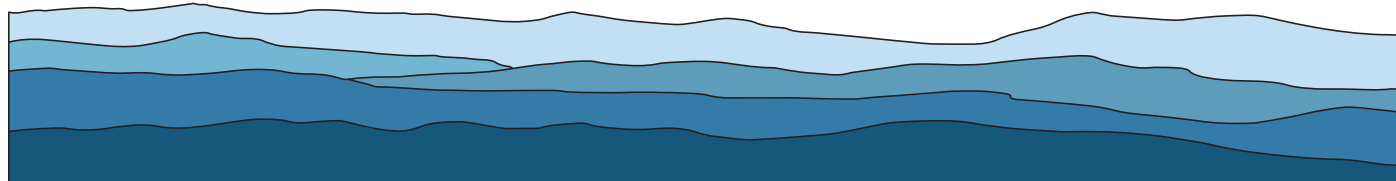


# HIGHLANDS IN CHEMISTRY SEMINAR SERIES



## PATRICIA DANKERS

EINDHOVEN UNIVERSITY OF TECHNOLOGY

### “Synthetic extracellular matrices based on bioinspired supramolecular polymers”

The extracellular matrix (ECM) is a complex assembly of various molecules held together via both covalent and noncovalent interactions. In order to make materials with comparable properties it is proposed that supramolecular materials based on hydrogen bonding units are eminently suitable. An important challenge in the synthesis and formulation of synthetic ECM, is besides the balance between dynamics and robustness, the introduction of complexity. This complexity can exist of bioactive molecules that are either supramolecularly or covalently attached to the materials, or might originate from the assembly of the supramolecular monomers into various hierarchical structures. Both parameters will heavily influence the function of the materials when brought into contact with cells. The bioactive function in our supramolecular systems is based on small synthetic peptides, large ECM proteins, or carbohydrates. Interestingly, small synthetic peptides can outperform mixtures of large natural proteins, highlighting the importance of bioinspired synthetic systems.

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2:30PM ET

ZOOM

FACULTY HOST:  
JOHN MATSON

