SPECIAL ORGANIC SEMINAR

Wood, Light, and Electricity – Three Flavors of Synthetic Chemistry

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At present, synthetic organic chemistry largely relies on fossil carbon sources. The seminar will highlight the alternative use of wood-based renewable chemical feedstocks and of photo- and electrochemical transformations in the synthesis of organic molecules, including biologically active natural products such as morphinan, strychnos, ergot or curare alkaloids.[1]

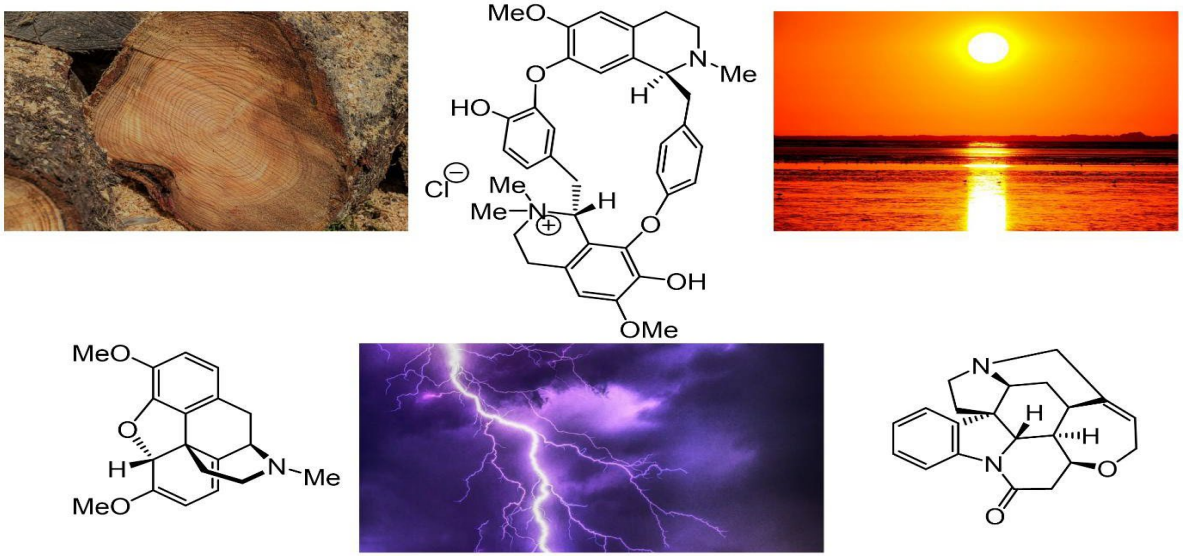

Figure 1. Examples of compounds synthesized using xylo-, photo- and electrochemistry

1 a) D. Stubba, G. Lahm, M. Geffe, J. W. Runyon, A. J. Arduengo III, T. Opatz, Angew. Chem. Int. Ed. 2015, 54, 14187; b) N. Otto, D. Ferenc, T. Opatz, J. Org. Chem. 2017, 82, 1205; c) A. Lipp, D. Ferenc, C. Gütz, M. Geffe, N. Vierengel, D. Schollmeyer, H. J. Schäfer, S. R. Waldvogel, T. Opatz, Angew. Chem. Int. Ed. 2018, 57, 11055; d) A. Lipp, M. Selt, D. Ferenc, D. Schollmeyer, S. R. Waldvogel, T. Opatz, Org. Lett. 2019, 21, 1828; e) J. Brauer, E. Quraishi, L. M. Kammer, T. Opatz, Chem. Eur. J. 2021, 27, 18168-18174; f) A. Luque, J. Groß, T. J. B. Zähringer, C. Kerzig, T. Opatz, Chem. Eur. J., 2022, 28, e2021043; g) L. M. Großmann, V. Beier, L. Duttenhofer, L. Lennartz, T. Opatz, Chem. Eur. J., 2022, 28, e202201768; h) J. Brauer, R. Wiechert, A. Hahn, T. Opatz, Org. Lett., 2024, 26, 4314; i) J. Rocker, J. A. Dresel, L. A. Krieger, P. Eckhardt, A. M. Ortuño, W. R. Kitzmann, G. H. Clever, K. Heinze, T. Opatz, Chem. Eur. J., 2023, 29, e2023012.

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