

University of Groningen

## Ion-selective membranes for the recovery of ammonium and potassium

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Propositions  
belonging to the PhD Thesis

**Ion-selective membranes for the recovery of  
ammonium and potassium**

1. Mixed matrix membranes containing clinoptilolite are a successful alternative for the recovery of nutrients from diluted urine (Chapter 2).
2. High selectivity and high flux are contrary goals in the performance of polymer inclusion membranes (Chapter 3 and Chapter 5).
3. Cation transport across polymer inclusion membranes containing crown ethers is based on co-transport, not ion-exchange (Chapter 3 and Chapter 4).
4. Any process that involves closing a cycle of natural sources is worth investing on - as long as the source remains unaltered.
5. Successful research needs more than a bright idea.
6. Once you have experienced new cultures and ideas, going back to your roots is surprising - you are not the same.
7. The process of working on a PhD challenges you on any aspect of your life, while you grow and set your limits further.
8. Sensitivity is a rare gift!

Anna Casadellà  
Leeuwarden, 1<sup>st</sup> April 2016