



## Multiscale Analysis of Polymer Nanocomposites

Guest Editors:

**Dr. Tien-Thinh Le**

1. Laboratoire Modélisation et  
Simulation Multi Echelle,  
Université Paris-Est, MSME UMR  
8208 CNRS, 5 bd Descartes, 77454  
Marne-la-Vallée, France  
2. Faculty of Mechanical  
Engineering and Mechatronics,  
Phenikaa University, Hanoi,  
Vietnam

**Dr. Goshtasp Cheraghian**

Civil Engineering and  
Environmental Science,  
Technische Universität  
Braunschweig, 38106  
Braunschweig, Germany

### Message from the Guest Editors

Polymer nanocomposites are heterogeneous materials, exhibiting novel multi-physical phenomena that are linked to interactions at the smallest scales. These interactions cause significant alterations of the local physical properties – in particular, of the matrix phase (for instance, transition and/or modification of phase, specific conformation, modification of the degree of crystallinity for an organic polymer matrix, etc.). For such nano-reinforced materials, interactions at small scales (between nanofillers and the matrix, or between different nanofillers) are no longer negligible and must be interpreted and modeled in a multi-scale framework.

Deadline for manuscript  
submissions:

**closed (31 October 2021)**

