

## بررسی امکان استفاده از الیاف لیگنوسلولزی (باگاس و کنف) در ساخت چند سازه‌های الیاف- پلی پروپیلن<sup>۱</sup> و<sup>۲</sup>

علی نقی کریمی<sup>۳</sup> مهدی روحانی<sup>۴</sup> داود پارساژوه<sup>۵</sup> قنبر ابراهیمی<sup>۶</sup>

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(E-mail: Karimi@nrf.ut.ac.ir)

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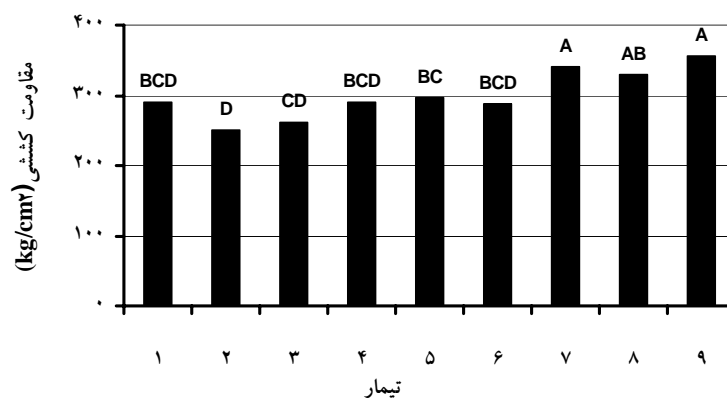
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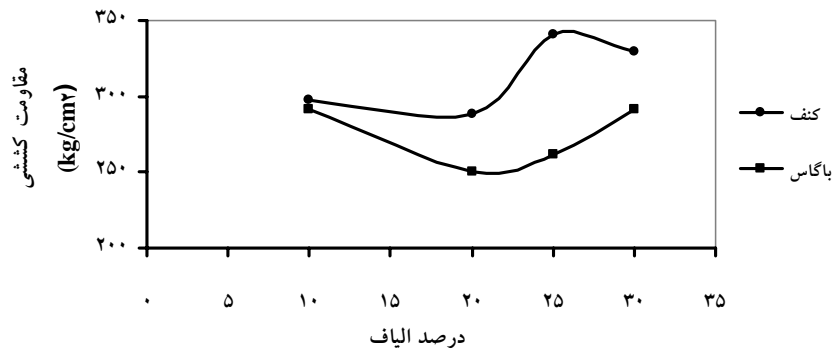
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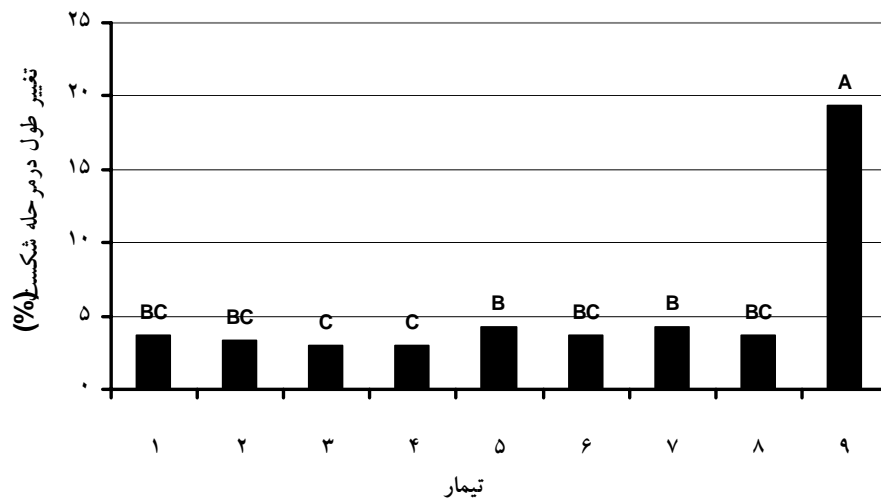
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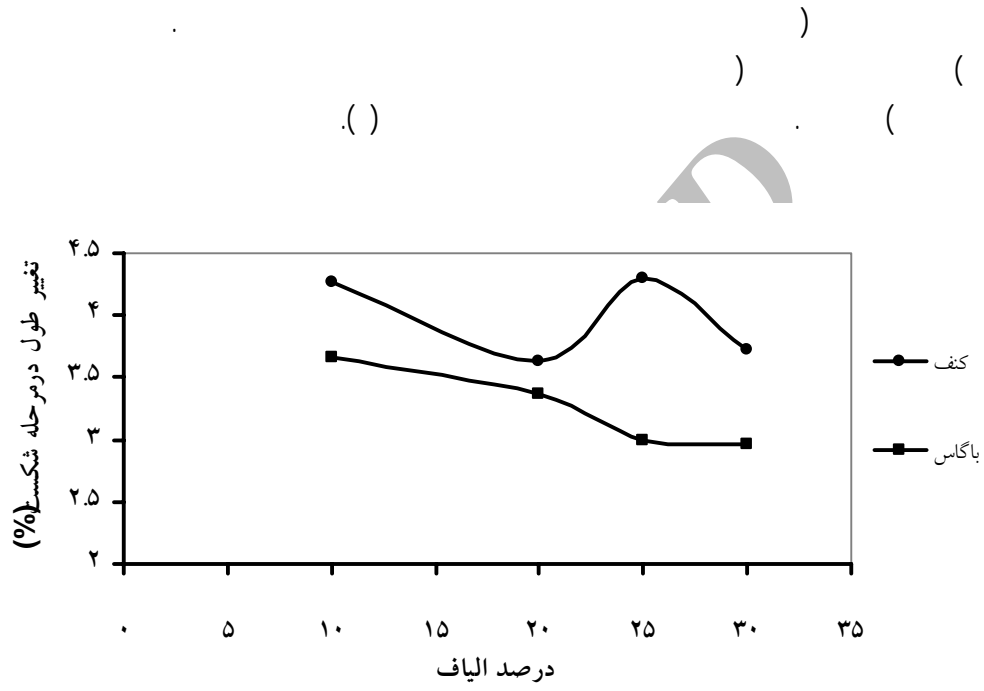


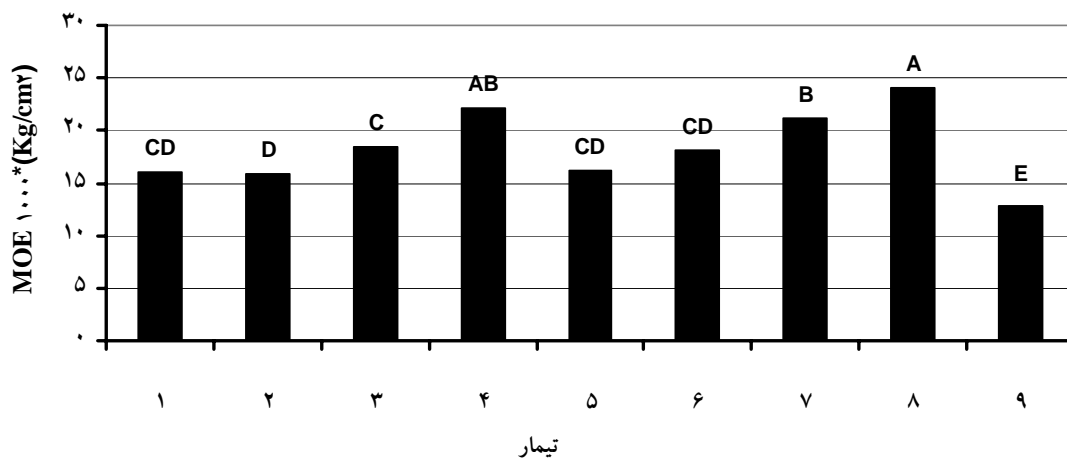
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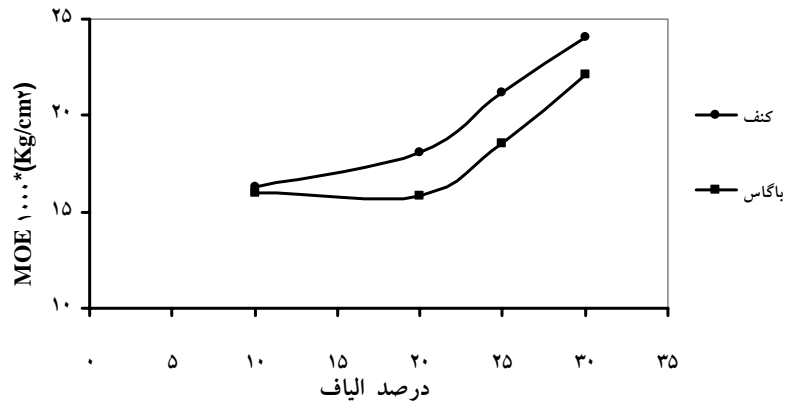
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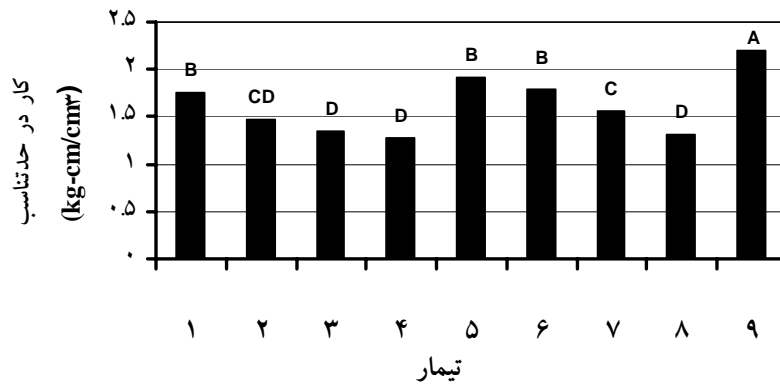
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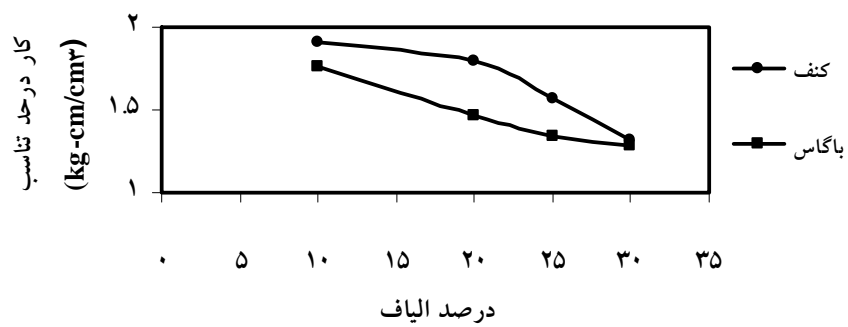
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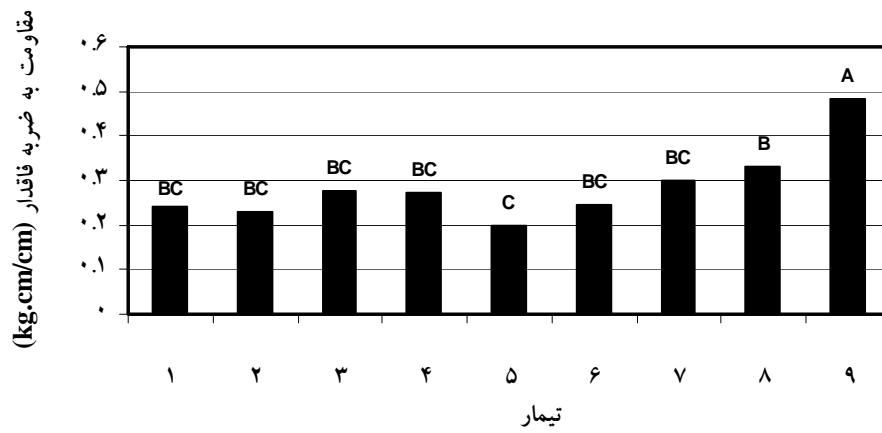
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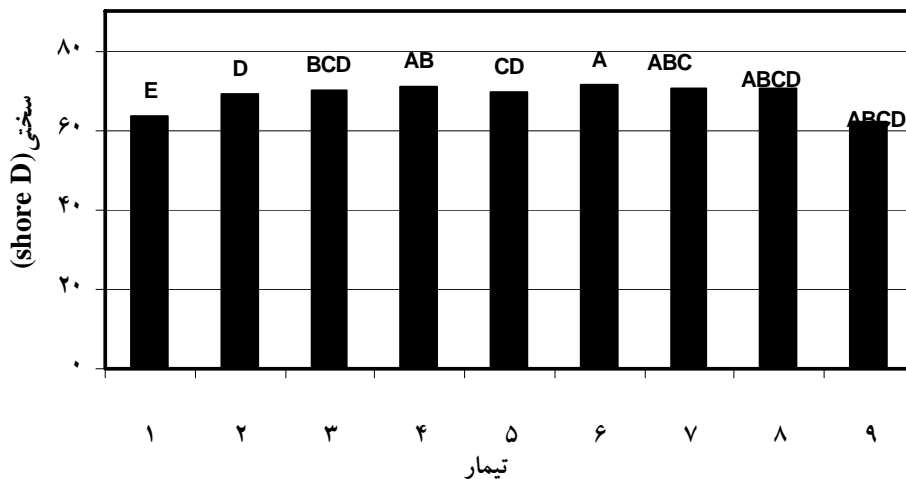
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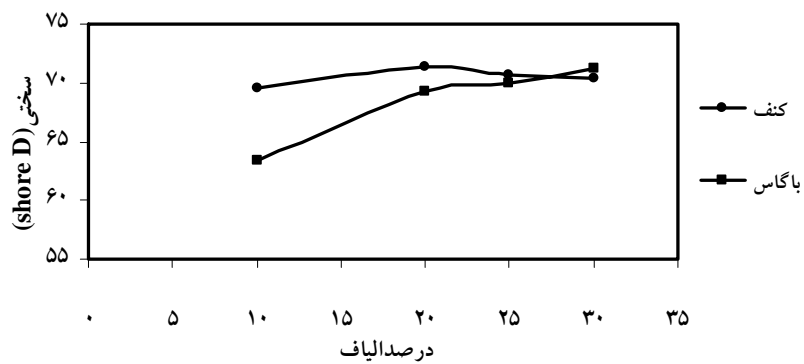
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## A Study of the Feasibility of the Use of Lignocellulosic, Bagasse and Kenaf Fibers in the Manufacture of Fiber-Polypropylene Composites

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### Abstract

In order to study the feasibility of the use of Lignocellulosic fibers in the manufacture of fiber-polymer composites, two types of these materials namely, kenaf and bagasse were mixed with polypropylene at 10, 20, 25 and 30 percent by weight. 2% MAPP was used as the compatibilizer and 1% DCP was used as the promoting interfacial agent. The results indicated that tensile strength, elongation at break and impact energy application declined whereas tensile modulus and hardness increased as compared with pure polypropylene. From the two filler types, kenaf fibers had better improved properties of composite materials. But this difference was not significant. Due to processing convenience and good dispersion in the polymer matrix of bagasse fibers, use of this material is recommended. Regarding a lack of significant difference in the reduction of properties due to an increase in filler content from 10% to 30% and the increase in tensile modulus as well as hardness, a 30% fiber content is recommended for application purposes.

**Keywords:** Composite, Polypropylene, Compatibilizer, Promoting interfacial agent, Lignocellulosic fibers, Kenaf, Bagasse.

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