Abstract Submitted
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Mathematical modelling of backflushing in membrane separation
FRANK VINTHER, Technical University of Denmark — A mathematical model
of pressure driven membrane separation is presented. Concentration polarization
is well known to reduce the flux, and thereby the performance of the separation
process, due to an increase in osmotic pressure. Therefore, back shocking where
the pressure difference and the flow through the membrane is reversed, is known to
decrease the concentration polarization and increase the performance of the membrane. The interplay between back shocking amplitude, frequency and reduction in
concentration polarization at the membrane surface is investigated.

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