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## REGERATION OF TFC PA MEMBRANE USED FOR PERMATION OF HEXANE VAPOURS

Z. Petrusová<sup>1,2</sup>, L. Morávková<sup>1</sup>, V. Štefková<sup>2</sup>, K. Machanová<sup>1</sup>, V. Jandová<sup>1</sup>, M. Košťejn<sup>1</sup>, P. Izák<sup>1</sup>, J. Jansen<sup>3</sup>

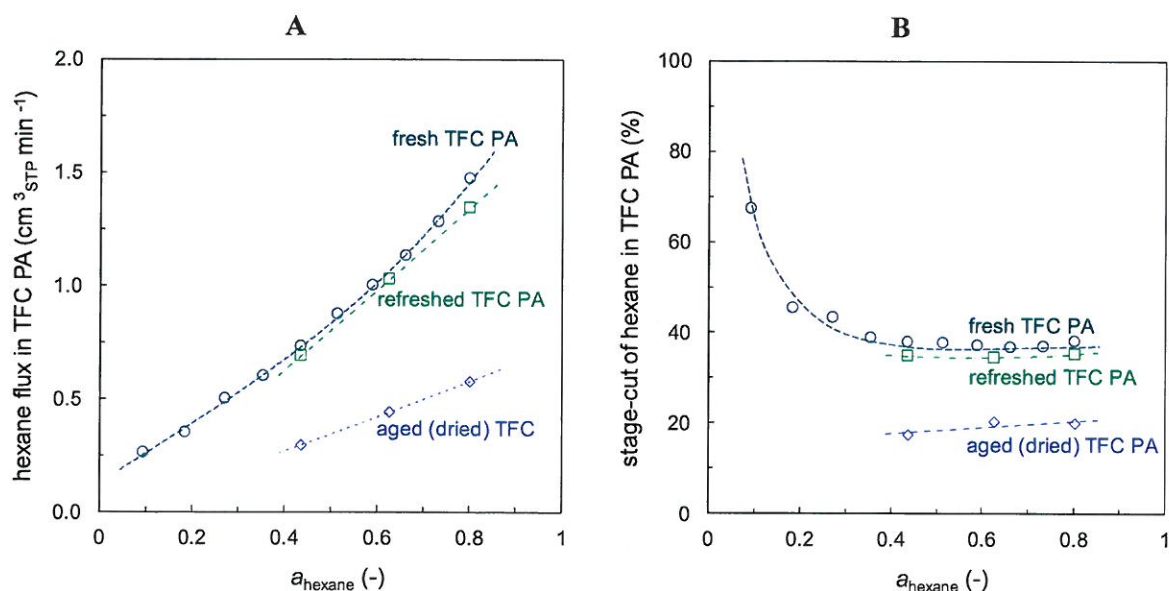
<sup>1</sup> Institute of Chemical Process Fundamentals of the Czech Academy of Sciences, Rozvojová 135, 165 02 Prague 6, Czech Republic (petrusova@icpf.cas.cz, www.icpf.cas.cz)

<sup>2</sup> Department of Chemistry, Faculty of Science, J. E. Purkinje, České Mládeže 8, 400 96 Ústí nad Labem, Czech Republic

<sup>3</sup> Institute on Membrane Technology, ITM-CNR, Via P. Bucci 17/C, 87036 Rende (CS), Italy

**Abstract:** The commercially available thin-film-composite polyamide (TFC PA) membrane is highly permeable for hexane vapours. However, the transport properties significantly change when the TFC PA membrane ages and when it is allowed to dry. Then, the hexane flux is twice lower (see Figure below).

In this paper we will demonstrate that this undesired change of transport properties can be reversed by a regeneration procedure based on wetting of the top active layer of the membrane by different solvents with a gradually decreasing polarity: methanol, followed by isopropanol and hexane. This contribution is accomplished by the study of the membrane affinity via contact angle measurements and by structural analysis via electron microscopy. The transport properties of the TFC PA were studied at various experimental conditions and the obtained results will be discussed.



**Figure:** Comparison of hexane flux (A) and stage-cut (B) in fresh TFC PA (○), aged dried TFC PA (◇) and refreshed aged TFC PA (□); measurements were carried out at 25 °C and trans-membrane pressure 5 kPa (pressure in retentate was 100 kPa and in permeate 95 kPa, respectively).

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