Title (5)	:	**Hydrolysis of Cellulose to Glucose Catalyzed by Noble Metal Palladium (Pd) Supported On Silica-Alumina [Hidrolisis Selulosa Kepada Glukosa Bermangkin Logam Adi Paladium (Pd) Disokong Pada Silika-Alumina]**
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UniKL Author	:	Puteri Nurain Syahirah Megat Muhammad Kamal, Muhammad Danial Hafiy Mohamad Zabidi, and Amin Safwan Alikasturi
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Abstract	:	Cellulose, a promising source of renewable energy, is currently receiving a lot of interest due to its potential application in the production of bioenergy. The catalytic conversion of cellulose into value-added compounds like glucose, which is subsequently fermented into bioethanol or dehydrated into platform chemicals, avoids the heavy reliance on fossil fuel economy tremendously. In this study, the catalytic conversion of cellulose to glucose was conducted using a supported noble metal catalyst. The wet impregnation method was used to synthesize 4 wt.% palladium (Pd) supported on silica-alumina (SiO2-AlO3), which was then calcined at 500 °C. Prior to reaction work, Fourier-transform infrared spectroscopy, thermogravimetric analysis, Brunauer-Emmett-Teller method, and particle size analysis were conducted to characterize the catalyst. To investigate the effect of the catalyst on the yield of glucose from cellulose, the catalyst loading was varied from 0.04 to 0.10 g. The results demonstrated that up to 23.6% yield of glucose was produced at 200 °C for 3 h with the catalyst and cellulose loading of 0.06 g and 0.3 g, respectively. Additionally, under these conditions, cellulose conversion was at its highest (78.7%). This study shows that the supported noble metal catalyst has the potential to enhance the hydrolysis step for the conversion of cellulose to glucose.