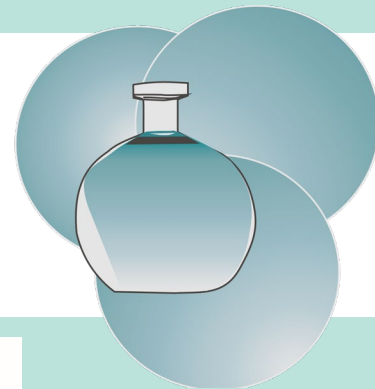


Fakultät für Naturwissenschaften
Institut für Chemie



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!

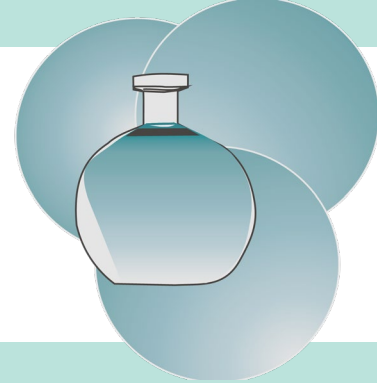


TECHNISCHE UNIVERSITÄT
IN DER KULTURHAUPTSTADT EUROPAS
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Prof. Daniel B.
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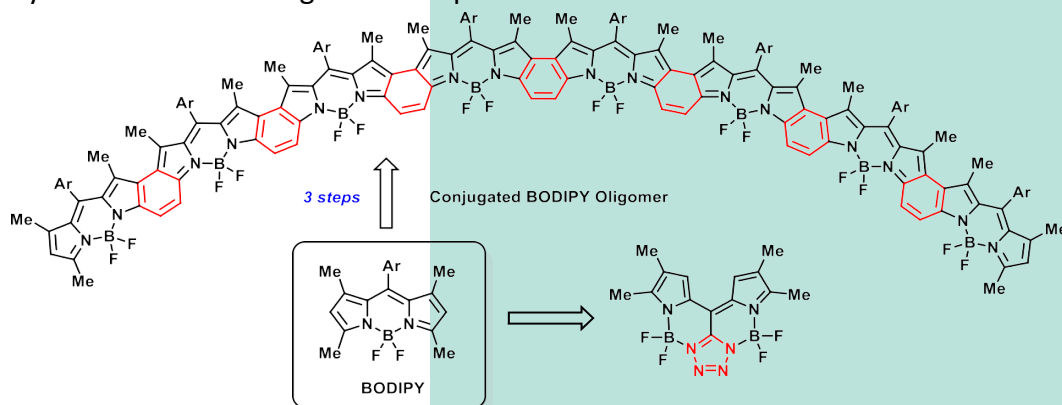


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“Design and Serendipity in Fluorophore Chemistry”

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.



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