

Advances in Natural Fiber Surface Treatment Methodologies for Upgradation in Properties of Their Reinforced Composites

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Abstract : Natural fiber reinforced polymer composite is a very attractive area among the scientific community because of their low cost, eco-friendly and sustainable in nature. Among all advantages there are few issues which need to be addressed, those issues are the poor adhesion and compatibility between two opposite nature materials that is fiber and matrix and their relatively high water absorption. Therefore, natural fiber modifications are necessary to improve their adhesion with different matrices. Excellent properties could be achieved with the surface treatment of these natural fibers ultimately leads to property up-gradation of their reinforced composites with different polymer matrices. Lot of work is going on to improve the adhesion between reinforced fiber phase and polymer matrix phase to improve the properties of composites. Researchers have suggested various methods for natural fiber treatment like silane treatment, treatment with alkali, acetylation, acrylation, maleate coupling, etc. In this study a review is done on the different methods used for the surface treatment of natural fibers and what are the advance treatment methodologies for natural fiber surface treatment for property improvement of natural fiber reinforced polymer composites.

Keywords : composites, acetylation, natural fiber, surface treatment

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