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PhD student / ESR 1

PhD on

**Towards a new generation of dialysis:
mixed matrix membranes**

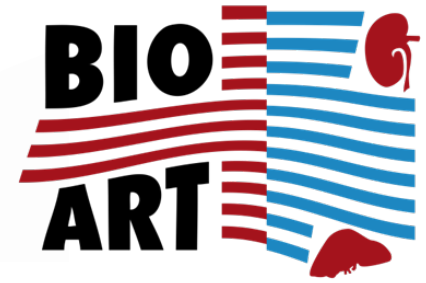
Aim & Things done
October 2014

Start date: August 2013

University of Twente, the Netherlands



Project details



Objective of the work:

- The aim of the project is to develop a new double layer mixed matrix membranes where adsorptive particles will be incorporated into polymer matrix to combine adsorption and filtration in one step.

Current problems:

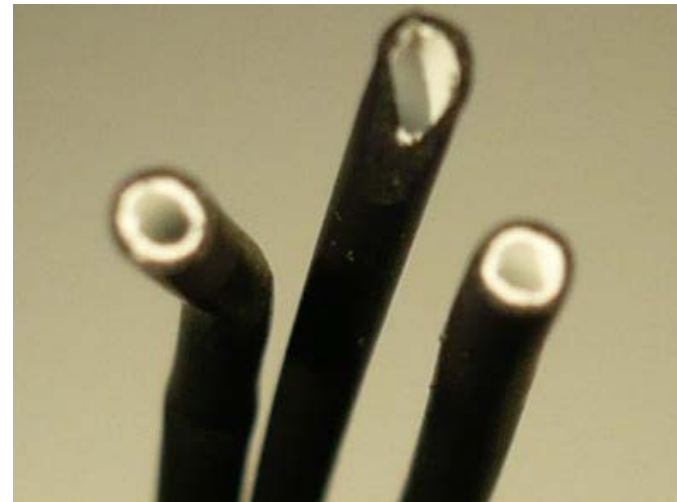
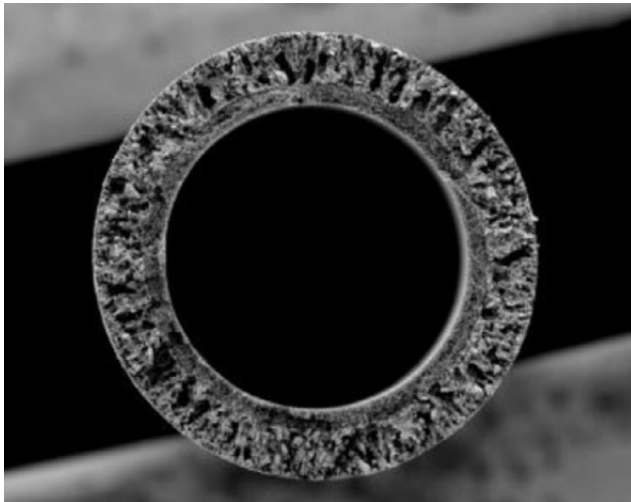
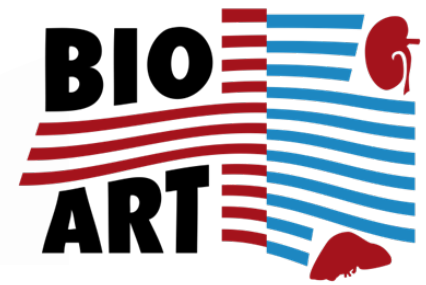
- Current dialysis show low removal of middle molecules and protein-bound toxins,
 - There is a need in minituarization of the dialysis modules to make a wearable system.
- Such an aim can be acomplished with more efficient membranes

Strategy:

- Combination of adsorption and filtration by the use of so-called mixed-matrix membranes.



Starting point



Tijink, M. S. L., et al. (2013). *Biomaterials* 34(32): 7819-7828.



New membranes

