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Effect of Si/Al ratio and amount of deposited MFI-type seed crystals on the separation performance of silicalite-1 membranes for ethanol/water mixtures in the presence of succinic acid

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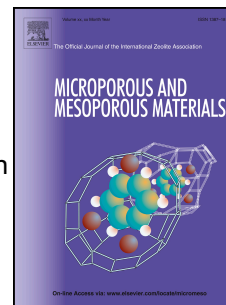
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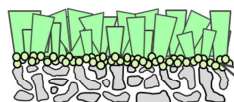
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Silicalite-1 membrane



Seed crystal

Separation factor (α) of ethanol

EtOH/water $\xrightarrow{+ \text{Succinic acid}}$ EtOH/water/*succinic acid*

Silicalite-1
(Si/Al= ∞)

$\alpha=55$

decrease

$\alpha=38$

ZSM-5
(Si/Al=104)

$\alpha=52$

increase

$\alpha=78$

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