Precise control of phase-separated structure in Polymer composite

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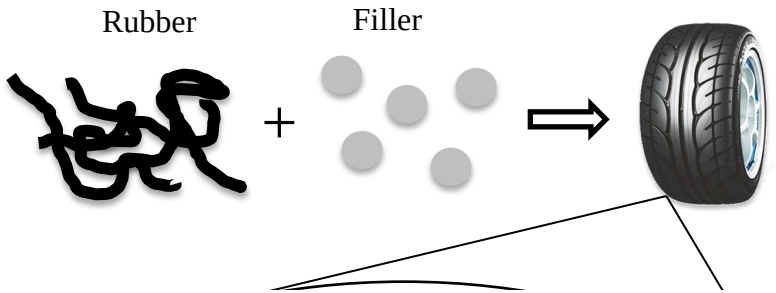
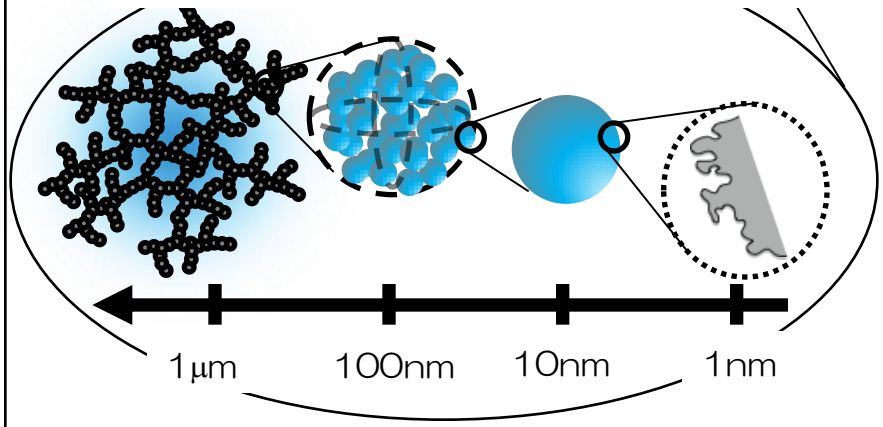
Structure analysis of rubber/filler system



Performance of tire change by the dispersion of filler.



Precise analysis of this hierarchical structure from μm to nm scale

Development of High performance tire

Content:

Polymer blends, alloys and composites can provide excellent physical properties that can not be achieved by one constituent component. Their performance depends on their phase separated structure and/or dispersion. In order to optimize their performance, it is, thus, needed to control their phase-separated structures and/or dispersions.

My goal is the development of new materials with high performance by control of the phase-separated structure. In order to achieve this goal, I analysis the phase-separated structure precisely by using microscopes (Optical Microscope, Scanning Electron Microscope, and Transmission Electron Microscope) and Scattering method (Light Scattering, X-ray Scattering and Neutron Scattering).

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Reserch Interest :
Polymer Science, Structure Analysis

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