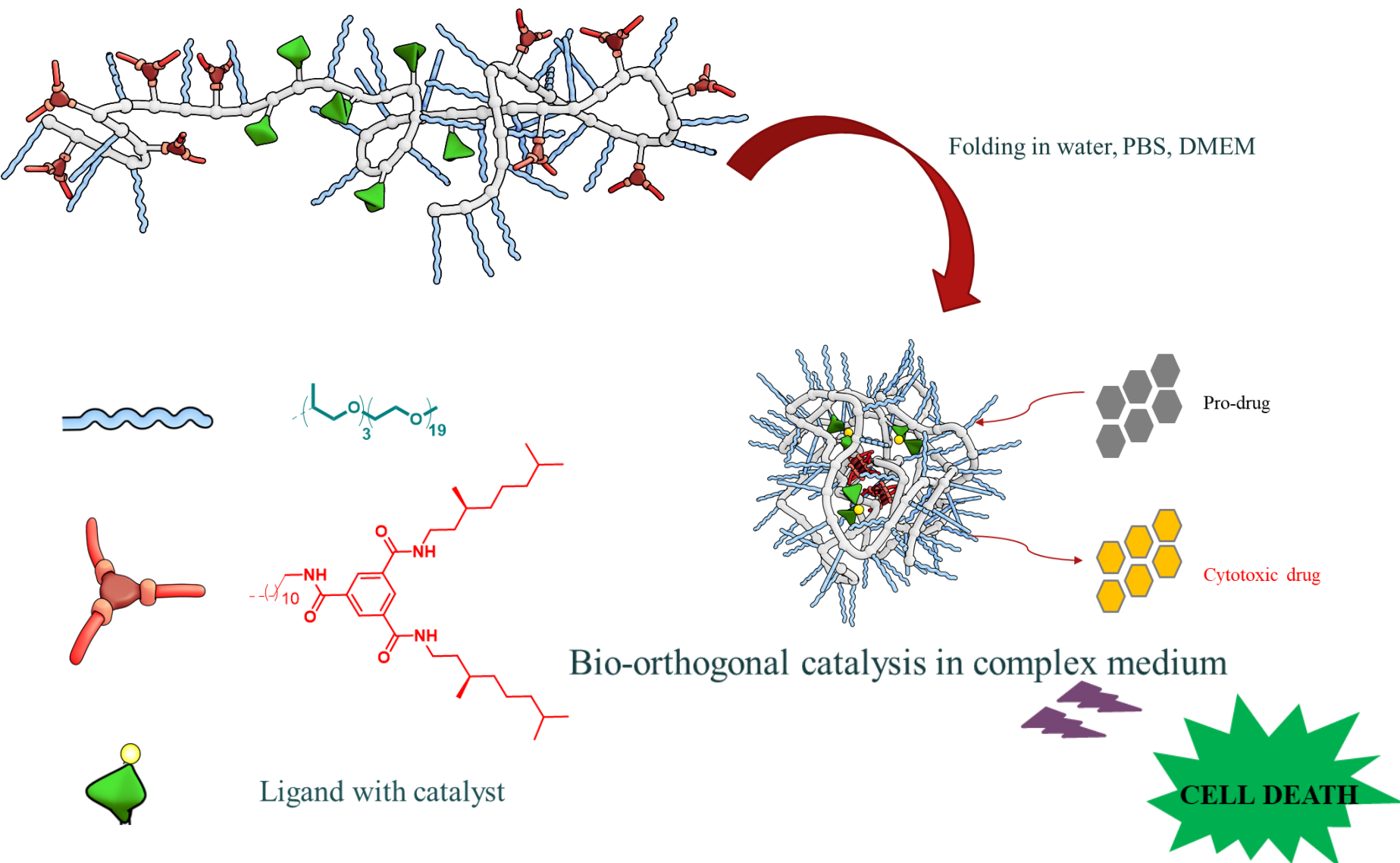
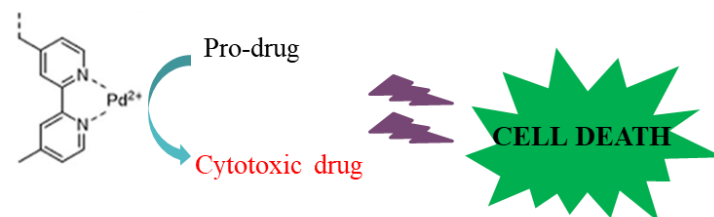
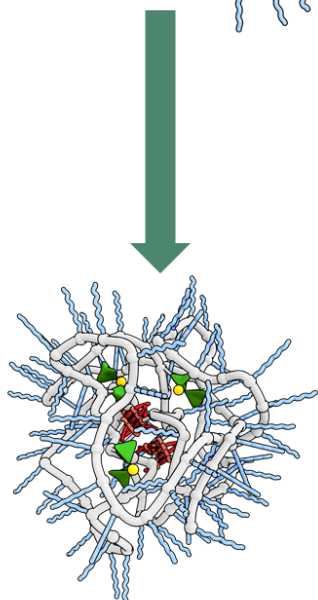
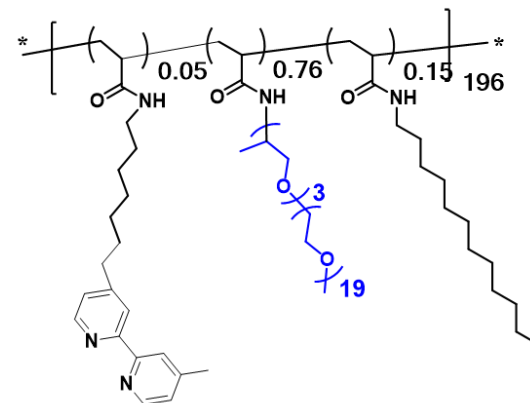
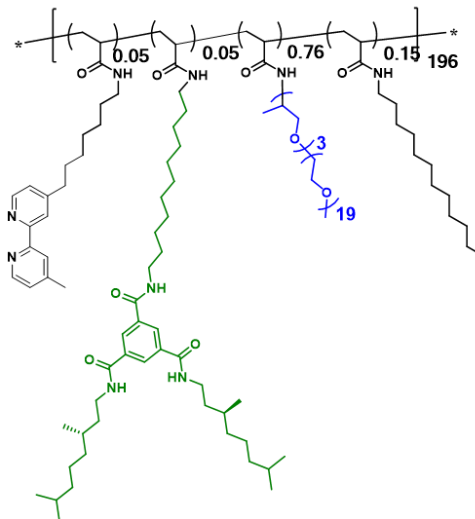
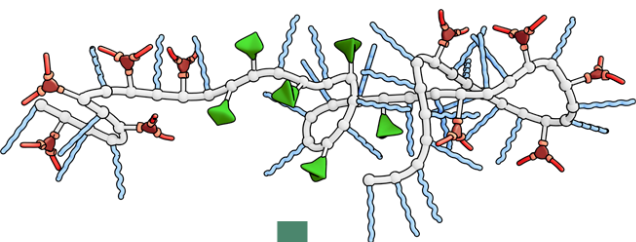


Anjana Sathyan
ESR4 Fellow

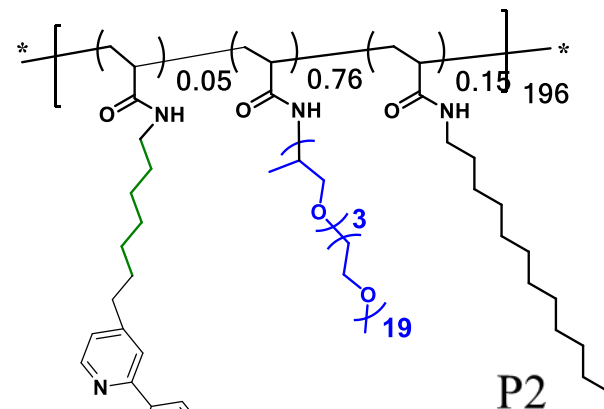
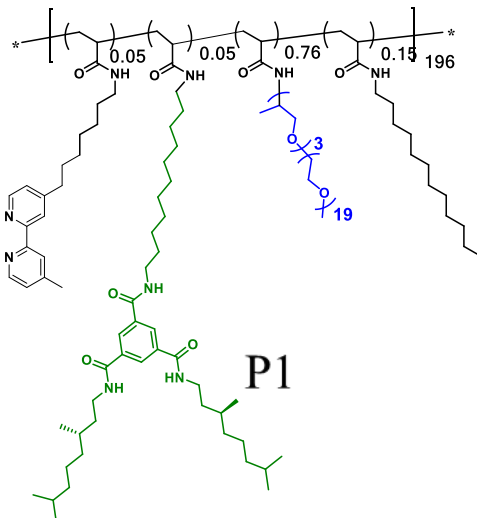
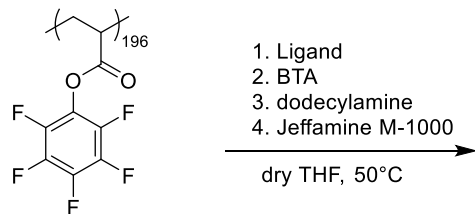
Institution: Eindhoven University of Technology
Group: Macromolecular and Organic Chemistry
Supervisor: Prof. Anja Palmans
E-mail: a.sathyan@tue.nl

Meeting 2
Edinburgh, 3rd February 2020

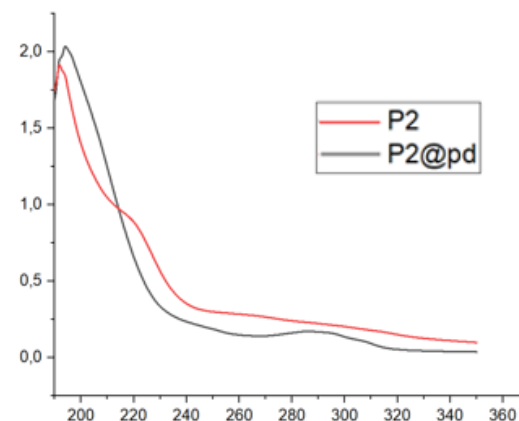
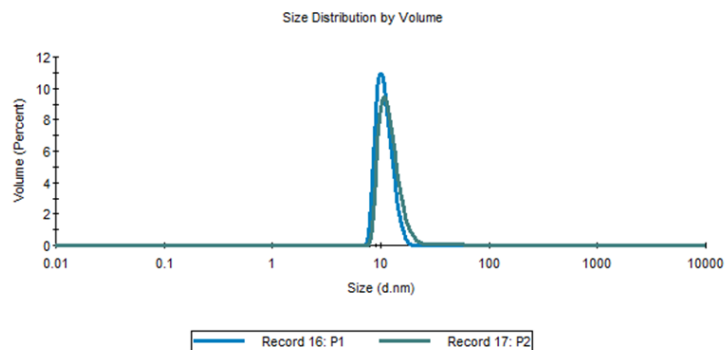
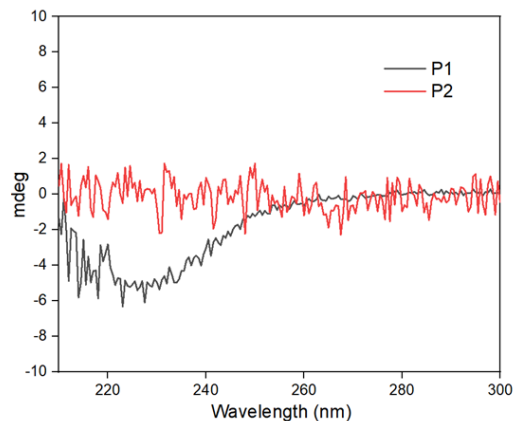


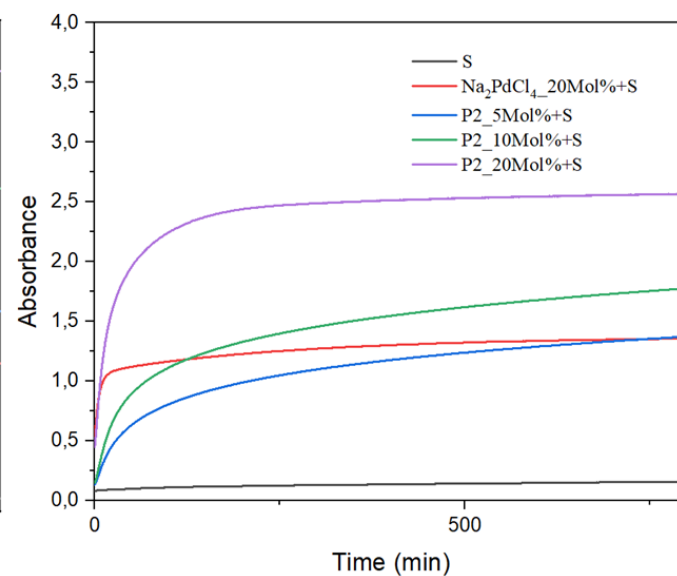
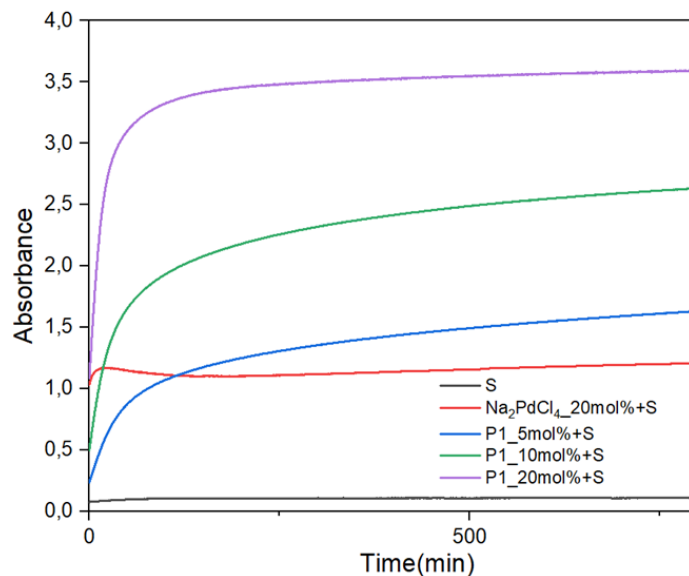
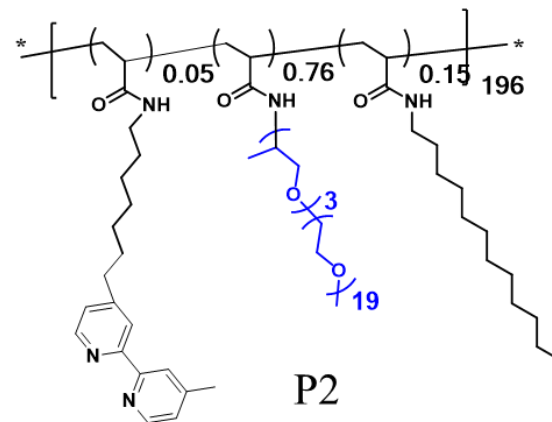
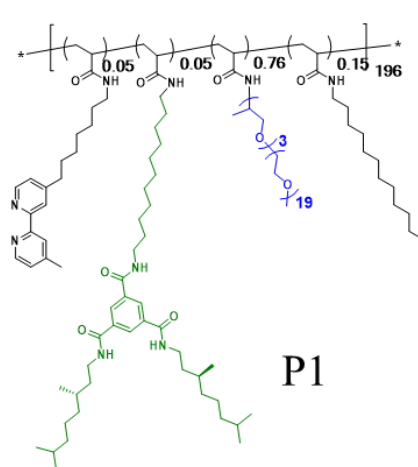
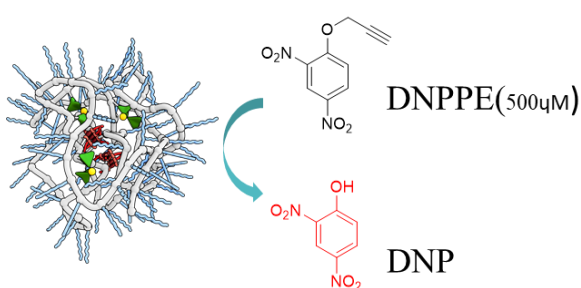


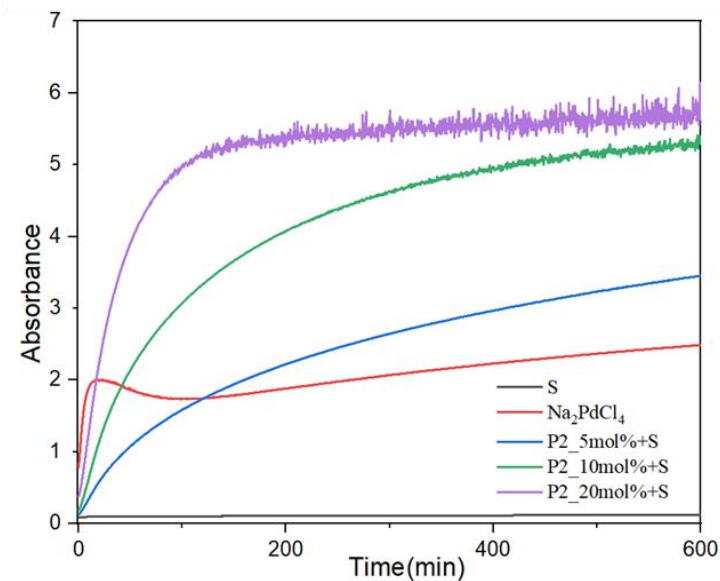
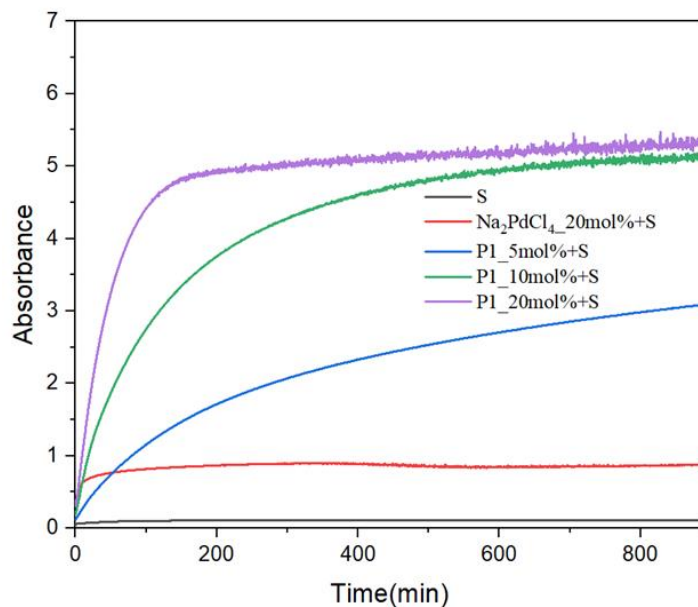
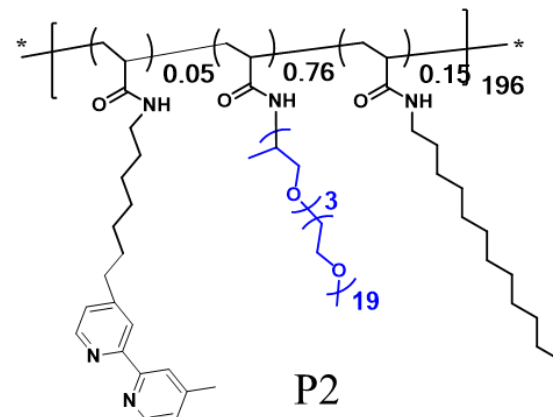
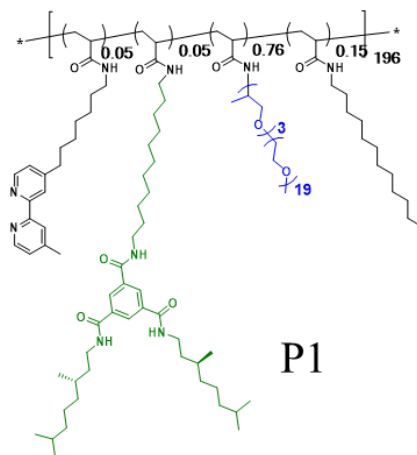
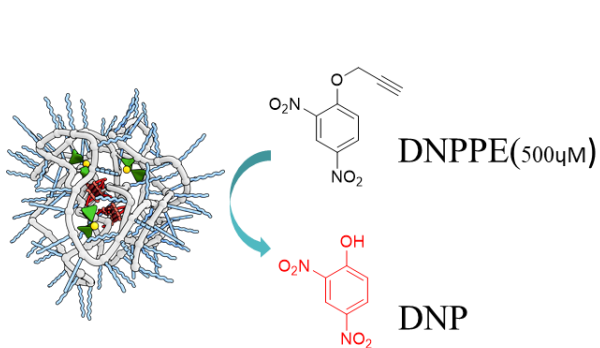
Water → PBS → DMEM → Cells

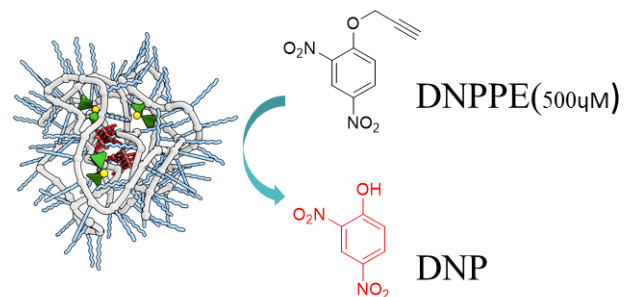


DLS and CD

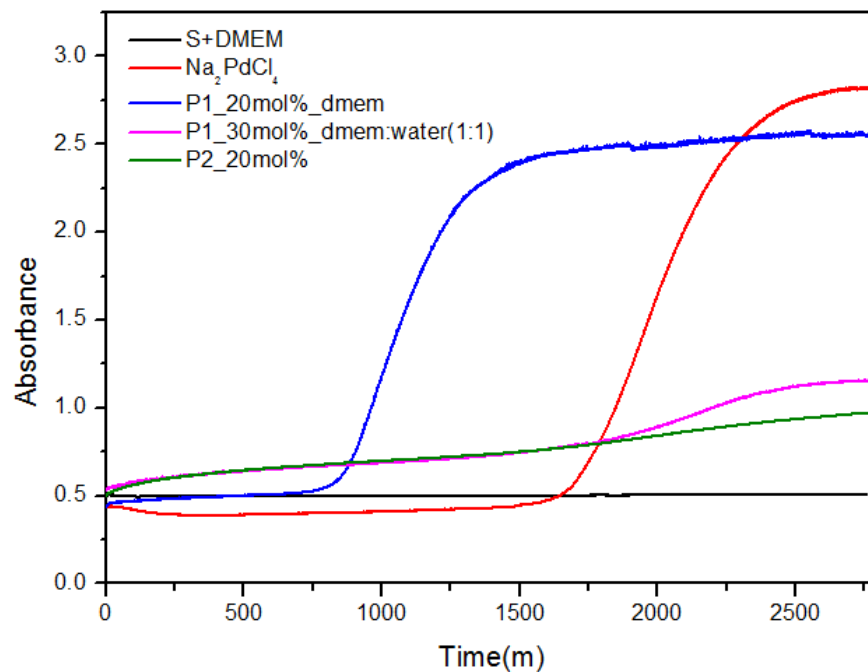
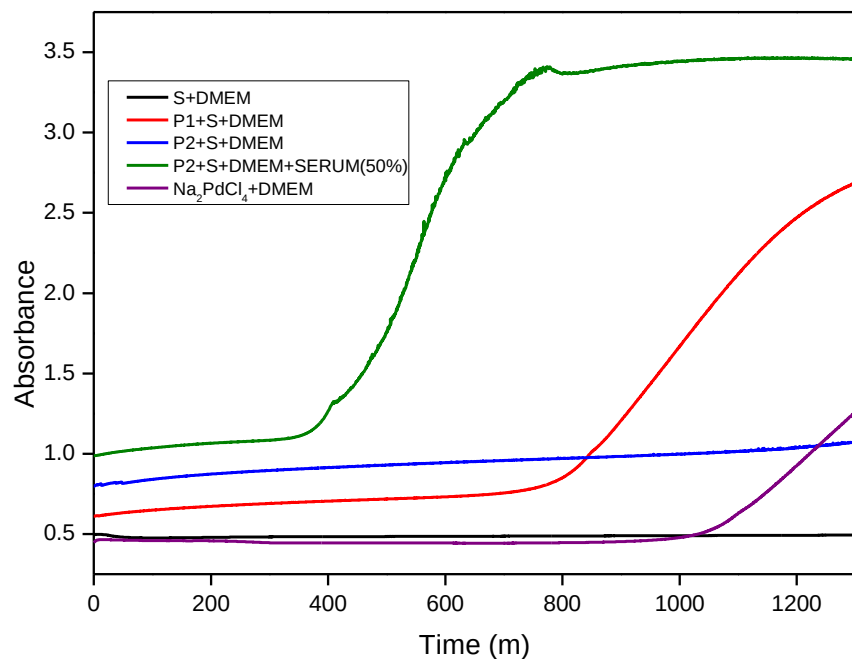


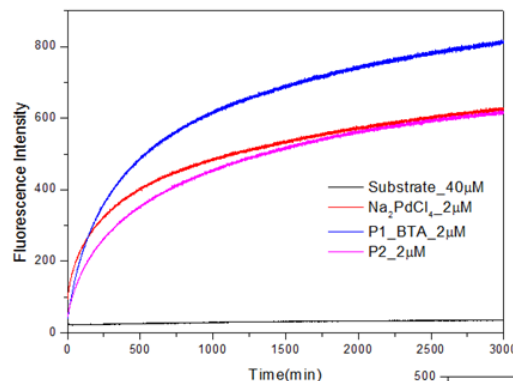




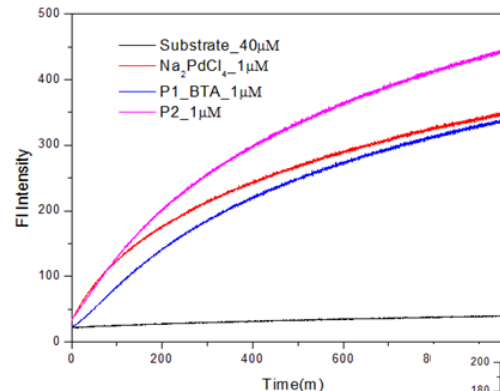


- Product reacted with the components in DMEM medium
- Not reliable

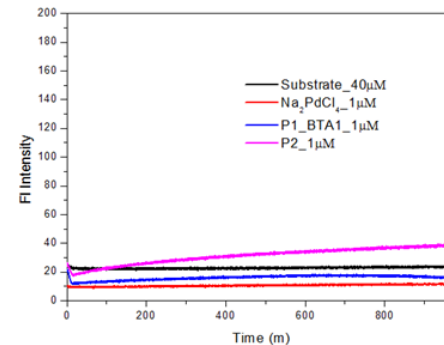




Water

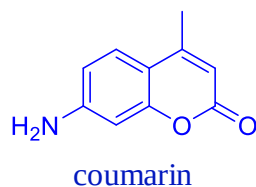
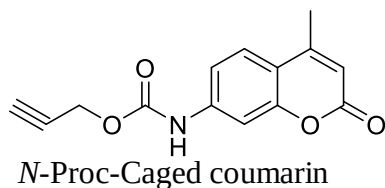
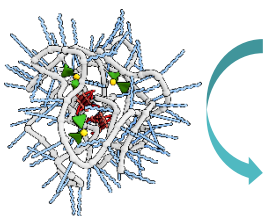


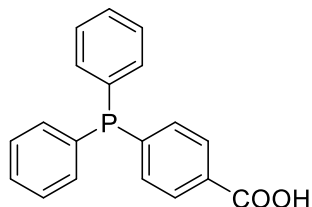
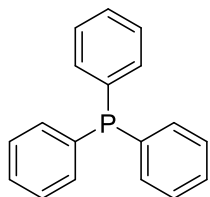
PBS



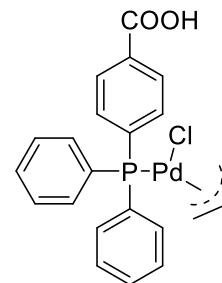
DMEM

Catalytic activity decreased with increasing medium complexity probably due to less stable ligand metal complex

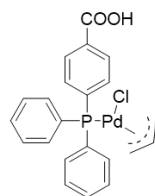




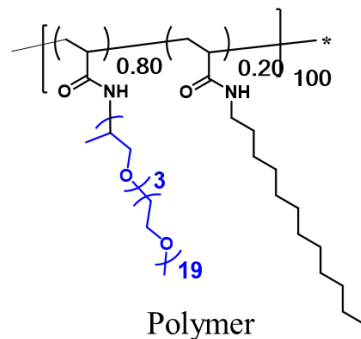
Phosphine ligands are known to form stable palladium complexes and resist the hostile media of cells



Catalyst



Catalyst

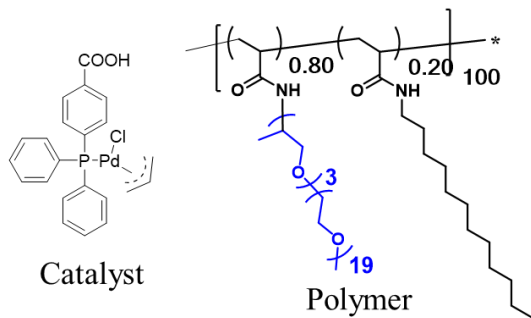


Polymer

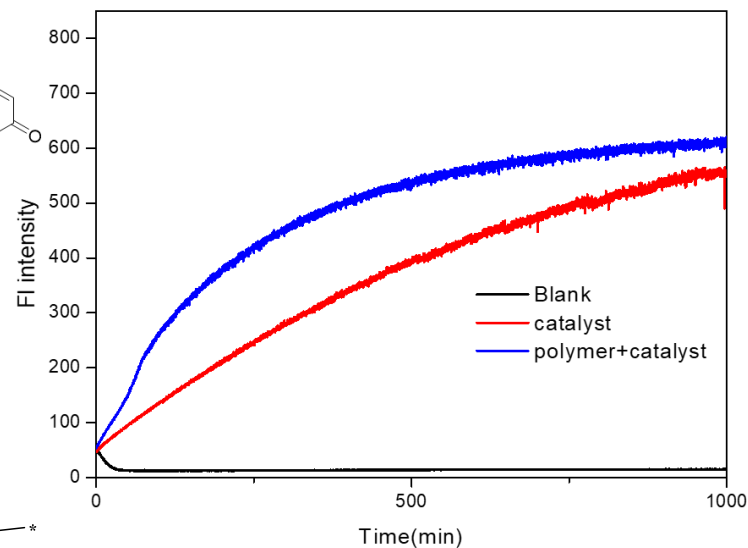
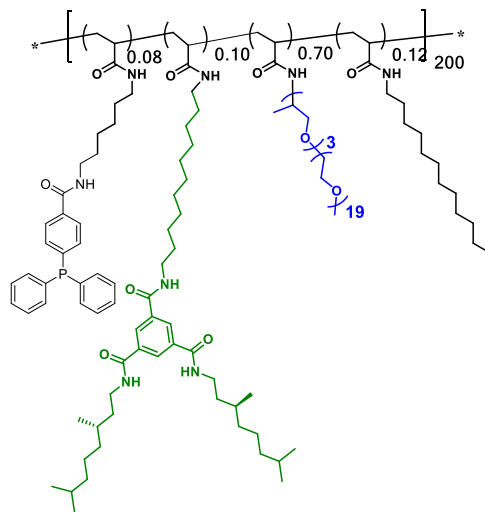
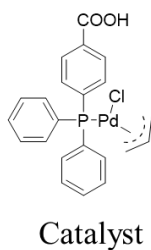
DMEM
Heated 15 min
Allowed to equilibrate for 3 hours

SCPNs with encapsulated catalysts

1.



2.

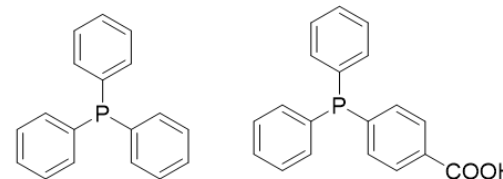


Conclusion

- SCPNs loaded with palladium catalyst can perform depropargylation reaction in water and PBS on different substrates
- Efficiency of catalyst varies with substrate based on its hydrophobicity which needs to be investigated which can give an insight to choose the best pro-drug
- Catalyst has to improved to perform function in complex media

Future plans

- Better ligands for catalyst that can perform catalysis in complex media
- Quantification of the product formed using LC-MS
- Best performing SCPN will be used for pro-drug activation in cells



- Scientific Skills
- Scientific Integrity
- Information Literacy and Reference Management
- Supramolecular Chemistry Course
- Training in polymer synthesis and characterization
- Spectroscopic Techniques

Communication and dissemination

- Research Presentation at Colloquium at TU/e
- Will present poster at Dutch polymer days in March

Thank you..