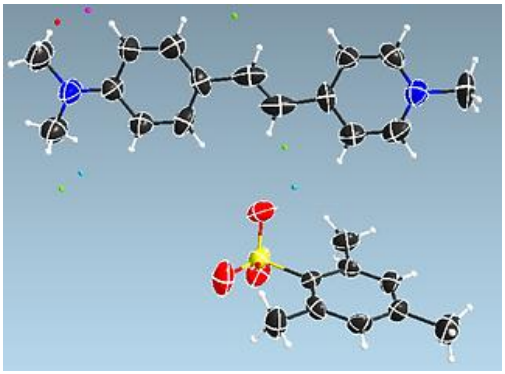
OH1 Organic Crystal

2-[3-(4- hydroxystyryl)-5, 5-dimethylcyclohex-2-enylidene] malononitrile

Applications

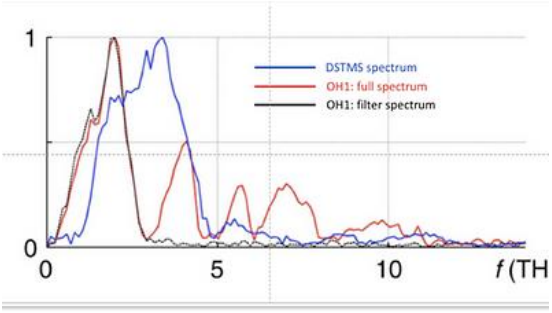


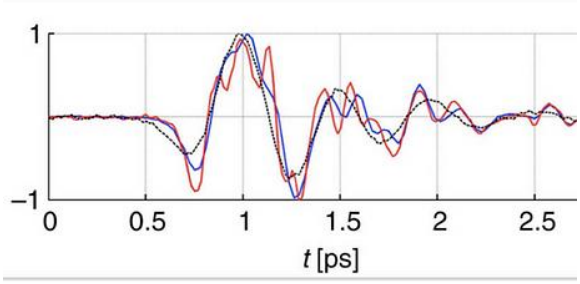
- THz generator and detector
- Multi-THz generator
- Second harmonic generator

Related Products

BNA is a new crystal operating at Ti:Sa 800 nm with similar generation properties to OH1

Example Output





Expected Output

- Input laser: 34 mJ OPA near-infrared
- Output THz: 85 MV/cm

Application 1: Intense Nonlinear Spectroscopy

Comparison with conventional ZnTe sources:

Crystal	Conversion Efficiency at RT	Bandwidth
OH1	2-3%	3THz or 13THz
ZnTe	0.0031%	3THz

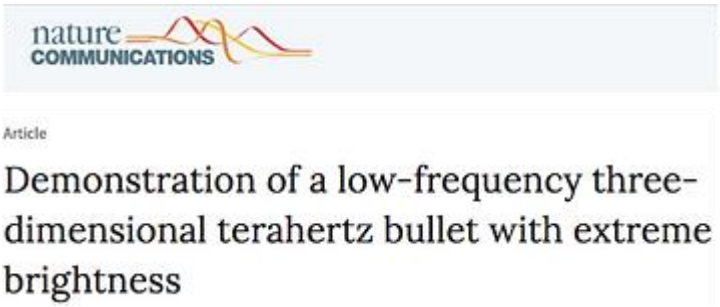
Application 2: Broadband Linear Spectroscopy

Comparison with conventional Lithium Niobate sources:

Crystal	Nonlinear Coefficient	Phase Matching with Ti:Sa 800 nm	Experimental Requirements	Conversion Efficiency at RT	Bandwidth
OH1	120pm/V @1990 nm	no	Simple Collinear Scheme	2-3%	3THz or 13THz
Lithium	31.5pm/V	no	Complex Tilted	0.1%	1THz or

Crystal	Nonlinear Coefficient	Phase Matching with Ti:Sa 800 nm	Experimental Requirements	Conversion Efficiency at RT	Bandwidth
Niobate			**Pulse Front**		**3THz**

Our Crystal Technology in Literature



Literature

Nat. Commun. 6, 5976 (2015); Opt. Express 34, 231974 (2015).