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## Preparation of Bacterial Cellulose Membranes from Nata de Coco for CO2/CH4 Separation

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**Abstract :** Carbon dioxide removal from natural gas is an important process because the existence of carbon dioxide in natural gas contributes to pipeline corrosion, reduces the heating value, and takes up volume in the pipeline. In this study, bacterial cellulose was chosen for the CO2/CH4 gas separation membrane due to its unique structure and prominent properties. Additionally, it can simply be obtained by culturing the bacteria so called "Acetobacter xylinum" through fermentation of coconut juice. Bacterial cellulose membranes with and without silver ions were prepared and studied for the separation performance of CO2 and CH4.

Keywords: bacterial cellulose, CO2, CH4 separation, membrane, nata de coco

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