



28<sup>th</sup> - 31<sup>st</sup> July 2026

Borneo Convention Centre Kuching,  
Sarawak, Malaysia

# S11 FUNCTIONAL AND SUSTAINABLE POLYMERS FROM BIO-RESOURCES

## Renewable Building Blocks:

Developing polymers from natural sources, including specialized chitin-chitosan systems and other bio-feedstocks.

## Advanced Material Design:

Creating biodegradable polymers and bio-composites that are tough enough for real-world use.

## The Circular Economy:

Focusing on the entire lifecycle of a material, from sustainable production to smart end-of-life management (like composting or chemical recycling).

Symposium Chair  
Prof Dr Suwabun Chirachanchai, Thailand



**Submit your Abstracts Today!**



Scan Here for more information



[macro2026.org/symposium](https://macro2026.org/symposium)



[secretariat@macro2026.org](mailto:secretariat@macro2026.org)



## Introduction:

The rapid advancement of polymer science and growing environmental concerns have highlighted the urgent need for sustainable and bio-based materials. This symposium will focus on the design, synthesis, and application of functional polymers derived from renewable resources. Emphasizing both fundamental research and practical innovations, it aims to showcase cutting-edge developments in biodegradable polymers, bio-composites, chitin-chitosan systems, and other advanced polymeric materials. By integrating sustainability with functionality, these polymers offer promising alternatives to conventional petroleum-based materials, supporting circular economy and green technologies.



## Objectives:

To present recent advances in bio-based and functional polymers, emphasizing design, synthesis, and application.

To foster interdisciplinary collaboration among researchers, industrial practitioners, and policymakers.

To explore innovative strategies for sustainable polymer production, processing, and end-of-life management.

To highlight the potential of renewable resources in creating high-performance, eco-friendly polymeric materials.