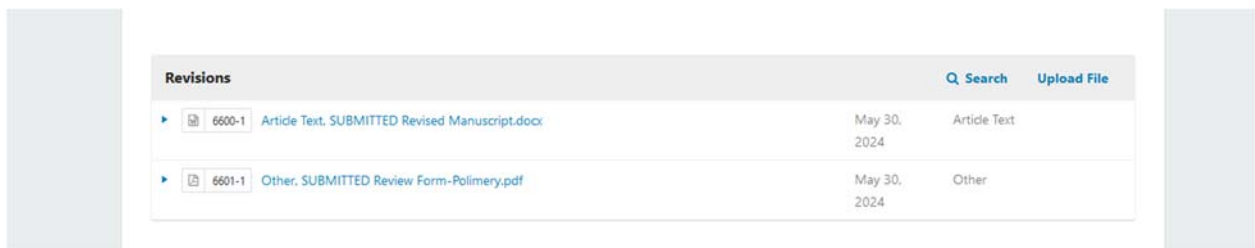
Reviewer C:

This manuscript demonstrates several strengths and is of high quality overall. The research is well-conducted and provides valuable insights into the morphology of cellulose acetate membrane. The authors effectively support their arguments with relevant literature and present their findings clearly. However, there are a few areas that require attention.

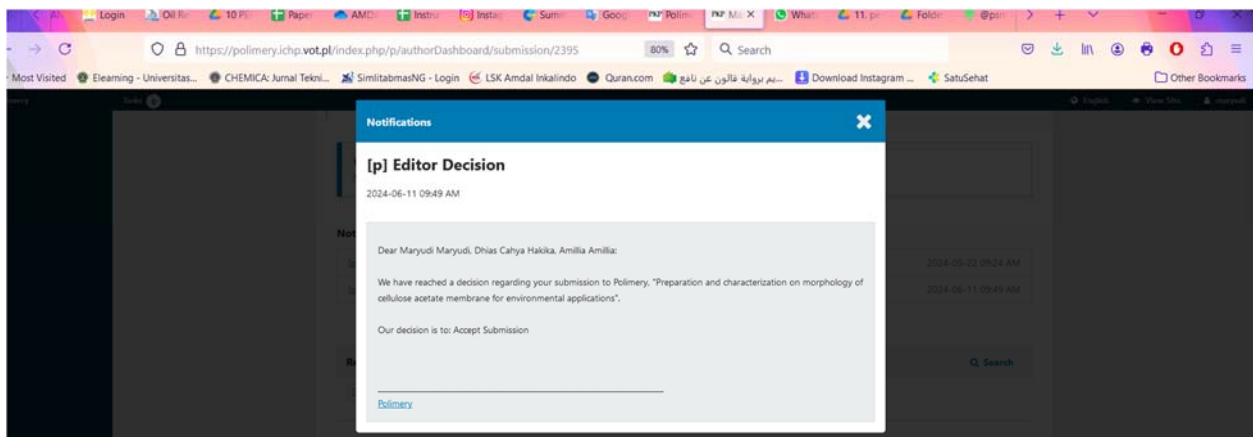
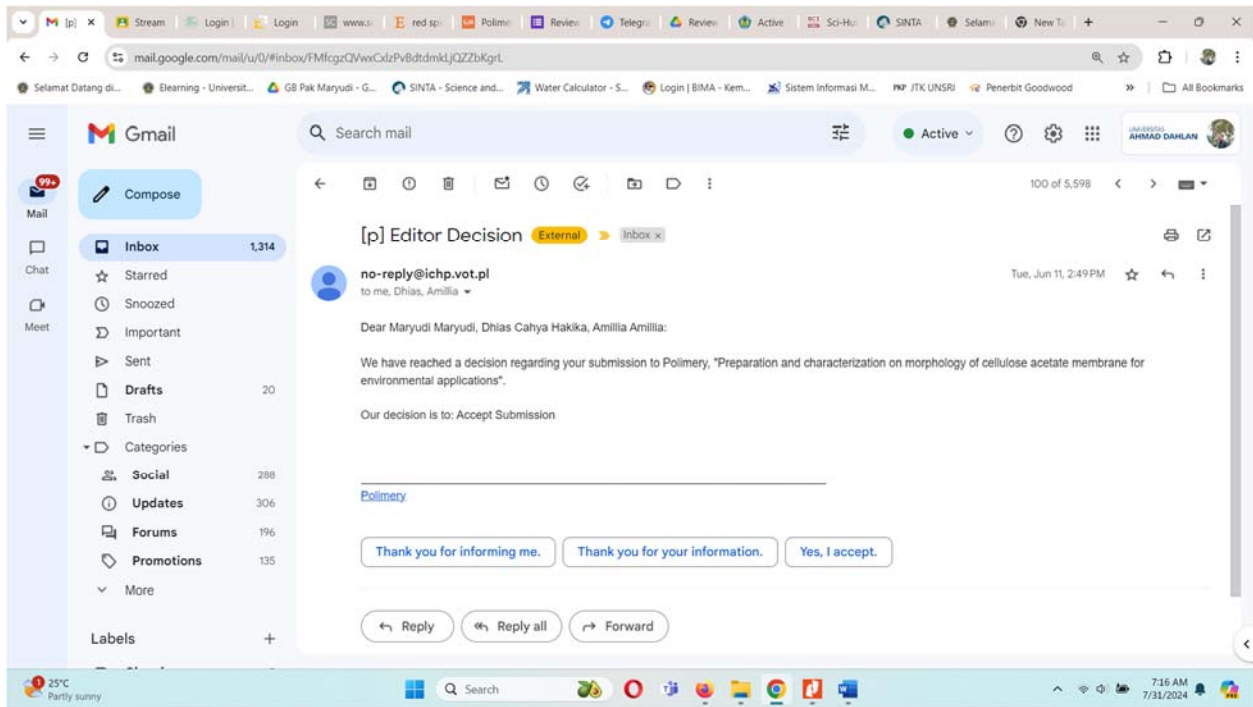
Recommendation: Accept Submission



30 Mei 2024: submit revisi



11 Juni 2024: accepted



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Published: 2024-05-29

### Articles

Article Title	Authors	Page Range
Liquid heat capacity of an amorphous poly(lactic acid)	Marcin Skolnicki, Anna Czerniecka-Kubicka, Iwona Zarzyka, Marek Pyda	283-291
Morphology and selected properties of cellulose acetate membranes for environmental applications	Maryudi Maryudi, Dhas Cahya Hakika, Amilia Amilia	292-299
Synthesis of double network nanohydrogel and its performance in release of doxorubicin	Ghasem Rezaejaade Bardajee, Maede Noruzian, Khadijeh Didehdan	300-311

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### Morphology and selected properties of cellulose acetate membranes for environmental applications

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Amilia Amilia  
DOI: <https://doi.org/10.14314/polimery.2024.5.2>

**Abstract**  
Microporous membranes were obtained by dry-wet phase inversion from a solution of cellulose acetate (CA) in acetone (13, 14 and 15 wt%). Polyethylene glycol was used as a blowing agent. The structure and mechanical properties were examined. FT-IR spectra show that the addition of polyethylene glycol improves the thermodynamics of the solution and increases the hydrophilicity of the membrane. The SEM method confirmed the microporous structure of membranes with an asymmetric structure and various pore sizes and porosities. Higher CA concentration resulted in better tensile properties.

**Keywords**  
biopolymer ; cellulose acetate ; membrane ; phase inversion biopolymer ; octan celulozy ; membran ; inwersja faz

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Maryudi, M., Hakika, D. C., & Amilia, A. (2024). Morphology and selected properties of cellulose acetate membranes for environmental applications. *Polimery*, 69(5), 292-299. <https://doi.org/10.14314/polimery.2024.5.2>

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292 POLIMERY 2024, 69, nr 5

## Morphology and selected properties of cellulose acetate membranes for environmental applications

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Amilia Amillia<sup>3</sup>  
DOI: <https://doi.org/10.14314/polimery.2024.5.2>

**Abstract:** Microporous membranes were obtained by dry-wet phase inversion from a solution of cellulose acetate (CA) in acetone (13, 14 and 15 wt%). Polyethylene glycol was used as a blowing agent. The structure and mechanical properties were examined. FTIR spectra show that the addition of polyethylene glycol improves the thermodynamics of the solution and increases the hydrophilicity of the membrane. The SEM method confirmed the microporous structure of membranes with an asymmetric structure and various pore sizes and porosities. Higher CA concentration resulted in better tensile properties.

**Keywords:** biopolymers, cellulose acetate, membrane, phase inversion.

### Struktura i wybrane właściwości membran z octanu celulozy do zastosowań środowiskowych

**Streszczenie:** Mikroporowate membrany otrzymano metodą inwersji fazy sucho-mokrej z roztworu octanu celulozy (CA) w acetonie (13, 14 i 15% mas.). Jako środek porotwórczy zastosowano glikol polietylenowy. Zbadano strukturę i właściwości mechaniczne. Widma FT-IR pokazują, że dodatek glikolu polietylenowego poprawia termodynamikę roztworu i zwiększa hydrofilowość membrany. Metodą SEM potwierdzono mikroporową strukturę membran o asymetrycznej budowie i różnej wielkości porów oraz porowatości. Większe stężenie CA skutkowało lepszymi właściwościami mechanicznymi przy rozciąganiu.

**Słowa kluczowe:** biopolimery, octan celulozy, membrany, inwersja faz.

25°C  
Mostly cloudy

6:08 AM  
7/31/2024