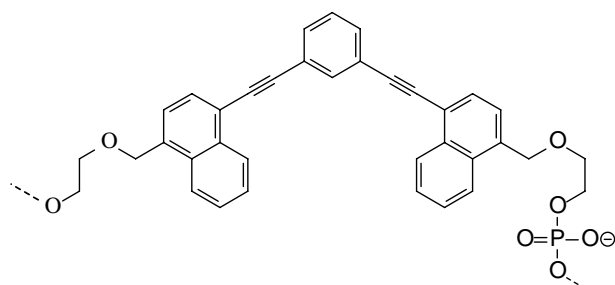


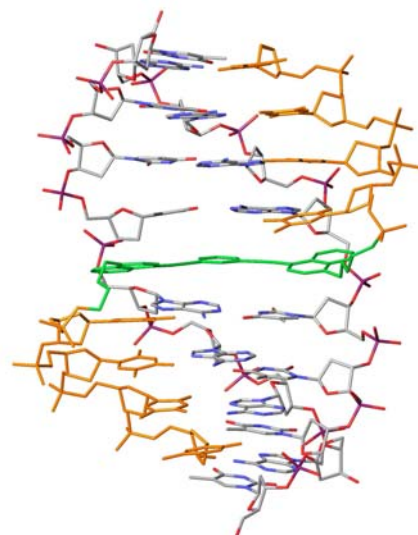
Intercalating Nucleic Acids Chemistry

The research focus is on synthetic chemistry within nucleic acid chemical biology. Modified nucleic acid fragments are designed for the mimicking and targeting of secondary nucleic acid structures – especially modified nucleic acids for use in antigene therapy, for example triplex-form oligonucleotides and intercalator-based transcription inhibiting.

Alternate-strand Hoogsteen Triplex Forming Oligonucleotides



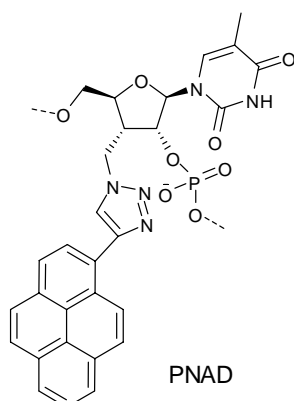
Alternate strand connector



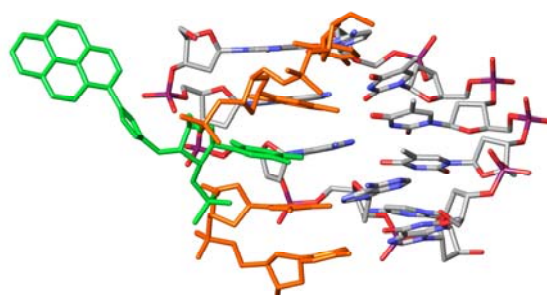
For more information:

- Filichev, Vyacheslav V.; Nielsen, Mads C.; Bomholt, Niels.; Jessen, Carsten H.; Pedersen, Erik B. **High Thermal Stability of 5'-5'-Linked Alternate Hoogsteen Triplexes at Physiological pH.** *Angew. Chem. Int. Ed.* 2006, 45, 5311-5315. [[Abstract](#)]
- Jessen, Carsten H.; Pedersen, Erik B. **Design of an intercalating linker leading to the first efficiently 5',5'-linked alternate-strand Hoogsteen triplex with high stability and specificity.** *Helvetica Chimica Acta.* 2004, 87, 2465-2471. [[Abstract](#)]

PNAD – Pyrene Labelled Probes For Nucleic Acid Detection



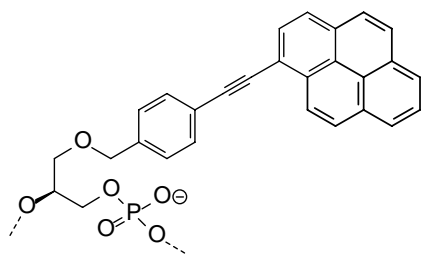
PNAD



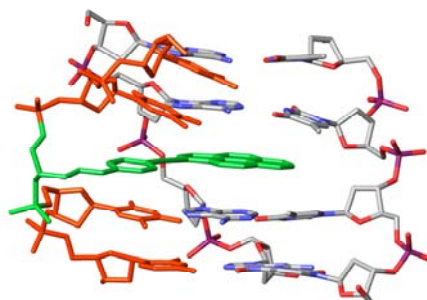
For more information:

- Van Daele, Ineke; Filichev, Vyacheslav V.; Bomholt, Niels; Van Calenbergh, Serge; Pedersen, Erik B. **Triplex formation of pyrene labelled probes for nucleic acid detection in fluorescence assays.** *In preparation.*

TINA Intercalating Nucleic Acids



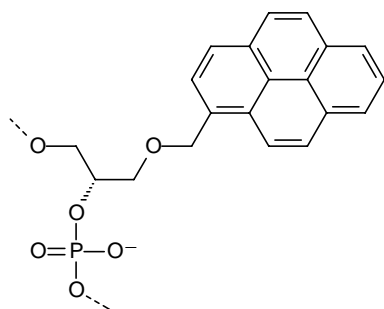
Triplex stabilizer (TINA)



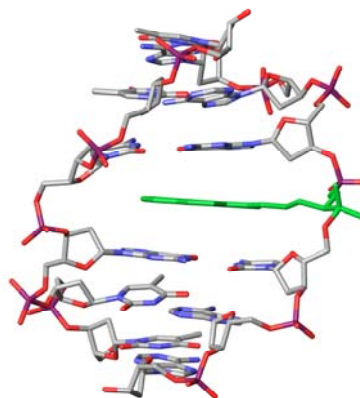
For more information:

- Filichev, Vyachelsav V.; Pedersen, Erik Bjerregaard. **Bulge insertions of flexible basestacking monomer into the middle of twisted intercalating nucleic acids (TINA) for stable and selective formation of hoogsteen-type triplexes and duplexes and uses.** *PCT Int. Appl.* (2006), 54pp. WO 2006125447. [[Abstract](#)]
- Filichev, Vyacheslav V.; Pedersen, Erik B. **Stable and selective formation of Hoogsteen-type triplexes and duplexes using Twisted Intercalating Nucleic Acids (TINA) prepared via postsynthetic Sonogashira solid-phase coupling reactions.** *Journal of the American Chemical Society*, 2005, 127, 14849-14858. [[Abstract](#)]

INA Intercalating Nucleic Acids



Duplex stabilizer (INA)



For more information:

- Wamberg, M. C.; Hassan, A. A.; Bond, A. D.; Pedersen, E. B. **Intercalating nucleic acids (INAs) containing insertions of 6H-indolo[2,3-b]quinoxaline.** *Tetrahedron*, 2006, 62, 11187-11199. [[Abstract](#)]
- Filichev, Vyacheslav V.; Vester, Birte; Hansen, Lykke H.; Pedersen, Erik B. **Easily denaturing nucleic acids derived from intercalating nucleic acids: thermal stability studies, dual duplex invasion and inhibition of transcription start.** *Nucleic Acids Research*, 2005, 33, 7129-7137. [[Abstract](#)]
- Christensen, Ulf B.; Wamberg, Michael; El-Essawy, Farag A. G.; Ismail, Abd El-Hamid; Nielsen, Christina B.; Filichev, Vyacheslav V.; Jessen, Carsten H.; Petersen, Michael; Pedersen, Erik B.: **Intercalating Nucleic Acids: The Influence of Linker Length and Intercalator Type on Their Duplex Stabilities.** *Nucleosides, Nucleotides & Nucleic Acids*, 2004, 23, 207-225. [[Abstract](#)]
- Filichev, Vyacheslav V.; Christensen, Ulf B.; Pedersen, Erik B.; Babu, B. Ravindra; Wengel, Jesper. **Locked nucleic acids and intercalating nucleic acids in the design of easily denaturing nucleic acids: Thermal stability studies.** *ChemBioChem*, 2004, 5, 1673-1679. [[Abstract](#)]
- Nielsen, Christina B.; Petersen, Michael; Pedersen, Erik B.; Hansen; Poul E., Christensen; Ulf B. **NMR Structure Determination of a Modified DNA Oligonucleotide Containing a New Intercalating Nucleic Acid.** *Bioconjugate Chemistry*, 2004, 15, 260-269. [[Abstract](#)]
- Christensen, Ulf B.; Pedersen, Erik B. **Intercalating nucleic acids containing insertions of 1-O-(1-pyrenylmethyl)glycerol: stabilisation of dsDNA and discrimination of DNA over RNA.** *Nucleic. Acids. Research* 2002, 30, 4918-4925. [[Abstract](#)]