



Chairperson: Nagahiro SAITO

Honored Chairperson: Osamu TAKAI

Organized by: BMMP Organizing Committee

Supported by: Institute of Materials Innovation, Nagoya University

Campus ASIA program, Nagoya University

Nagoya University - Chulalongkorn University International Collaboration in
Sustainable Materials Engineering

■ SCOPE

Organisms produce a wide variety of materials at ambient temperature and pressure. Moreover, each material produced plays an important role in each function in living systems. Biomimetic Materials Processing (BMMP) is an academic discipline that aims to discover and realize engineering processes, engineering materials, devices, and engineering systems with novel functions through the development of knowledge and understanding of relevant biological products, structures, functions, and processes. Therefore, BMMP is not a simple imitation of biological material processes, but a fusion of bionics, electronics, photonics, mechanics, energy technology, chemical engineering technology, etc. to achieve a new perspective that is not bound by conventional engineering wisdom. The BMMP based on this concept has the potential to provide a major turning point in the conventional scenario through materials processing for a sustainable future society.

For example, in recent years, we have been facing the technical challenge of how to control carbon dioxide emissions from human activities, as the risk of global warming is extremely high. On the other hand, if we look at the biological world, we find that the processing of these materials is often carried out in an extremely environmentally harmonious process. Therefore, learning from these biological processes will lead to the realization of low environmental impact processing, which has never been achieved before (Nos. 9 and 13 of the SDGs). Furthermore, learning about the water treatment, energy conversion, storage, and natural recirculation capabilities of living organisms can contribute to solving many of the challenges facing humanity (Nos. 6, 7, 12, 14, and 15 of the SDGs).

Moreover, future researchers and engineers will be essential in developing the technologies to build such a

sustainable society. Moreover, these global challenges require precisely the kind of true collaboration that transcends national borders, and it is important to develop such human resources.

In this symposium, world-class researchers will present their recent research results and their expected future, and young researchers will present their own research progress and provide a forum for discussion of these results and progress into the future.

■ SYMPOSIUM TOPICS

I. **Process Basic**

self-organization, molecular recognition, biomineralization, process-mimetics, function-mimetics, characterization, nano-structure formation, patterns, etc.

II. **Material Basic**

(functions, forms, structures, properties, composites, etc.)

III. **Device Applications**

medical applications, pharmaceutical applications, optical applications, electronic applications, mechanical applications, chemical applications, coating applications, etc.

IV. **Process Applications**

solar cell, photocatalysis, battery, biomass, simulation, ecological designs, etc.

V. **Characterizations**

(scanning probe microscopy, electron microscopy, etc.)

■ SYMPOSIUM SCHEDULE

January 21 (Wed)	Registration & Preparation
January 22 (Wed) ~ 24 (Sat)	Presentation & Discussion
January 25 (Sun) ~ 26 (Mon):	Factory Tour & Excursion

■ SYMPOSIUM LANGUAGE

The official language of the symposium is English. All abstracts should be submitted in English. The conference lectures should also be presented in English.

■ PRESENTATION STYLE

Presentations will be delivered in two formats:

- Oral Presentations

■ REGISTRATION

Participants are kindly requested to submit their registration details to the BMMP Secretariat by e-mail at bmmp@sp.material.nagoya-u.ac.jp.

Please include the following information:

1. Full Name (First, Middle, Last)
2. Position / Academic / Professional Title
3. Institution / Organization
4. Department / Division
5. E-mail Address
6. Title of Presentation

■ ABSTRACT SUBMISSION

Deadline: **Dec 05, 2025**

Please send your abstract by e-mail to bmmp@sp.material.nagoya-u.ac.jp

■ CONFERENCE FEE

Conference Fee:

Academic :	Free
Company :	10,000 JPY

*The payment is available onsite and only cash payment is acceptable.

■ CORRESPONDENCE

Secretariat General:

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