

3. Company Background

Baseclick GmbH is a start-up company funded and founded by BASF Venture Capital GmbH. It holds the intellectual property for the above mentioned technologies and will offer this for licensing the technology or purchasing products. The company has its seat in Tutzing, south of Munich, close to the biotech campus in Munich-Martinsried. Part of the IP was generated at the University of Munich in the group of Prof. Thomas Carell. Two members of his group (Dr. Antonio Manetto, Dipl. Chem. Simon Warncke) joined the company.

4. Literature

P. M. E. Gramlich, C. T. Wirges, A. Manetto, T. Carell. Postsynthetic DNA Modification through the Copper-Catalyzed Azide-Alkyne Cycloaddition Reaction. *Angew. Chem. Int. Ed.* **2008**, *47*, 8350-8358.

P. M. E. Gramlich, S. Warncke, J. Gierlich, T. Carell. Click-Click-Click: Single to Triple Modification of DNA. *Angew. Chem. Int. Ed.* **2008** 3442-3444.

J. Gierlich, K. Gutsmedl, P. M. E. Gramlich, A. Schmidt, G. Burley, T. Carell. Synthesis of Highly Modified DNA by a Combination of PCR with Alkyne-Bearing Triphosphates and Click Chemistry. *Chem. Eur. J.* **2007**, *13*, 9486-9494.

D. M. Hammond, A. Manetto, J. Gierlich, V. A. Azov, P. M. E. Gramlich, G. A. Burley, M. Maul, T. Carell. DNA Photography: An Ultrasensitive DNA-Detection Method Based on Photographic Techniques, *Angew. Chem. Int. Ed.* **2007**, *46*, 4184-4187.

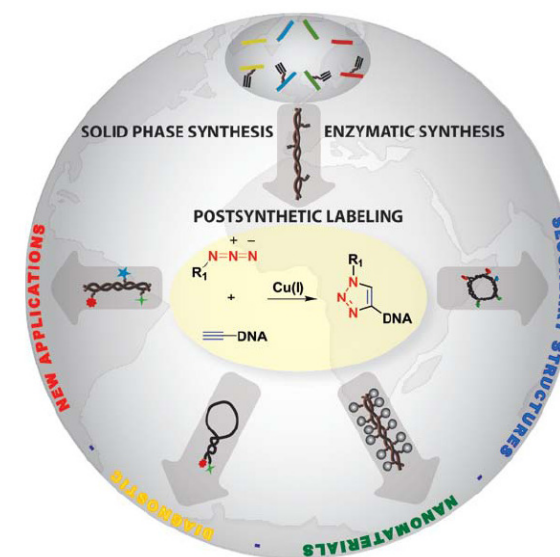
G. A. Burley, J. Gierlich, M. R. Mofid, S. T. H. Nir, Y. Eichen, T. Carell. Direct DNA Metallization, *J. Am. Chem. Soc.* **2006**, *128*, 1398-1399

5. Contact

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The DNA Company



**New Labeling Technology Offers
Opportunities in DNA Research and
in vitro / *in vivo* Diagnostics**

1. Technology

1.1. Introduction

Core technology of our company is the modification of oligonucleotides with click chemistry (chemical and enzymatic DNA synthesis).

Using this method, nucleic acids can be easily labeled with various molecules, amongst them dyes, quenchers, affinity tags, intercalators, but also peptides, lipophilic groups, nanoparticles, enzymes, antibodies, solid phases and many more.

Multiple modifications with different labels can be done at any position within the DNA/RNA strand, including the termini.

1.2. baseclick offer

- Modified nucleotides, ready to be used in standard DNA synthesis procedures (solid phase and enzymatic)
- Free modified-nucleosides for your cell-culture lab.
- Various azides for click-chemistry
- New ultra-photostable dyes with Stokes-Shift up to 180 nm
- Customized oligonucleotides labeled at defined positions
- Co-development of kits for labeling and detecting nucleic acids (DNA/RNA) for research and diagnostic purposes
- Licensing of technology

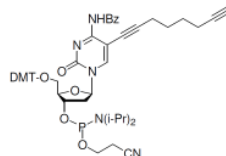
2. Products

2.1. Introduction

State-of-the-art labeling technologies suffer from poor incorporation rates of the label and of instabilities of intermediate products. Our new technology overcomes these weaknesses. DNA and RNA can be labeled at any position even with different or new kind of labels. This enables new protocols in the research lab and for the development of new diagnostic products. The procedures are efficient, inexpensive and robust.

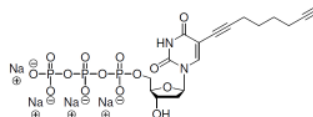
2.2. Phosphoramidites

We offer highly efficient coupling alkyne-derived phosphoramidites (dU & dC) for the DNA solid-phase synthesis (see example below).



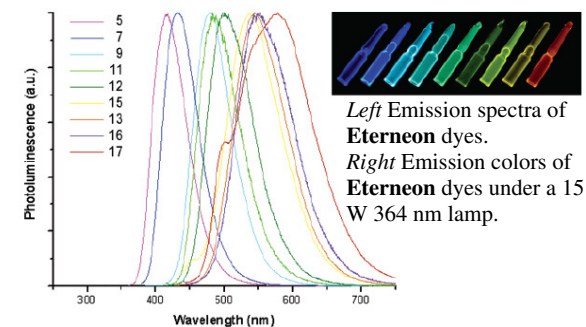
2.3. Triphosphates and free-nucleosides

Our alkyne-NTPs (dU & dC) allow you to work with standard PCR conditions, assuring you high fidelity incorporation comparable to natural occurring NTPs. Moreover, the long C8-alkyne-linker is optimally suited for highly efficient multiple labeling.



2.4. Azides

baseclick offers standard fluorescent dyes, quenchers, haptens, linkers and a new generation of ultra-photostable dyes with Stokes-Shift up to 180 nm! **ETERNEON Dyes** as azides & NHS-esters.



2.5. Miscellaneous

One-stop / one-shop. baseclick offers all what you need for DNA-labeling including expert's advice.

2.6. Custom Oligonucleotides

baseclick offers highly pure oligos (DNA/RNA) through its custom synthesis service. You can order your custom-designed alkyne-containing oligos as well as highly modified oligos.

