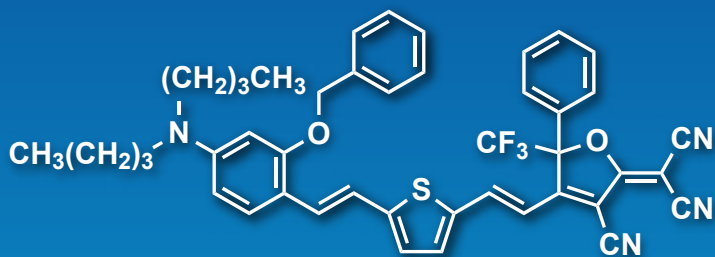


Organic Non-linear Optical (NLO) Material with High Electro-optic Effects



NEO-823
[N1056]

Electro-optic modulators exhibiting the electro-optic effect (EO) are typically used when converting electrical signals to optical signals within optical telecommunication networks. Additionally, organic non-linear optical (NLO) materials have attracted attention towards these applications due to their ability to break speed limits within devices using inorganic dielectric materials. The organic NLO material NEO-823 in particular shows high EO effects, and an organic EO polymer is preparable by blending NEO-823 into polymethylmethacrylate (PMMA).

Physical Properties

- Maximum absorption wavelength (λ_{\max}) : 823 nm
- Hyperpolarizability (β) : 1670×10^{-30} esu
- Electro-optic coefficient (r)
@1550nm (20wt% in PMMA host polymers) : 75 pm/V

Research Applications

- Ultra-high-speed optical modulation devices
- Terahertz radiation devices
- Highly-sensitive electric field sensors

T. Yamada, I. Aoki, H. Miki, C. Yamada, A. Otomo, *Mater. Chem. Phys.* **2013**, 139, 699.
A. Otomo, I. Aoki, H. Miki, H. Tazawa, S. Yokoyama, *PCT Int. Appl. WO 2011024774*, **2011**.

NEO-823

100mg [N1056]

This product was produced by collaboration with Dr. Akira Otomo, National Institute of Information and Communications Technology, Japan.

Related Product

DANS (= 4-Dimethylamino-4'-nitrostilbene)
MNA (= 2-Methyl-4-nitroaniline)

5g [D2505]
25g [N0529]

For further information please refer to our website at www.TCIchemicals.com. ▶▶▶

NLO



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