

Title (8)	:	Potential of Lignin from Oil Palm Biomass using Deep Eutectic Solvent as Carbon Fibre Precursor [Potensi Lignin daripada Biojisim Kelapa Sawit Menggunakan Pelarut Eutektik Dalam sebagai Prekursor Gentian Karbon]
Journal	:	Malaysian Journal of Analytical Sciences, Volume 27, Issue 3, 2023
Document Type	:	Article
Publisher	:	Malaysian Analytical Science Society
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Abstract	:	The modern composites industry heavily relies on carbon fibre as a raw material due to its high tensile strength, fatigue resistance, and temperature resistance. Thus, researchers are investigating the use of lignin extracted from biomass as a precursor for carbon fibre to reduce costs and environmental impact. Oil palm biomass is classified as a lignocellulosic compound due to its high cellulose, hemicellulose, and lignin content. Since lignin has a complex structure with numerous linkages between its monomeric components, it can be complicated to isolate it from lignocellulosic components. Deep eutectic solvents (DESs) are a promising new class of environmentally friendly solvents owing to their low toxicity, low production cost, and high biodegradability. Lignin valorisation has received much attention due to immense ability of DES to dissolve and extract lignin without condensation. This review aimed to provide a comprehensive and comparative analysis of the physicochemical and thermal properties of DES for utilisation in lignin extraction from biomass, with a focus on its potential as a precursor for carbon fibre.