

## Topical Collection

# Reinforced Polymer Composites

### Message from the Collection Editor

Polymer materials are widely used in human life, medicine, industry, and so on. However, polymers have a lot of disadvantages, such as insufficient strength, stiffness, creep, and low usage temperature. That is why reinforcing fillers are widely used to improve polymer properties. The following factors should be taken into account to reach high mechanical properties when nanofillers are used: (a) Uniform distribution of the filler in the polymer matrix will result in a composite physical and chemical properties uniformity over its volume; (b) filler should not agglomerate inside the polymer bulk sample because it might act as stress concentrator; (c) interaction between fillers and polymer matrix should result in a composite supramolecular structure improvement. Special attention will be given to the following aspects:

- Effect of polymer-filler interfaces interaction on the composite properties;
- Carbon fillers for polymers, including fibers, nanotubes, graphene, etc.;
- Solid-state technique for polymer composite formation, such as ball-milling, extrusion, molding, etc.;
- Polymer composites by additive manufacturing;
- Using of recycling materials in polymer composites.

### Collection Editor

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## Polymers

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Since its foundation in 2009, *Polymers* has developed into an internationally renowned, extremely successful open access journal. The editorial team and the editorial board dedicatedly combine open-access publishing and high-quality rigorous peer reviewing. The performance of the journal has proven this strategy to be well-suited and highly successful. This is reflected in the increasing impact factor of *Polymers*, the most recent one being 4.7.

I would like to invite you to contribute to the success of the journal by sending us your high quality research papers. We would be pleased to welcome you as one of our authors.

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### Editor-in-Chief

Prof. Dr. Alexander Böker

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