

Applying Intelligent Material in Food Packaging

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Abstract : One of the main issues affecting the quality and shelf life of food products is temperature fluctuation during transportation and storage. Packaging plays an important role in protecting food from environmental conditions, especially thermal variations. In this study, the performance of using microencapsulated Phase Change Material (PCM) as a promising thermal buffer layer in smart food packaging is investigated. The considered insulation layer is evaluated for different thicknesses and the absorbed heat from the environment. The results are presented in terms of the melting time of PCM or provided thermal protection period.

Keywords : food packaging, phase change material, thermal buffer, protection time

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