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Author: Jia-Zhuang Xu Gan-Ji Zhong Benjamin S. Hsiao
Qiang Fu Zhong-Ming Li



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Low-Dimensional Carbonaceous Nanofiller Induced Polymer Crystallization

Jia-Zhuang Xu ^a, Gan-Ji Zhong ^a, Benjamin S. Hsiao ^b, Qiang Fu ^a, Zhong-Ming Li ^{a,*}

^a College of Polymer Science and Engineering and State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu 610065, China

^b Department of Chemistry, Stony Brook University, Stony Brook, New York 11794-3400, USA

* To whom correspondence should be addressed. E-mail: zmli@scu.edu.cn.

Tel/Fax: +86-28- 8540-6866. (Z.-M. Li)

ABSTRACT:

Low-dimensional carbonaceous nanofillers (LDCNs), i.e., fullerene, carbon nanofiber, carbon nanotube, and graphene, have emerged as a new class of functional nanomaterials world-wide due to their exceptional electrical, thermal, optical, and mechanical properties. One of the most promising applications of LDCNs is in polymer nanocomposites; these materials endow the polymer matrix with significant physical reinforcement and/or multi-functional capabilities. The relations between properties, structure and morphology of polymers in the nanocomposites offer an effective pathway to obtain novel and desired properties via structure manipulation, wherein the interfacial crystallization and the crystalline structure with the matrix are

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