

# BioPRIA NEWSLETTER

July 2024

## Congratulations to Prof Warren Batchelor and Dr Joel Hooper

We are pleased to celebrate the promotion of Warren Batchelor to Professor and as the newly appointed Department Deputy Head of Chemical and Biological Engineering. With this new appointment, Warren will be stepping back as Deputy Director at BioPRIA.

We are delighted to announce Dr. Joel Hooper as the new Deputy Director at BioPRIA. Joel is a Senior Lecturer, Monash Chemistry and also the Chemistry Platform leader at BioPRIA. He is a well recognised specialist of Organic Chemistry, Catalysis and Organometallics. Joel will lead the integration of Green Chemistry and Engineering for Sustainable solutions.

Many thanks to Prof Warren Batchelor for his fantastic and loyal duty as Deputy BioPRIA Director since 2016.



## Visiting Scientist from University of Malaya, Malaysia

We are pleased to host Assoc. Professor Bey Fen, Leo from the University of Malaya, Malaysia, for her sabbatical placement at BioPRIA from March to July 2024.

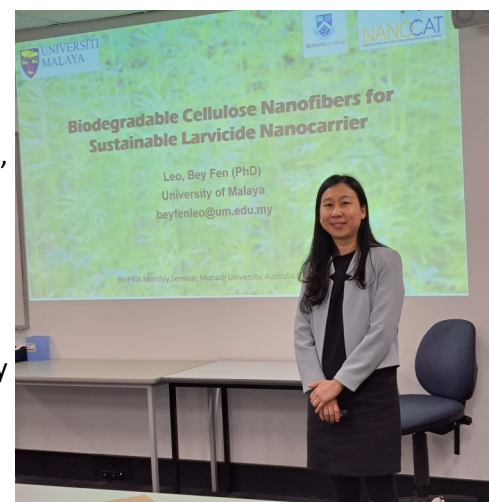
Collaborating with Prof. Warren Batchelor, Dr. Leo has been focusing on developing cellulose nanomaterials for biomedical applications, with specific attention to controlling size, porosity, and biodegradability.

In May 2024, Dr. Leo presented a lecture on “Biodegradable Cellulose Nanofibers for sustainable Larvicide Nanocarriers” during the BioPRIA Seminar Series, which was well-received.

Dr. Leo shared her experience:

“The visit to BioPRIA has been incredibly meaningful for me. I gained extensive experience in developing cellulose nanomaterials, from raw sources to nanofibers, and understanding the factors that affect their properties. The discussions with BioPRIA colleagues have brought new ideas and perspectives to my project. The students and staff have been exceptionally friendly and helpful during my stay. I extend a special thanks to Prof. Warren Batchelor and Prof. Gil Garnier for their continued support and insightful comments, which have significantly improved my research ideas. I look forward to establishing more collaborative opportunities between my research group and BioPRIA”.

We are grateful for Dr. Leo’s contributions and look forward to future collaborations.



## Conference Highlight

Prof Gil Garnier was an invited Keynote Speaker to the 13th International Colloids Conference held in Sitges, Barcelona, Spain. As well as presenting, Gil also Chaired a morning session of presentations. This conference was held from 9-12 June. This annual conference offered attendees the opportunity to exchange new ideas, establish new scientific relationships and international collaborations.

Gil presented on "Nanocellulose: precious or sublime material?"

During this travel, Gil visited Cambridge University, UK continuing his collaboration with the Department of Chemical Engineering.

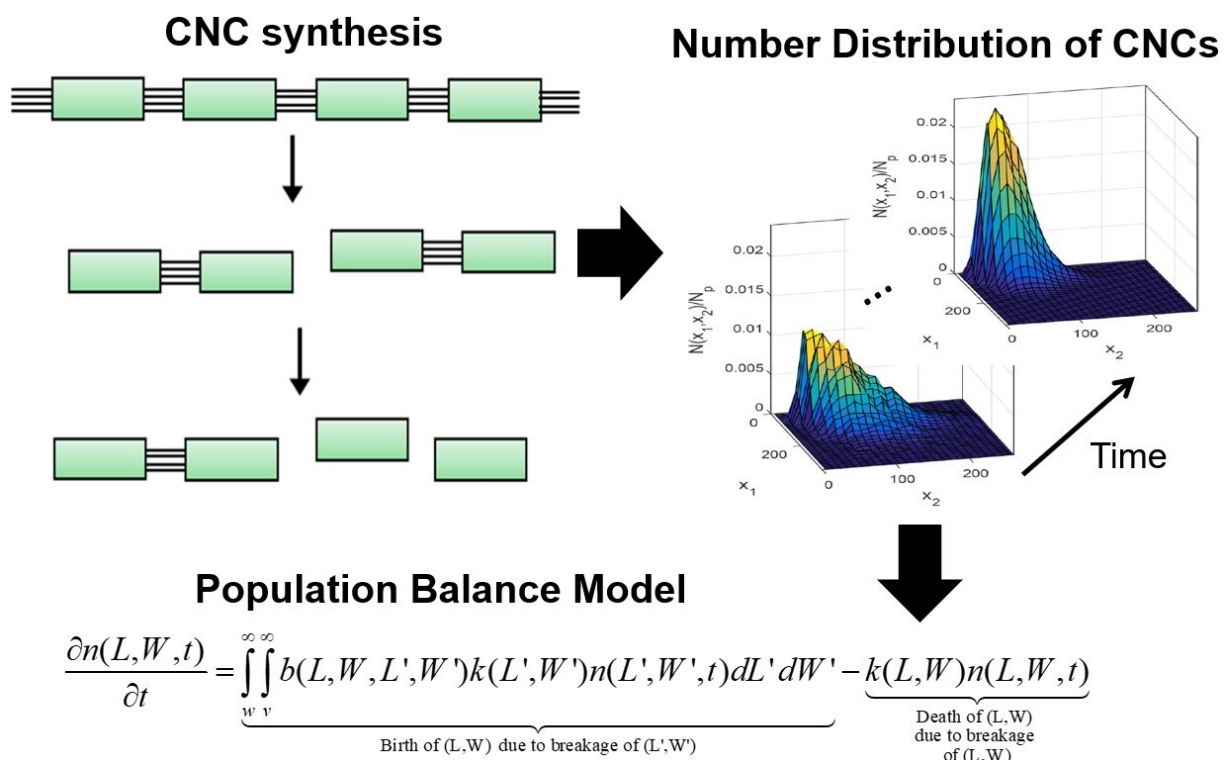
Gil was also an invited Keynote Speaker at the Wallenberg Wood Innovation and Biopolymers Summer Workshop in Kolmarden, Sweden. His presentation was titled: "Nanocellulose for Biomedical and Agriculture Applications"



## Monash University Malaysia PhD Visitor

BioPRIA welcomed back PhD student Janice Leong from Monash University Malaysia for a two-month research visit from May to July. She continued her research collaboration with Prof Warren Batchelor on developing a computational model using the population balance model to track the transients of the two-dimensional morphological evolution of cellulose nanocrystals (CNCs) during synthesis. Her visit includes weekly discussions with Prof Warren on analyzing CNC size data for use in her model.

"I am immensely grateful for the opportunity to be back at BioPRIA for continued research collaboration. In-person discussions at BioPRIA allowed for more effective outcomes and provided a clearer perspective on the experimental side, which helped refine my methodology for developing a computational framework for tracking CNC size evolution. The model will serve as a useful tool for CNC size prediction and provide a comprehensive understanding of the intricate breakdown of cellulose during synthesis. Thank you to BioPRIA for hosting."



## Congratulations to Craig Stocker

We extend our congratulations to Dr Craig Stocker who recently completed his PhD.

After three years of hard work and dedication Craig was certified by Monash University.

His thesis titled “Lignocellulose for Sustainable Agriculture” was under the supervision of Prof Gil Garnier, Prof Tony Patti and Assoc Prof Vanessa Wong. Craig’s research focussed on how to utilise wood fibres to synthesise sustainable hydrogels and sprayable mulches. This resulted in two published papers and one provisional patent for a sprayable nanofiber-based formulation.

## Welcome to BioPRIA

We are pleased to welcome Dr. Ella Charnetskaya as our new Technical Officer.

Ella gained her PhD at Monash University, School of Chemistry (Australia) in November 2023. Before joining the BioPRIA team Ella was a Teaching Associate with the School of Chemistry (Monash). She has a passion for solving technological matters by using theory, engineering thinking and troubleshooting skills.

Outside of work Ella enjoys sailing, nature, reading and classical music.



## Latest Publications

Raghuwanshi, V. S., Mendoza, D.J., Mata, Jitendra., Garnier, G. **Modulating the Isotopic Hydrogen-Deuterium Exchange in Functionalized Nanocellulose to Optimize Sans Contrast**[doi.org/10.2139/ssrn.4798718](https://doi.org/10.2139/ssrn.4798718)

## Conferences of Interest

### APPITA New Speaker Competition

Applications are now open for the 2024 Appita New Speaker Competition Runoffs.

This is an exciting opportunity for emerging voices in the pulp and paper industry to showcase their knowledge and presentation skills. Applications close on 1<sup>st</sup> August so **SIGN Up Now!**

### 2024 Appita Annual Conference - Save the Date

**4 - 5 December 2024**

Stay tuned for the release of the program and updates for the **2024 Appita Annual Conference & International Fibre Packaging Symposium - Recyclability & Beyond** to be held at the **Distinction Hotel, Rotorua, New Zealand**. More information coming soon.

## CONTACT BIOPRIA

Bioresource Processing Research Institute of Australia (BioPRIA)

Department of Chemical and Biological Engineering

15 Alliance Lane (Building 59), Clayton Campus

Monash University Victoria

Tel: (03) 9905 3456

Fax: (03) 99053413



[www.biopria.com.au](http://www.biopria.com.au)



[linkedin.com/company/biopria](https://www.linkedin.com/company/biopria)



[@biopria5249](https://www.youtube.com/@biopria5249)