

## List of publications: THz generation using our organic crystals DAST, DSTMS & OH1

### DSTMS

Ultra-broadband terahertz pulses generated  
in the organic crystal DSTMS

C. Somma, G. Folpini, J. Gupta, K. Reimann, M. Woerner, and T. Elsaesser  
*Optics Letter* **40**, 3404, 2015

M. Shalaby, C.P. Hauri

Demonstration of a low-frequency three-dimensional terahertz bullet with extreme brightness  
*Nature Comm.* **2015**, 6, No. 5976, doi:10.1038/ncomms 6976

C. Vicario, M. Jazbinsek, A.V. Ovchinnikov, O.V. Chefonov, S.I. Ashitkov, M.B. Agranat, and C.P. Hauri

High efficiency THz generation in DSTMS, DAST and OH1 pumped by Cr:forsterite laser  
*Opt. Express*, **2015**, 23, 4573-4580.

M. Shalaby, C.P. Hauri

Terahertz brightness at the extreme: demonstration of 5 GV/m low frequency  $\lambda^3$  terahertz bullet  
<http://arxiv.org/pdf/1407.1656v1.pdf> (2014)

C. Vicario B. Monoszlai, C. P. Hauri

GV/m Single-Cycle Terahertz Fields from a Laser-Driven Large-Size Partitioned Organic Crystal  
*Phys. Rev. Lett.*, **2014**, 112, 213901

C. Vicario, B. Monoszlai, B. ruiz, M. Jazbinsek, C. Medrano and C.P. Hauri

Terahertz emission in organic crystals pumped by conventional laser wavelength  
*SPIE OPTO 89850, 89850C (2014)*

B. Monoszlai, C. Vicario, M. Jazbinsek, C.P. Hauri.

High-energy terahertz pulses from organic crystals: DAST and DSTMS pumped at Ti:sapphire wavelength  
*Opt. Lett.*, **38**, No. 23, 5106, 2013

Ruchert, C.; Vicario, C; Hauri, C.P.

Spatiotemporal Focusing Dynamics of Intense Supercontinuum THz Pulses  
*Phys. Rev. Lett.*, **2013**, 110, 123902

Vicario, C; Ruchert, C.; Hauri, C.P.

High field broadband THz generation in organic materials  
*J. Mod. Opt.*, 2013, DOI: 10.1080/09500340.2013.800242

Stillhart, M.; Schneider, A. & Gunter, P.

Optical properties of 4-N,N-dimethylamino-4'-N'-methyl-stilbazolium 2,4,6-trimethylbenzenesulfonate crystals at terahertz frequencies  
*J. Opt. Soc. Am. B*, **2008**, 25, 1914-1919

Mutter, L.; Brunner, F. D. J.; Yang, Z.; Jazbinsek, M. & Gunter, P.

Linear and nonlinear optical properties of the organic crystal DSTMS  
*J. Opt. Soc. Am. B*, **2007**, 24, 2556-2561

Yang, Z.; Mutter, L.; Stillhart, M.; Ruiz, B.; Aravazhi, S.; Jazbinsek, M.; Schneider, A.; Gramlich, V. & Gunter, P.

Large-size bulk and thin-film stilbazolium-salt single crystals for nonlinear optics and THz generation  
*Adv. Funct. Mater.*, **2007**, 17, 2018-2023

## DAST

C. Vicario, M. Jazbinsek, A.V. Ovchinnikov, O.V. Chefonov, S.I. Ashitkov, M.B. Agranat, and C.P. Hauri

High efficiency THz generation in DSTMS, DAST and OH1 pumped by Cr:forsterite laser  
*Opt. Express*, **2015**, 23, 4573-4580.

Hauri, C. P.; Ruchert, C.; Vicario, C. & Ardana, F.  
Strong-field single-cycle THz pulses generated in an organic crystal  
*Appl. Phys. Lett.*, **2011**, 99, 161116

Hauri, C. P.; Ruchert, C.; Vicario, C. & Ardana, F.  
Laser driven generation of intense single-cycle THz field  
*Proc. SPIE*, **2012**, 8261, 82610Z

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Comparison of GaAs and DAST electro-optic crystals for THz time domain spectroscopy using 1.55  $\mu\text{m}$  fiber laser pulses  
*Terahertz Technology And Applications Iv*, **2011**, 7938, 793807

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*Opt. Express*, **2010**, 18, 23620-23625

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Generation of widely tunable Fourier-transform-limited terahertz pulses using narrowband near-infrared laser radiation  
*J. Mol. Spectrosc.*, **2009**, 256, 111-118

Liu, J. J. & Merkt, F.  
Generation of tunable Fourier-transform-limited terahertz pulses in 4-N, N-dimethylamino-4'-N'-methyl stilbazolium tosylate crystals  
*Appl. Phys. Lett.*, **2008**, 93, 131105

Jazbinsek, M.; Mutter, L. & Gunter, P.  
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*IEEE J. Sel. Top. Quantum Electron.*, **2008**, 14, 1298-1311

McLaughlin, C. V.; Hayden, L. M.; Polishak, B.; Huang, S.; Luo, J. D.; Kim, T. D. & Jen, A. K. Y.  
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*Appl. Phys. Lett.*, **2008**, 92, 151107

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Determination of the refractive index over a wide wavelength range through time-delay measurements of femtosecond pulses  
*Opt. Commun.*, **2007**, 275, 354-358

Zheng, X. M.; McLaughlin, C. V.; Cunningham, P. & Hayden, L. M.  
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*J. Nanoelectron. Optoelectron.*, **2007**, 2, 58-76

Schneider, A.; Stillhart, M.; Yang, Z.; Brunner, F. & Gunter, P.  
Improved emission and coherent detection of few-cycle terahertz transients using laser pulses at 1.5  $\mu\text{m}$  - art. no. 658211  
*Nonlinear Optics and Applications II*, **2007**, 6582, 658211

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Generation of terahertz pulses through optical rectification in organic DAST crystals: theory and experiment  
*J. Opt. Soc. Am. B*, **2006**, *23*, 1822-1835

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*Opt. Express*, **2006**, *14*, 5376-5384

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*Ferroelectrics*, **2005**, *318*, 83-88

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*Appl. Phys. Lett.*, **2003**, *82*, 2383-2385

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*Chimia*, **2003**, *57*, 349-351

**OH1**

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Terahertz brightness at the extreme: demonstration of 5 GV/m low frequency  $\lambda^3$  terahertz bullet  
<http://arxiv.org/pdf/1407.1656v1.pdf> (2014)

A. Majkic, M. Zgonik, A. Petelin, M. Jazbinsek, B. Ruiz, C. Medrano, and P. Günter.

Terahertz source at 9.4 THz based on a dual-wavelength infrared laser and quasi-phase matching in organic crystals OH1

*Appl. Phys. Lett.*, **2014**, 105, 141115

A.G. Stepanov, C. Ruchert, J. Levallois, C. Erny and C.P. Hauri

Generation of broadband THz pulses in organic crystal OH1 at room temperature and 10 K  
*Opt. Mat. Express* **4**, 870 (2014)

Ruchert, C.; Vicario, C.; Hauri, C. P.

Scaling submillimeter single-cycle transients toward megavolts per centimeter field strength via optical rectification in the organic crystal OH1

*Opt. Letters*, **2012**, 37, 899-901

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*J. Opt. Soc. Am. B*, **2008**, 25, 1678-1683

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*Opt. Express*, **2008**, 16, 16496-16508

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*Adv. Funct. Mater.*, **2008**, 18, 3242-3250