

EDITORIAL

Polymer Composites in the Spotlight

The landscape for science and technology of composite materials, and in particular those with polymers as one of their ingredients, is vast and diverse. Composites are used in so many applications, ranging from aerospace, to environmental remediation, to rubber reinforcement, that it is almost impossible to give an exhaustive panoramic view of the field.

At the *Journal of Applied Polymer Science*, given the number of articles we publish in this area, we feel, however, most suited to the task of trying to paint this expansive landscape. In particular, the focus of this special issue is on composites with inorganic fillers, starting from clays (unmodified, as in the paper by Xingui Zhang, or organo-functionalized as in the research by Steele *et al.*), then on to nanotubes (as in the work by Gupta and research from Chaoyang Wang and co-workers), and the most recent addition to the field, graphene (see the article by Feng Luo *et al.*). Our roster also features research on glass fiber composites (see Sarfaraz and Subhash), and composites with metal compounds such as zinc oxide (as in the work by Alves *et al.*).

After mentioning the materials, a note on their applications is indeed warranted, as polymer composites are researched for their reinforcement capabilities towards the host matrix (polymeric or inorganic), but also to add functionalities, for example in

fire retardants or conducting materials, or to help with drug delivery applications. The morphology and properties are affected by fillers as well, so, for example, hydrogel composites are also examined in this special issue, as well as a variety of fibers and a number of nanocomposites.

The highly international character of current polymer research is also reflected by the variety of contributions to this special issue, and we think this also shows the large interest at a global level in composites, as witnessed by the size of their market and sheer variety of applications in which they are involved.

Composites containing renewably sourced or biopolymers are only marginally covered in this special issue. This was a conscious choice, as those will be the subject of a future special issue specifically focused on these materials.

We hope you will enjoy reading this selection of articles from the *Journal of Applied Polymer Science* as much as we enjoyed putting it together, and we are looking forward to continuing the strong tradition of our journal in this area.

Stefano Tonzani

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