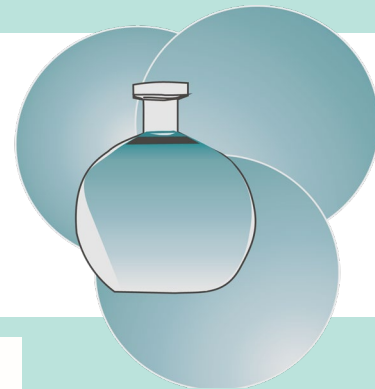


Fakultät für Naturwissenschaften  
**Institut für Chemie**



lädt ein

gemeinsam mit der Gesellschaft  
Deutscher Chemiker  
zum



**Vortrag**  
von Herrn

**Prof. Daniel B.  
Werz**

Institute of Organic Chemistry  
**Albert-Ludwigs-  
Universität Freiburg**

**“Design and  
Serendipity in  
Fluorophore  
Chemistry”**

am: 13. Juni 2024  
um: 16:00 Uhr  
WO: im Raum 1/232

Die kleine Kaffeerunde vor dem Vortrag beginnt  
um 15:30 Uhr im Raum 1/232.

Das Mitbringen von eigenen Trinkgefäßen ist  
erwünscht.

Gäste sind herzlich willkommen!

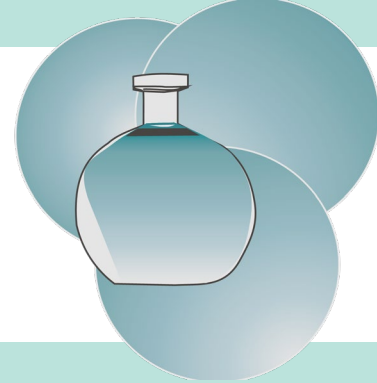


TECHNISCHE UNIVERSITÄT  
IN DER KULTURHAUPTSTADT EUROPAS  
CHEMNITZ

Prof. Dr. Michael Sommer

Telefon: 0371 / 531 32507

E-Mail: [michael.sommer@chemie.tu-chemnitz.de](mailto:michael.sommer@chemie.tu-chemnitz.de)



Prof. Daniel B.  
Werz

Institute of Organic Chemistry  
Albert-Ludwigs-Universität  
Freiburg

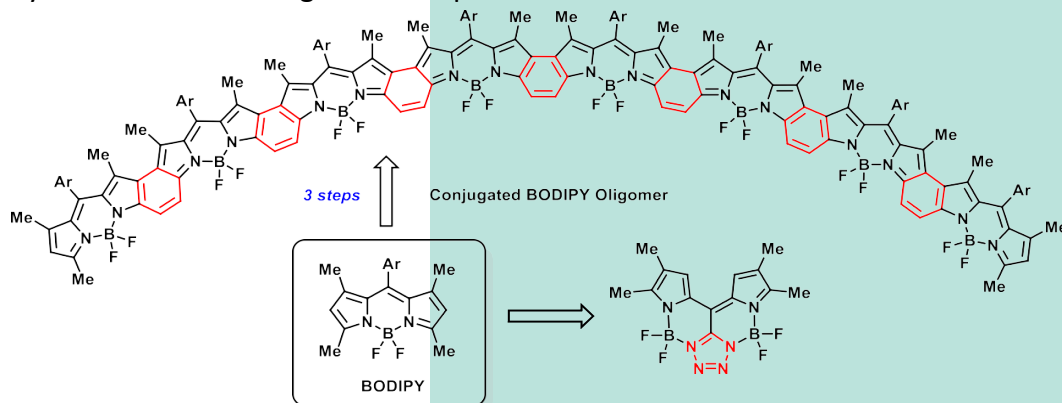


GDCh  
GESELLSCHAFT  
DEUTSCHER CHEMIKER

## “Design and Serendipity in Fluorophore Chemistry”

The rich chemistry of the BODIPY motif, together with its beneficial photophysical properties, has markedly boosted the popularity of this user-friendly fluorophore over the last few decades.[1] The diversity of easily incorporated fluorescence modulation modes has set the stage for a variety of sensorically active species.

The talk describes which physical-organic rationalisation led to the development of the BOIMPY motif showing a significant red-shift with respect to the parent BODIPY.[2] In addition, a simple synthetic route to oligomerized ethano-linked BODIPYs (up to an octamer) is presented which can be further oxidized to huge completely conjugated systems.[3] Photophysical properties and biological properties are discussed by experimental and theoretical means.[4] It is shown that the suprastructure of the oligomeric dyes plays a significant role for their absorption and emission properties and that the conjugated systems are interesting NIR fluorophores.



**Scheme 1:** BODIPY, (Aza-)BOIMPY and highly conjugated BODIPY oligomer.

[1] a) A. Loudet, K. Burgess, *Chem. Rev.* **2007**, *107*, 4891; b) G. Ulrich, R. Ziessel, A. Harriman, *Angew. Chem. Int. Ed.* **2008**, *47*, 1184.

[2] a) L. J. Patalag, P. G. Jones, D. B. Werz, *Angew. Chem. Int. Ed.* **2016**, *55*, 13340; b) L. J. Patalag, P. G. Jones, D. B. Werz, *Chem. Eur. J.* **2017**, *23*, 15903.

[3] a) L. J. Patalag, L. Phong Ho, P. G. Jones, D. B. Werz, *J. Am. Chem. Soc.* **2017**, *139*, 15104; b) A. Patra, L. J. Patalag, P. G. Jones, D. B. Werz, *Angew. Chem. Int. Ed.* **2021**, *60*, 747.

[4] L. J. Patalag, S. Ahadi, O. Lashchuk, P. G. Jones, S. Ebbinghaus, D. B. Werz, *Angew. Chem. Int. Ed.* **2021**, *60*, 8766- 8771.



TECHNISCHE UNIVERSITÄT  
IN DER KULTURHAUPTSTADT EUROPAS  
CHEMNITZ

Prof. Dr. Michael Sommer  
Telefon: 0371 / 531 32507  
E-Mail: [michael.sommer@chemie.tu-chemnitz.de](mailto:michael.sommer@chemie.tu-chemnitz.de)