



Relaxation Phenomena in Polymers

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Message from the Guest Editors

This Special Issue covers the relevant aspects of relaxation phenomena in polymers. The glassy state, viscoelasticity, and fracture mechanics are time-dependent phenomena that characterize the fundamental knowledge of polymers. Among the others, the following arguments of physical and engineering interest are still open to debate in the literature:

- The polymers' time dependence induced by strain changes and temperature variations is ordinarily reported.
- Structural relaxation effects during manufacturing operations generate the residual stresses in thermoplastic polymers.
- The residual stresses that arise during the manufacturing process, which involves chemical reactions, are the source of early flaw formation that triggers the development of other high-performance carbon/epoxy laminate damage mechanisms, influencing their lifetime.
- Determining the properties of glassy polymers confined at the nanometric length scale, where one sample dimension is much lower than the statistical macromolecular dimension, is challenging and represents an open literature dilemma.





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