

The collaboration research for the Dual Graduate School between VNU and JAIST

[Title of collaboration research]

Development of highly stable polyolefins and polyolefin-based nanocomposites

[The members of collaboration research]

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Polyolefin has been most widely produced plastics in the world.

However, polyolefin, especially polypropylene (PP), has been known to be degraded very easily by heat and light, which has been regarded as the largest weak point of PP. Therefore, degradation and stability of PP have been widely studied from the very early stage of the industrial production because. In order to improve the stability of PP, various kinds of stabilizers like hindered-amine and phenol compounds have been used during pelletizing and processing. Those stabilizers are very effective, but they can not improve the stability of PP molecule.

In this research, the development of highly stable polyolefins and polyolefin-based nanocomposites will be investigated from the view points of polymer micro-structure as well as macro-structure of the composites.