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## Bio-Based Materials from Plant Cells: Strategies for Building Functional Bio-Assemblies and Composite Structures

Guest Editors:

### Dr. Nicolas Le Moigne

Polymers Composites and Hybrids (PCH), IMT Mines Ales, 6 avenue de Clavières, 30319 Alès, CEDEX, France

### Prof. Dr. Ingo Burgert

Institute for Building Materials, ETH Zürich, 8093 Zürich, Switzerland

### Dr. Johnny Beaugrand

INRAE Institut National de La Recherche Agronomique pour l'agriculture, l'alimentation et l'environnement, 75338 Paris, France

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**closed (31 January 2022)**

### Message from the Guest Editors

Dear Colleagues,

Plant cells are fascinating hierarchical bio-assemblies that are perfectly designed to fulfill a specific role in nature (structural, protection, energy storage, transportation, etc.) and can adapt in an evolutive environment via polymer remodeling. Though plants have been used for several thousands of years to satisfy human needs such as food, textile, mud houses, etc., new uses may arise from the growing interest in the development of bio-based and smart materials in technical and high-performance applications. In this regard, ongoing interdisciplinary research gathering plant biology, biotechnologies, wood science, and polymers and materials science is a driving force to boost ideas and innovations around the efficient use of wood and plant biomass for the development of new bio-based materials with original functionalities.

### Keywords

- plant cells
- materials
- biopolymers
- functionalization
- deconstruction and reassembly
- processes



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## Message from the Editor-in-Chief

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