הפקולטה לכימיה
ע"ש שוליך
טכניון – מכון טכנולוגי לישראל

Faculty of Chemistry
SCHULICH
Technion, Israel Institute of Technology

The Laboratory for Organic and Inorganic Chemistry

Seminar

Monday, May 22nd at 11:30 in the Seminar Room

Prof. Stellios Arseniyadis

Queen Mary University of London

On the Topic of:

From organometallic catalysis to bio-hybrid catalysis: Some recent results from the group

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From organometallic catalysis to bio-hybrid catalysis: Some recent results from the group

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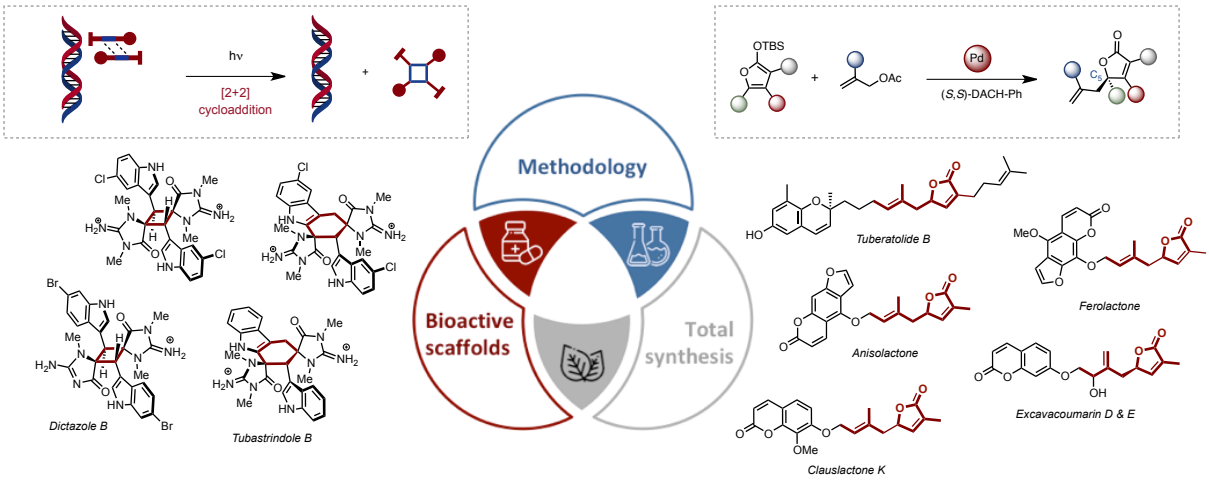
For the past several years, the group has focused on the development of new synthetic tools with a special emphasis given to structural and functional complexity. These methods span within the areas of transition metal catalysis, asymmetric organocatalysis and, more recently, bio-hybrid catalysis. In this context, we've developed a number of synthetic methods involving either palladium-catalysed asymmetric allylic alkylation processes[1] or DNA-catalysed transformations.[2] I'll present some of our most recent results.



References

[1] For selected examples of Pd-AA and Pd-AAA reactions developed in the group, see: (a) J. Huang *et al. ChemRxiv* **2023** (*DOI: 10.26434/chemrxiv-2023-0xbh5*). (b) F. Richard *et al. Nat. Synth.* **2022**, *1*, 641. (c) M. Dolé Kerim *et al. J. Org. Chem*. **2020**, *85*, 12514. (d) T. Katsina *et al. Org. Lett*. **2019**, *21*, 9348. (e) S. Aubert *et al. Org. Lett*. **2019**, *21*, 2231. (f) T. Song *et al. Org. Lett*. **2019**, *21*, 603. (g) T. Song *et al. Chem. Eur. J*. **2018**, *24*, 8076. (h) M. Nascimento de Oliveira *et al. Chem. Eur. J*. **2018**, *24*, 4810. (i) M. Nascimento de Oliveira *et al.* J. *Org. Lett*. **2017**, *19*, 14. (j) H. Elhachemia *et al. Chem. Commun*. **2016**, *52*, 14490. (k) J. Fournier *et al*. *Angew. Chem. Int. Ed*. **2013**, *52*, 1257. (l) J. Fournier *et al. Angew. Chem. Int. Ed*. **2012**, *51*, 7562.

[2] For selected examples of DNA-based asymmetric transformations developed in the group, see: (a) S. Oger *et al*. *Chem. Commun*. **2023**, *59*, 4221. (b) N. Duchemin *et al. JACS Au* **2022**, *2*, 1910. (c) J. Mansot *et al. Chem. Eur. J*. **2020**, *26*, 3519. (d) J. Mansot *et al. Chem. Sci.* **2019**, 2875. (e) N. Duchemin *et al. Angew. Chem. Int. Ed.* **2018**, *57*, 11786. (f) N. Duchemin *et al. Chem. Commun*. **2016**, *52*, 8604. (g) K. Amirbekyan *et al. ACS Catal*. **2016**, *6*, 3096. (h) E. Benedetti *et al. Chem. Commun*. **2015**, *51*, 6076. (i) J. Wang *et al. Angew. Chem. Int. Ed*. **2013**, *52*, 11546.