

Alternative Stabilization Methods and Value-Added Derivatives from Polyolefin Carbon Precursors

Disclosure Number

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Technology Summary

The present invention comprises an alternative to conventional stabilization methods (functionalization methods) to chemically crosslink polyolefin-based carbon precursors. This method will help to reduce inter-filament bonding or fusion in carbonized fibers. The proposed route involves least expensive chemicals. A proof-of-concept has been demonstrated (in the laboratory) in support of some of the claims of this disclosure using partially functionalized fiber tow. It has been shown that irrespective of the method of sulfonation carbon yield of the precursors can be tailored depending on the degree of functionalization. Other value-added products from the functionalized precursors are claimed.

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