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| **Published Researches**  **الأبحاث المنشورة** | |
| Title  **عنوان البحث** | Study on Thermal, Thermo-Mechanical, and Flexural Properties of Jute Fiber Surface Modification and Its Reinforced Composite |
| Author  **الناشر** | * Syed Rashedul Islam, Abeer Alassod, Mohammed Kayes Patoary, Tayyab Naveed, Md Arshad Ali, Jinhua Jiang |
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| Abstract  **خلاصة** | * In recent years, reinforced composites from biodegradable and natural fibers have a worldwide scope for advanced applications. However, the core limitation of natural fiber reinforced composites are poor consistency among supporting fibers and the matrix. Therefore, optimal structural performance of fibers and matrix is desirable. In this study, chemical treatments (i.e., alkali pretreatment, acid pretreatment, and scouring) were applied to jute fibers for improvement of composite properties. Thermal, thermo-mechanical, and flexural properties, and surface morphology, of untreated and treated jute fibers were studied on the treated fibers. Jute fiber/epoxy composite properties were analyzed by thermogravimetric analysis (TGA), flexural strength and modulus, and dynamic mechanical analysis (DMA). The chemical treatments had a significant impact on the properties of jute fiber composites. |