Special Issue

Applications of Process Simulation in Polymer-Based Products Injection Molding

Message from the Guest Editors

Injection molding is the most widely used manufacturing process to produce polymer-based products for various markets including automotives, appliances, electronics and packaging, etc. For either the non-reinforced or the filler reinforced polymer material, the control process variables directly affect the material microstructure and crystallinity, thus affecting the molded part properties and quality. For large and complex molding parts, such as a car bumper, its tooling is very expensive, and once the tooling is cut, it is non-reversible. Simulation is a powerful method not only to study the effect of different control process variables, but also the locations of gates, as well as the gate opening strategy. Usually, several iterations of flow simulations are conducted before cutting the tooling, which significantly saves the tooling cost for the molders. This Special Issue includes several papers that study different applications of process simulation in injection molding, serving as a good summary to provide some guidance and insights for polymer researchers, material engineers and process engineers, as well as raw material suppliers, automotive OEMs, etc.

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Message from the Editor-in-Chief

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.

Editor-in-Chief

Prof. Dr. Alexander Böker
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