

Collection of Czechoslovak Chemical Communications - digital archive

[CCCC](#) > [Symposium Series](#) > [2008, Volume 10](#) > **p. 451**

Collection Symposium Series **2008**, 10, 451-451

<http://dx.doi.org/10.1135/css200810451>

Published online 2015-10-30 18:44:55

Metal free click chemistry on nucleosides and oligonucleotides

Ishwar Singh, Frances Heaney, Caroline Batchelor and Joseph S. Vyle

This article is part of proceedings of the XIVth Symposium on Chemistry of Nucleic Acid Components, Český Krumlov, 8 Jun 2008 – 13 Jun 2008.

First page

METAL FREE CLICK CHEMISTRY ON NUCLEOSIDES AND OLIGONUCLEOTIDESIshwar SINGH^a, Frances HEANEY^a, Caroline BATCHELOR^b and Joseph S. VYLE^c*Department of Chemistry, Department of Biology, National University of Ireland, Maynooth,
School of Chemistry and Chemical Engineering, The Queen's University of Belfast, U.K.*

Chemoselective ligation of biologically significant moieties through azide alkyne Click Chemistry has recently received much attention¹. The reaction is attractive in that it regioselectively affords stable triazole linked bioconjugated products under mild conditions. However, from the view point of the synthetic oligonucleotide chemist, a significant disadvantage is that the non-thermal reaction requires an *in situ* generated Cu(I) catalyst. Unwanted Cu(I) mediated chemistry, specifically oxidative degradation, has meant the number of examples of Click reactions with nucleic acids is still relatively small². Whilst judicious choice of copper ligand can help to minimise this problem we are interested in a more general solution to this problem. To this end we are developing metal free Click Chemistry and we present our results with nucleoside and oligonucleotide substrates in this poster.

REFERENCES

1. Kolb H. C., Finn M. G., Sharpless K. B: *Angew. Chem., Int. Ed.* **2001**, *40*, 2004.
2. Fokin V. V.: *ACS Chem. Biol.* **2007**, *2*, 775.