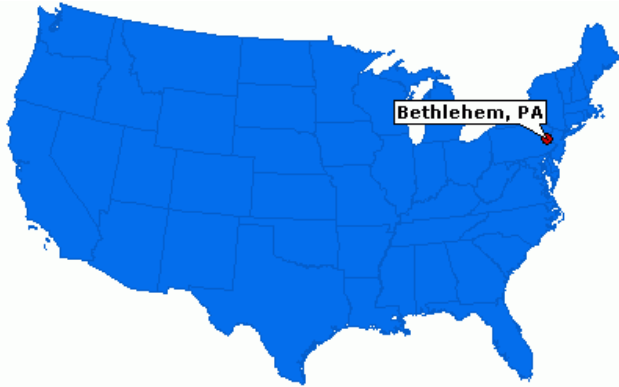


How to make a fouling resistant nanofiltration membrane?

Adam Uliana

Spring 2016 EuroScholars MidStay

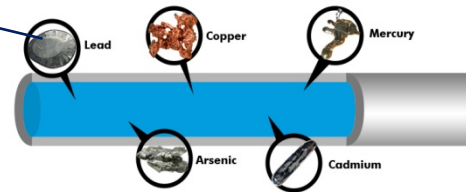
About me



3.4 million water-related deaths occur each year in the world



Pathogens



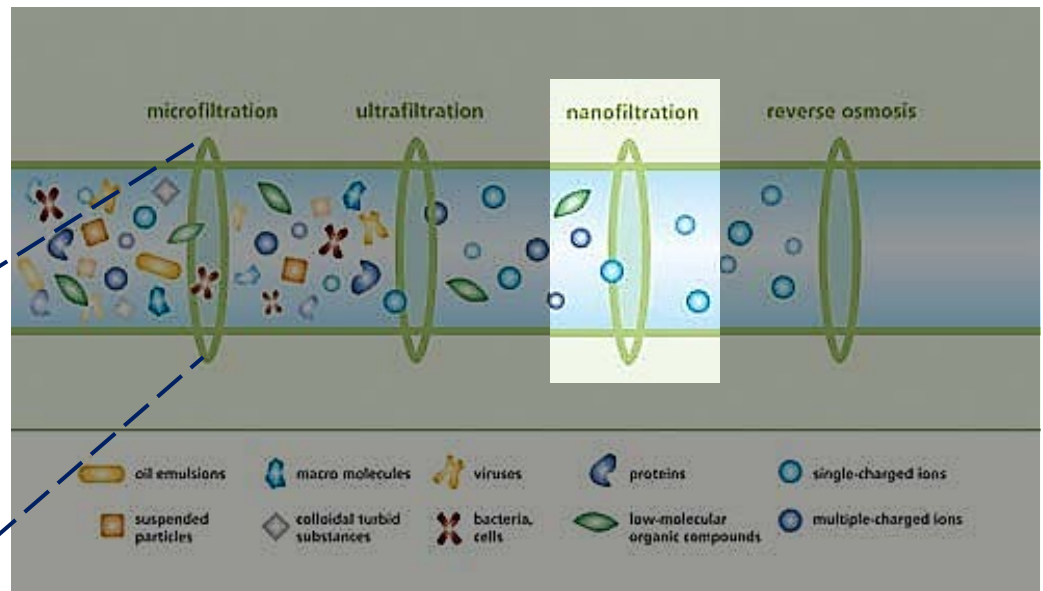
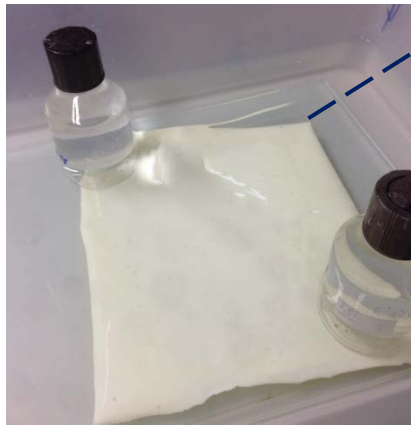
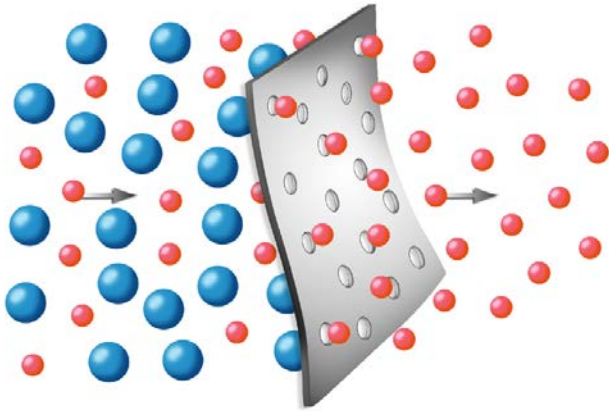
Heavy metals



Pharmaceuticals and personal care products



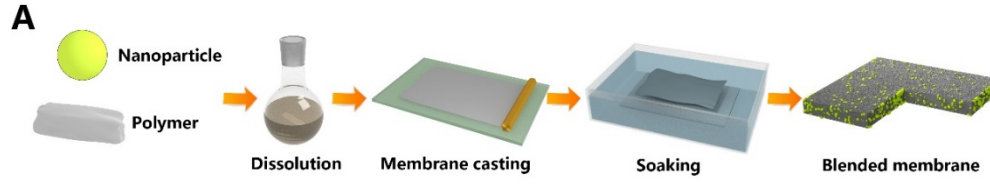
Membranes have emerged as a leading water treatment method



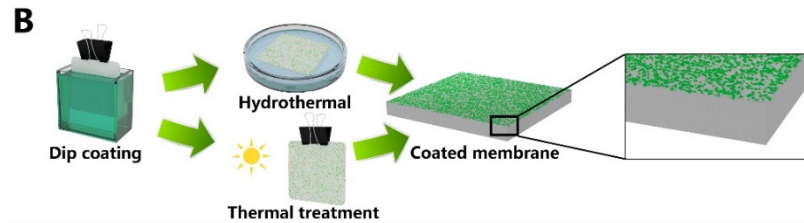
Increasing energy and costs required

My project: use various nanomaterials
to improve water treatment membranes

Membrane physicochemical properties can be modified for better performance

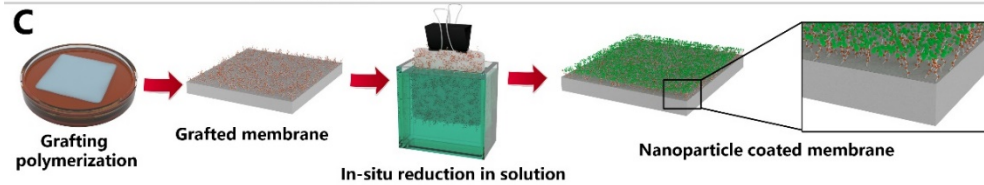


1) Pore size

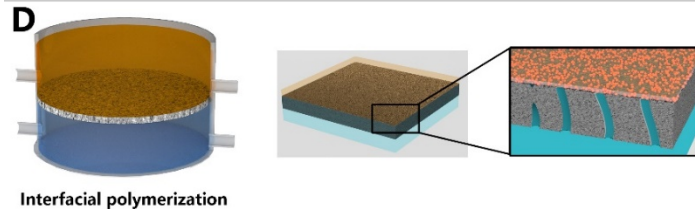


2) Surface charge

3) Hydrophilicity



4) Antimicrobial abilities



5) Surface morphology

Acknowledgements

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- Ph.D. student Junyong Zhu for collaborations and mentorship

