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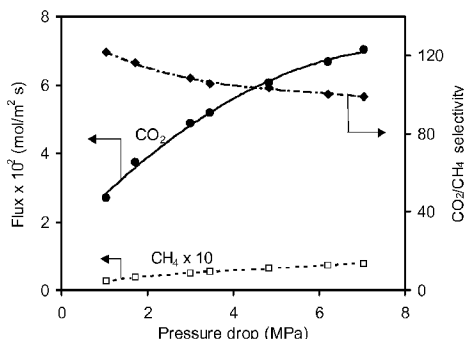
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(54) Title: HIGH FLUX AND SELECTIVITY SAPO-34 MEMBRANES FOR CO₂/CH₄ SEPARATIONS



(57) Abstract: SAPO-34 membranes and methods for their preparation and use are described. The SAPO-34 membranes are prepared by contacting at least one surface of a porous membrane support with a synthesis gel. The Si/Al ratio of the synthesis gel can be from 0.3 to 0.15. SAPO-34 crystals are optionally applied to the surface of the support prior to synthesis. A layer of SAPO-34 crystals is formed on at least one surface of the support. SAPO-34 crystals may also form in the pores of the support. SAPO-34 membranes of the invention can have improved selectivity for certain gas mixtures, including mixtures of carbon dioxide and methane.

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