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**On the use of nanocellulose as reinforcement in polymer matrix composites**

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**Abstract**

Nanocellulose is often being regarded as the next generation renewable reinforcement for the production of high performance biocomposites. This feature article reviews the various nanocellulose reinforced polymer composites reported in literature and discusses the potential of nanocellulose as reinforcement for the production of renewable high performance polymer nanocomposites. The theoretical and experimentally determined tensile properties of nanocellulose are also reviewed. In addition to this, the reinforcing ability of BC and NFC is juxtaposed. In order to analyse the various cellulose-reinforced polymer nanocomposites reported in literature, Cox-Krenchel and rule-of-mixture models have been used to elucidate the potential of nanocellulose in composite applications. There may be potential for improvement since the tensile modulus and strength of most cellulose nanocomposites reported in literature scale linearly with the tensile modulus and strength of the cellulose nanopaper

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