

SCIENTIFIC AND METHOD MODULES

Module name	From Molecules to Materials: Innovative Bio-Based Materials and Technologies
Number	2025-T4
Aims	This module links molecular sciences and materials science. It invites you to engage in a dynamic discussion centered on bio-based materials and cutting-edge technologies for novel applications. The goal is to offer a wider perspective on the future directions of this innovative research area together with distinguished partners from international, national, and regional projects, alongside invited scientists, local and regional policymakers, and government.
Basics	General knowledge of biochemistry and materials science
Contents	The module will contain introductory and more specialised lectures on: <ul style="list-style-type: none"> • new methodologies and principles in bioactive matter and AI for advancing sustainable technologies, • technology transfer in natural and life sciences, with a focus on fostering innovation and start-ups in these fields, • chemical production within a circular economy framework, • resource management and sustainability, including critical areas such as energy, feed, and water, • sensor technologies for applications in medicine and environmental monitoring.
Methods	Lectures / poster session
Type	Single-day block course
Date (month/year)	24 March 2025
Time	9.00 – 18.00
Work load	9 hours presence (online course), 51 hours self-study
Examination	- 2-page report/essay on two topic sessions of the module (self-selected; submission to Prof. Pompe within 7 days after the event) or - participation in the poster session with an active presentation
Credit points	2
Responsible scientists	T. Pompe
Guest lecturers	Dr. Felix Krujatz, André Hofmann, Prof. Dr. Manuel Salmeron-Sanchez, Prof. Dr. Giovanni Volpe, Dr. Jagannath Rao Marati, Dr. Rohan Karande, Dr. Elina Dace, Prof. Dr. Alper Gurarslan, Washington Logroño, Janine Henkel, Prof. Dr. Falk Harnisch, Dr. Manuel Häußler, Benjamin Herzog, Dr. Christian Sonnendecker, Prof. Dr. Ralf Seidel, Prof. Dr. Ulrich Rant, Veronika Riedl
Industrial partners	-
Recommendations for literature, e-learning	-

SCHEDULE for Module 2025-T4

See agenda.

Didactic elements:

Lectures, talks, posters, discussions, etc.

Expected performance:

Active participation in discussions during event/breaks/poster session etc.

Exam:

For the exam a written essay accompanied by a critical analysis (total 2 pages) will be graded.