

The Impact of organic salts on the tensile properties of polymer biocomposites

ABSTRACT

The tensile properties are the significant mechanical properties of composite materials. The properties consist of tensile stress, tensile modulus, and tensile extension data. The purpose of this short review is to discover the impact of different types of organic salts on the tensile properties of polymer biocomposites. First, organic salts such as surfactants and ionic liquids that are used in the preparation of polymer biocomposites were identified. Later, the percentages of increase and decrease of tensile properties of polymer biocomposites were calculated to observe the impact of organic salts. Finally, the change of tensile properties of polymer biocomposites was explained concisely. From the review, the use of organic salts can increase the tensile stress, tensile modulus, and tensile extension of polymer biocomposites by up to 136%, 758%, and 233%, respectively, compared to the polymer biocomposites without organic salts. Furthermore, organic salts can act as coupling agent, compatibilizing agent, and plasticizing agent for polymer biocomposites.

Keyword: Organic salts; Tensile properties; Polymer biocomposites; Ionic liquids; Surfactants