



GESELLSCHAFT DEUTSCHER CHEMIKER
ORTSVERBAND SIEGEN

Ankündigung

Am Dienstag, **28. Januar 2020**, spricht um **16:30 Uhr**
im Hörsaal AR-F 002, Department Chemie und Biologie

Prof. Dr. Peter Bäuerle
Universität Ulm

über das Thema

„Towards complex aromatic carbon-sulfur structures“

Kaffeerunde ab 16 Uhr **im Foyer des Hörsaals AR-F 002**, organisiert
durch das
JungChemikerForum

Alle interessierten Kolleginnen und Kollegen, Mitarbeiterinnen und Mitarbeiter
und Studierende sind zu diesem Vortrag herzlich eingeladen.
Gäste sind herzlich willkommen.

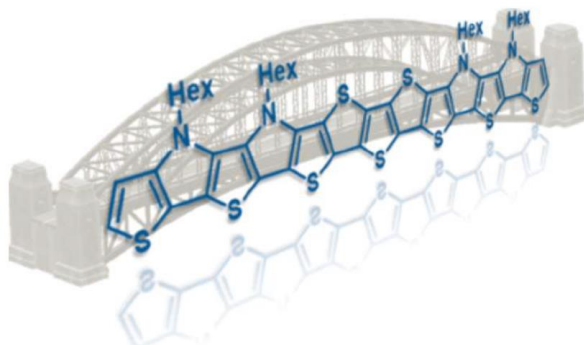
Der Ortsverbandsvorsitzende
PD Dr. Stephan Bäurle
Tel. 0271 740-4025



Prof. Dr. Peter Bäuerle

Towards complex aromatic carbon-sulfur structures

Oligothiophenes represent an important class of compounds in the field of organic semiconductors and organic electronics. On the basis of thiophenes, we are currently synthesizing and investigating novel conjugated architectures and shapes, such as linear, macrocyclic, dendritic, and fused. In particular, we have recently developed series of novel S,N-heteroacenes up to a 13-mer which combine the stability of oligothiophenes and the planar extended π -system of (phen)acenes.¹ Conjugated materials with highly interesting optoelectronic properties,² small bond length alternation, planarity, and good charge transport properties result in interesting structure-property relationships.



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Opposite to these typically flat and extended π -conjugated structures, we currently develop and synthesize 3-dimensional and sterically crowded aromatic carbon-sulfur structures (thienylene-phenylenes) in order to elucidate how increasing steric congestion influences the electronic properties. Both classes of compounds were implemented in highly efficient organic³ or perovskite solar cells.⁴

1. E. Brier, C. Wetzel, M. Bauer, M. Wunderlin and P. Bäuerle, Chem. Mater. 2019, (<http://dx.doi.org/10.1021/acs.chemmater.9b01652>).
2. C. Wetzel, A. Vogt, A. Rudnick, E. Mena-Osteritz, A. Köhler and P. Bäuerle, Org. Chem. Front., 4, 1629 (2017).
3. T. Leitner, A. Vogt, D. Popović, E. Mena-Osteritz, K. Walzer, M. Pfeiffer and P. Bäuerle, Mater. Chem. Front., 2, 959 (2018).
4. D. Bi, A. Mishra, P. Gao, M. Franckevicius, C. Steck, S. M. Zakeeruddin, M. K. Nazeeruddin, P. Bäuerle, M. Grätzel and A. Hagfeldt, ChemSusChem, 9, 433 (2016).