

## عنوان مقاله:

Clay-reinforced nanocomposites for the slow release of chemical fertilizers and water retention

## محل انتشار:

فصلنامه کامپوزیت ها و ترکیبات, دوره 2, شماره 3 (سال: 1399)

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## خلاصه مقاله:

The present study includes an overview of the applications of clay-based nanocomposites over the past decade to date in various fields such as pharmaceuticals, water treatment, food packaging, electricity, automotive, and especially the production of chemical fertilizers with water retention and slow release. In the agricultural area, one of the promising materials that help green chemical engineering and green chemistry is slow-release fertilizer (SRF). Clay minerals and also clay nanocomposites provide cost-effective and efficient material for this purpose. In this paper, the research and development of polymer nanocomposites based on clay in recent years with the focus on their application as novel fertilizers have been reviewed. Clay minerals are promising reinforcements to manufacture high-performance, lightweight, and low-cost nanocomposites because of their abundance, layered structure, low cost, and rich intercalation chemistry. ©2019 jourcc. All rights reserved

## کلمات کلیدی:

Clay nanocomposites, Slow release, Controlled release, Fertilizer

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