



Mechanical Modeling of Viscoelastic Composite Materials

Guest Editors:

Prof. Dr. Frédéric Lebon

CNRS, Centrale Marseille, Aix
Marseille Université, LMA UMR
7031, Marseille, France

Dr. Reinaldo Rodríguez-Ramos

1. Facultad de Matemática y
Computación, Universidad de La
Habana, San Lázaro y L, Vedado,
La Habana 10400, Cuba
2. PPG-MCCT, Universidade
Federal Fluminense, Av. dos
Trabalhadores 420, Vila Sta.
Cecília, Volta Redonda 27255-
125, Brazil

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Message from the Guest Editors

Nowadays, there are different types of materials characterized by a viscoelastic response, where the phases generally involve both instant elastic and time-dependent viscous behavior, as well as those with hierarchical structures found in biological contexts driven by natural evolution. The present Special Issue intends to collect some theoretical and experimental approaches with the aim of achieving better performance by intentionally manipulating the complexity and inner design, and by ensuring multilength scale property control. In addition, the study of creep and relaxation behavior in viscoelasticity has gone some way towards enhancing the understanding of these kinds of composites. Viscoelastic materials are often used to improve the capability of systems to dissipate more energy. Their mechanical properties depend mainly on the frequency of excitations and temperature. The family of rheological models that consider the dependence of the mechanical properties of these materials on the excitation frequencies is very attractive. Moreover, the so-called fractional models, where fractional derivatives are used, can be considered relevant for the purpose of this work.





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Editor-in-Chief

Prof. Dr. Maryam Tabrizian

1. Department of Biomedical Engineering, Faculty of Medicine and Health Sciences, McGill University, Montreal, QC H3A 2B6, Canada

2. Faculty of Dentistry and Oral Health Sciences, McGill University, 3640 Rue University, Montreal, QC H3A 0C7, Canada

Message from the Editor-in-Chief

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Materials Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

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