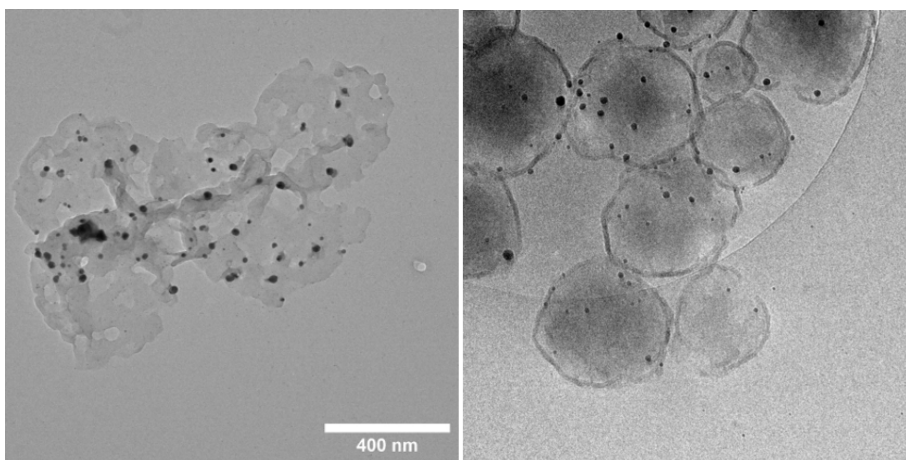


Internship position master students, Nov. 22

Silver nanoparticles have gained much attention due to their antibacterial properties, yet “collateral damage” to healthy cells and nonspecificity is still a hurdle to tackle.

By using polymer vesicles with a porous network as shell, cytotoxicity would be limited to the release of silver ions via the pores. Further modification via functional handles on the polymer surface can give way for more modifications to increase targeting capabilities for example using antibodies or cell penetrating peptides.



TEM and Cryo TEM of polymersomes with pores and silver nanoparticles in the cavity

The internship would probe various silver nanoparticle syntheses in combination with the polymersomes to find ways of controlling the nucleation and growth inside the polymersomes. Techniques such as TEM, DLS, Zeta Potential, ICP-MS etc. Will be used to determine efficiency of the protocols. Later on tests with ML2 bacteria (*P. aeruginosa*) for antibacterial effects can be planned.

If interested feel free to email me your CV and transcripts to bela.berking@ru.nl