GESELLSCHAFT DEUTSCHER CHEMIKER
ORTSVERBAND HANNOVER

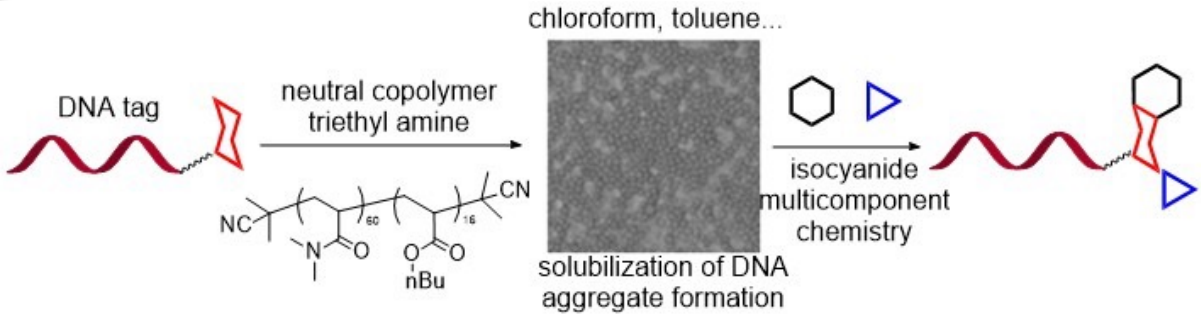
Einladung zum GDCh-Colloquium des Ortsverbandes Hannover

Das Colloquium findet um 17c.t. im Dr.-Oetker Hörsaal (Raum 007, Geb. 2504) der Leibniz Universität Hannover, Physikalische Chemie, Callinstraße 3A, 30167 Hannover statt.

04.12.2025 **Prof. Dr. Andreas Brunschweiger**,
Universität Würzburg

Synthesis of DNA-encoded libraries in organic solvents

Organic reactions with DNA-conjugated substrates are important in technologies such as DNA-encoded libraries (DEL). One major challenge to the translation of many organic reactions to DNA-tagged substrates is the lack of solubility of the highly charged DNA oligomer in most organic solvents. A neutral acrylate block copolymer tightly interacted with DNA oligomers in their ammonium form, and solubilized them in pure apolar solvents such as dichloromethane, chloroform, toluene and many co-solvents of these. The DNA-polymer interaction in organic solvents led to formation of aggregates whose size correlated with DNA oligomer length. The copolymer solvent system was successfully exploited to diversify DNA-tagged substrates by isocyanide multicomponent reactions (IMCR) with broad scope and excellent yields for DNA-encoded library design. The DNA-solubilization method was applied in the synthesis of a macrocycle DEL using Ruthenium-promoted ring-closing metathesis as a key step.



Bingold et al., Aggregation of DNA oligomers with a neutral polymer facilitates DNA solubilization in organic solvents for DNA-encoded chemistry, Chem. Sci.: https://doi.org/10.1039/D5SC06782K

Prof. Dr. Jens-Uwe Grabow
Vorsitz OV Hannover

Vor dem Colloquium findet ab ca. 16 c.t. eine ‚Kaffeerunde' mit dem Vortragenden in der Bibliothek des Instituts für Physikalische Chemie, Callinstraße 3A statt.