

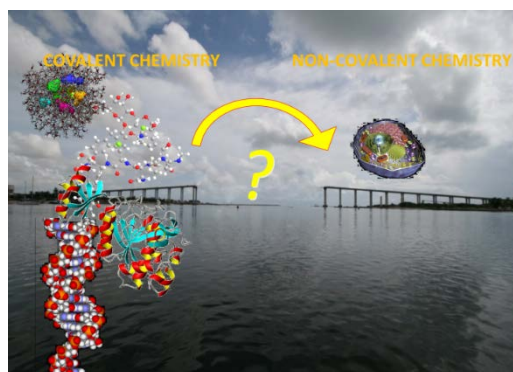
From non-covalent synthesis to complex molecular systems

Group Prof. Dr. E.W. Meijer

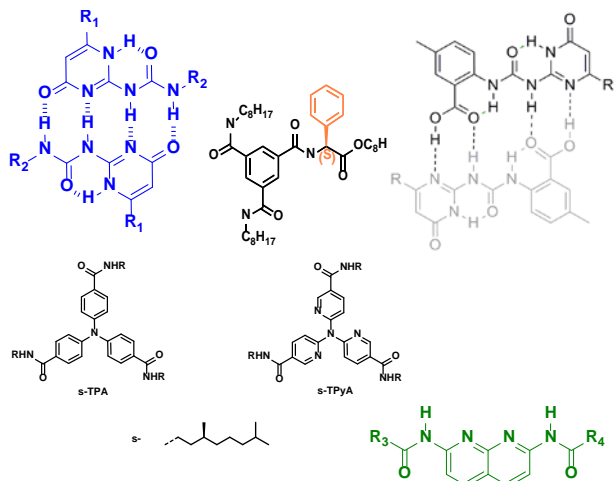


From covalent to non-covalent chemistry

Mastering complexity and multistep non-covalent synthesis are the most challenging research topics in our subgroup. We investigate fundamental issues with respect to self-assembly but we are also studying new aggregation processes to control non-covalent synthesis of molecular systems. Supramolecular protective groups and competition between supramolecular units are just two of the many challenges that we are currently facing on our way to understanding and mastering the complexity of these processes in order to take non-covalent synthesis to the next level.

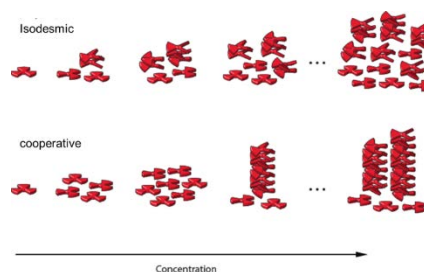


Our toolbox includes:



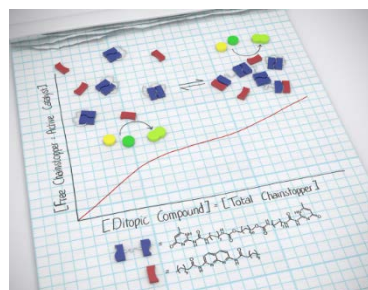
Fundamentals of self-assembly: towards predictive supramolecular chemistry

A combination of experimental techniques and mathematical models permits to elucidate the thermodynamics and kinetics of self-assembly processes. An important goal is the ability to predict how the molecular structure translates to the nature of the self-assembly process.



Multi-step non-covalent synthesis

The outcome of a non-covalent synthesis reaction is determined by the order of events. We design and study new molecular systems with multiple components and interactions.



Masterprojects

We are looking for students that like to combine modelling with experimental approaches and get excited by fundamentally understanding how a collection of molecules behave. Also synthetic chemists intrigued by new molecular systems are highly welcomed. Many projects are available on this subject, which is carried out in close collaboration with other groups in the Netherlands and abroad.