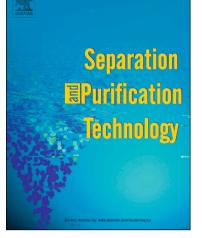
Accepted Manuscript

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PII:	S1383-5866(18)32426-2
DOI:	https://doi.org/10.1016/j.seppur.2018.09.086
Reference:	SEPPUR 14984
To appear in:	Separation and Purification Technology
Received Date:	14 July 2018
Revised Date:	28 September 2018
Accepted Date:	28 September 2018



Please cite this article as: O. Choi, P.G. Ingole, H-K. Lee, Preparation and characterization of thin film composite membranefor the removal of water vapor from the flue gas at bench scale, *Separation and Purification Technology* (2018), doi: https://doi.org/10.1016/j.seppur.2018.09.086

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ACCEPTED MANUSCRIPT

Preparation and characterization of thin film composite membrane for the removal of water vapor from the flue gas at bench scale

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Abstract

Water inadequacy is increasing day by day and researchers are developing several technology to fulfill the pure water demand. Currently membrane technology is coming in big way to save and recovered the water. Herewith we introduce the thin-film composite (TFC) hollow fiber membranes to recover water vapor from flue gas in industrial power plants and it has become a promising technology. TFC membranes were prepared by interfacial polymerization between the aqueous monomer of 3,5-diaminobenzoic acid (DABA) in various concentrations and the organic monomer of trimesoyl chloride (TMC) inner surface of a polysulfone (PSf) hollow fiber substrate. The selective polyamide layers of TFC membranes were comprehensively characterized by attenuated total reflectance Fourier transformed infrared spectroscopy (ATR-FTIR), field emission scanning electron microscopy (FE-SEM), atomic force microscopy (AFM) and water contact angle measurement (WCA). Download English Version:

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