

# **SUSTAINABLE POLYMER NANOCOMPOSITES MATERIALS**

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## **ABSTRACT**

Nanocomposite materials have naturally emerged from the field of conventional composite materials as modern techniques of characterization became available to visualize sub-micron sized objects in terms of size, shape, and other surface characteristics. While continuous progresses are made in preparing always more sophisticated synthetic nanocomposite materials, a rising trend is to take advantage of what nature can offer as building blocks to prepare nanocomposite materials. Through the examples of naturally occurring clays and nanofibrillated cellulose, this contribution shows how using nanofillers extracted from natural resources can transform the field of polymer composite into a more sustainable industry using renewable resources, while still offering materials with continuously improved functional properties.