



Showcasing research from Professor Konrad Kowalski's laboratory, Department of Organic Chemistry, University of Łódź, Poland and collaborators.

Chemistry of organometallic nucleic acid components: personal perspectives and prospects for the future

This Perspective summarizes key results regarding the synthetic chemistry and biological activities of organometallic nucleic acid components obtained in our laboratory over the last 12 years. In particular, we have developed a Michael addition reaction-based methodology that enabled the synthesis of an entirely new class of glycol nucleic acid (GNA) components. Recently, we developed a CuAAC reaction-based approach for the synthesis of novel 1,2,3-triazole-linked ("click") nucleosides. The high value of this approach is because it allows for the introduction of functional (e.g., redox-active) groups that protrude from the main oligomer sequence. The final section of this paper serves as a guide for future studies, as it presents some goals yet to be achieved within the rapidly growing field of nucleic acid chemistry.

Acknowledgement: Dr. Damian Trzybiński is thanked for help in creation of this artwork.

As featured in:



See Mateusz Klarek and Konrad Kowalski, *Dalton Trans.*, 2024, **53**, 18420.