



# Lightweight and Sustainable Composite Materials

Preparation, Properties and Applications

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## 5 - Recyclability of lightweight and sustainable materials

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### Abstract

Sustainable development goals and environmental safety have been the primary goals of materials research. An environmental impact assessment can lead to repercussions in research on recyclability and sustainability in the use of lightweight materials. A plethora of reports regarding the utility of lightweight and sustainable materials have been documented in construction, automobile, aerostructures, aerogels, waste management, and packaging industries. Naturally derived biocomposite materials are widely advocated in establishing circular bionomics for environmental protection. The present review compiles the scenario of applications in the realm of recyclability of lightweight and sustainable materials. Further, future prospects in augmenting the recyclable biocomposites and various research directions are critically summarized. The comprehensive assessment will aid environmentalists and researchers around the globe in manifesting environmental safety. Impeccable insights for aggravating a common cause for sustainable development in applications of sustainable lightweight materials are catalogued.

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