



## Rubber/Silica Composites

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### Message from the Guest Editor

SSBR/BR/silica composites are used for PCR tire tread compounds to obtain low rolling resistance and high wet grip performances. The application of silane coupling agents is the key technology for the dispersion of silica in the rubber/silica composites. The silanol group on the surface of silica and ethoxy group of coupling agents do the salinization reaction and sulfide group of the coupling agents, and rubber molecules do the grafting reaction. To control these reactions, various types of chemical structure of coupling agents and processing conditions such as mixing procedure, temperature, and time are being studied.

The aim of this Special Issue is to highlight the progress and fundamental aspects of tread compounds, such as rubber, silica, dispersion of silica, analysis of compounds, application of sustainable materials, and the processing parameters to increase the performance of tread compounds.





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