

Nathalie Picqué
Full list of publications and invited talks
February, 2022

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List of publications

Publications in peer-reviewed journals

Submitted for publication:

79. K. Van Gasse, Z. Chen, E. Vicentini, J. Huh, S. Poelman, Z. Wang, G. Roelkens, T.W. Hänsch, B. Kuyken, N. Picqué, An on-chip III-V-semiconductor-on-silicon laser frequency comb for gas-phase molecular spectroscopy in real-time, preprint at arXiv:2006.15113 (2020).

78. Z. Chen, T.W. Hänsch, N. Picqué, Up-conversion mid-infrared dual-comb spectroscopy, preprint at arXiv:2003.06930 (2020).

77. A. Shams-Ansari, M. Yu, Z. Chen, C. Reimer, M. Zhang, N. Picqué, M. Lončar, An integrated lithium-niobate electro-optic platform for spectrally tailored dual-comb spectroscopy, preprint at arXiv:2003.04533 (2020).

76. K. Fritsch, J. Brons, M. Iandulskii, K.F. Mak, Z. Chen, N. Picqué, O. Pronin, Dual-comb thin-disk oscillator, preprint at arXiv:2004.10303 (2020).

Published:

75. M. Piccardo, V. Ginis, A. Forbes, S. Mahler, A.A. Friesem, N. Davidson, H. Ren, A. H. Dorrah, F. Capasso, F.T. Dullo, B. S. Ahluwalia, A. Ambrosio, S. Gigan, N. Treps, M. Hiekkamäki, R. Fickler, M. Kues, D. Moss, R. Morandotti, J. Riemensberger, T.J. Kippenberg, J. Faist, G. Scalari, N. Picqué, T.W. Hänsch, G. Cerullo, C. Manzoni, L.A. Lugiato, M. Brambilla, L. Columbo, A. Gatti, F. Prati, A. Shiri, A.F. Abouraddy, A. Alù, E. Galiffi, J.B. Pendry, P.A. Huidobro, Roadmap on multimode light shaping, *Journal of Optics* **24**, 013001 (2022).

74. E. Vicentini, Z. Wang, K. Van Gasse, T.W. Hänsch, N. Picqué, Dual-comb hyperspectral digital holography, *Nature Photonics* **15**, 890–894 (2021).

73. J. Huh, Z. Chen, E. Vicentini, T.W. Hänsch, N. Picqué, Time-resolved dual-comb spectroscopy with a single electro-optic modulator, *Optics Letters* **46**, 3957-3960 (2021).

72. N. Picqué, T.W. Hänsch, Photon-level broadband spectroscopy and interferometry with two frequency combs, *Proceedings of the National Academy of Sciences of the United States of America* **117**, 26688-26691 (2020).

71. A. Shams-Ansari, P. Latawiec, Y. Okawachi, V. Venkataraman, M. Yu, B. Desiatov, H. Atikian, G.L. Harris, N. Picqué, A.L. Gaeta, M. Loncar, Supercontinuum generation in angle-etched diamond waveguides, *Optics Letters* **44**, 4056-4059 (2019).

70. N. Picqué, T.W. Hänsch, Frequency comb spectroscopy, *Nature Photonics* **13**, 146-157 (2019).

69. N. Picqué, T.W. Hänsch, Mid-infrared spectroscopic sensing, *Optics & Photonics News* **19**, 26-33, issue of June (2019).

68. G. Scalari, J. Faist, N. Picqué, On-chip mid-infrared and THz frequency combs for spectroscopy, *Applied Physics Letters* **114**, 150401 (2019).

67. Z. Chen, T.W. Hänsch, N. Picqué, Mid-infrared feed-forward dual-comb spectroscopy, *Proceedings of the National Academy of Sciences of the United States of America* **116**, 3454-3459 (2019).

66. J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, N. Picqué, U. Keller, An unstabilized femtosecond semiconductor disk laser for dual-comb spectroscopy of acetylene, *Optics Express* **27**, 3190-3199 (2019).
65. M.L. Weichmann, P.B. Changala, J. Ye, Z. Chen, M. Yan, N. Picqué, Broadband molecular spectroscopy with optical frequency combs, *Journal of Molecular Spectroscopy* **355**, 66-78 (2019).
64. Z. Chen, M. Yan, T.W. Hänsch, N. Picqué, A phase-stable dual-comb interferometer, *Nature Communications* **9**, 3035 (2018).
63. M. Yu, Y. Okawachi, A.G. Griffith, N. Picqué, M. Lipson, A.L. Gaeta, Silicon-chip-based mid-infrared dual-comb spectroscopy, *Nature Communications* **9**, 1869 (2018).
62. S.A. Meek, A. Hipke, G. Guelachvili, T.W. Hänsch, N. Picqué, Doppler-free Fourier transform spectroscopy, *Optics Letters* **43**, 162-165 (2018).
61. A. Parriaux, M. Conforti, A. Bendahmane, J. Fatome, C. Finot, S. Trillo, N. Picqué, G. Millot, Spectral broadening of picosecond pulses by dispersive shock waves in optical fibers, *Optics Letters* **42**, 3044-3047 (2017).
60. M. Yan, P.-L. Luo, K. Iwakuni, G. Millot, T.W. Hänsch, N. Picqué, Mid-infrared dual-comb spectroscopy with electro-optic modulators, *Light: Science and Applications* **6**, e17076 (2017).
59. M. Ferreira, E. Castro-Camus, D. Ottaway, J. Miguel Lopez-Higuera, X. Feng, K. P Chen, Y. Jeong, N. Picqué, L. Tong, B. Reinhard, P. Pellegrino, M. Diem, Q. Quan, Roadmap on Optical Sensors, *Journal of Optics* **19**, 083001 (2017).
58. K.J. Mohler, B.J. Bohn, M. Yan, G. Mélen, T.W. Hänsch, N. Picqué, Dual-Comb Coherent Raman Spectroscopy with Lasers of 1-GHz Pulse Repetition Frequency, *Optics Letters* **42**, 318-321 (2017).
57. G. Millot, S. Pitois, M. Yan, T. Hovannysyan, A. Bendahmane, T.W. Hänsch, N. Picqué, Frequency-agile dual-comb spectroscopy, *Nature Photonics* **10**, 27-30, (2016).
56. B. Kuyken, T. Ideguchi, S. Holzner, M. Yan, T.W. Hänsch, J. Van Campenhout, P. Verheyen, S. Coen, F. Leo, R. Baets, G. Roelkens, N. Picqué, An octave spanning mid-infrared frequency comb generated in a silicon nanophotonic wire waveguide, *Nature Communications* **6**, 6310 (2015).
55. A. Hipke, S.A. Meek, T. Ideguchi, T.W. Hänsch, N. Picqué, Broadband Doppler-limited two-photon and stepwise excitation spectroscopy with laser frequency combs, *Phys. Rev. A* **90**, 011805(R) (2014).
54. S. Chaitanya Kumar, A. Esteban-Martin, T. Ideguchi, M. Yan, S. Holzner, T.W. Hänsch, N. Picqué, M. Ebrahim-Zadeh, Few-cycle broadband mid-infrared optical parametric oscillator pumped by a 20-fs Ti:sapphire laser, *Laser Photonics Rev.* **8**, L86–L91 (2014).
53. T. Ideguchi, A. Poisson, G. Guelachvili, N. Picqué, T.W. Hänsch, Adaptive real-time dual-comb spectroscopy, *Nature Communications* **5**, 3375 – 8 pages (2014).
52. S.A. Meek, A. Poisson, G. Guelachvili, T.W. Hänsch, N. Picqué, Fourier transform spectroscopy around 3 μm with a broad difference frequency comb, *Applied Physics B* **114**, 573-578 (2014).
51. T. Ideguchi, S. Holzner, B. Bernhardt, G. Guelachvili, N. Picqué, T.W. Hänsch, Coherent Raman spectro-imaging with laser frequency combs, *Nature* **502**, 355-358 (2013).
50. T.W. Hänsch and N. Picqué, Laser spectroscopy and frequency combs, *Journal of Physics: Conference Series* **467**, 012001 – 7 pages (2013).

49. C.Y. Wang, T. Herr, P. Del'Haye, A. Schliesser, R. Holzwarth, T. W. Hänsch, N. Picqué and T. J. Kippenberg, Mid-infrared optical frequency combs at 2.5 μm based on crystalline microresonators, *Nature Communications* **4**, 1345 (2013).
48. T.W. Hänsch, N. Picqué, Future Fourier transform spectroscopy, *Encyclopedia of Biophysics*, Springer Verlag, 1792-1799 (2013).
47. T. Ideguchi, B. Bernhardt, G. Guelachvili, T.W. Hänsch, N. Picqué, Raman-induced Kerr effect dual-comb spectroscopy, *Optics letters* **37**, 4498-4500 (2012).
46. T. Ideguchi, A. Poisson, G. Guelachvili, T.W. Hänsch, N. Picqué, Adaptive dual-comb spectroscopy of iodine in the green region, *Optics letters* **37**, 4847-4849 (2012).
45. A. Schliesser, N. Picqué, T.W. Hänsch, Mid-infrared frequency combs, *Nature Photonics* **6**, 440-449 (2012).
44. R. Chiche, D. Jehanno, V. Soskov, A. Variola, F. Zomer, N. Picqué, Les cavités Fabry-Pérot en mode pulsé et leurs récentes applications, in *Systemes femtosecondes, optique et phénomènes ultrarapides*, Publication mission ressources et compétences technologiques, 119-169 (2012).
43. T.W. Hänsch, N. Picqué, Frequency combs, *Handbook of Lasers and Optics*, second edition, F. Träger Ed., Springer Berlin Heidelberg, 1285-1304 (2012).
42. N. Picqué, T.W. Hänsch, Molecular spectroscopy with laser frequency combs, *Proceedings of the 20th International Conference on Laser Spectroscopy*, 185-194, W. Ertmer, R. Scholz Ed., Logos Verlag Berlin (2011).
41. T.W. Hänsch, N. Picqué, Peignes de fréquences femtosecondes : aux limites de la spectroscopie, *Images de la Physique 2011*, 31-38 (2011).
40. B. Bernhardt, N. Picqué, T.W. Hänsch, Echtzeit-Spurengasanalyse mit Frequenzkämmen, *Physik in unserer Zeit* **41**, 59-60 (2010).
39. B. Bernhardt, E. Sorokin, P. Jacquet, R. Thon, T. Becker, I.T. Sorokina, N. Picqué, T.W. Hänsch, Mid-infrared dual comb spectroscopy with $\text{Cr}^{2+}\text{ZnSe}$ femtosecond oscillators, *Applied Physics B* **100**, 3-8, 2010.
38. B. Bernhardt, A. Ozawa, P. Jacquet, M. Jacquy, Y. Kobayashi, T. Udem, R. Holzwarth, G. Guelachvili, T.W. Hänsch, N. Picqué, Cavity-enhanced dual-comb spectroscopy, *Nature Photonics* **4**, 55-57, 2010.
37. J. Mandon, G. Guelachvili, N. Picqué, Fourier Transform Spectroscopy with a Laser Frequency Comb, *Nature Photonics* **3**, 99-102, 2009.
36. E. Sorokin, V. Kalashnikov, J. Mandon, G. Guelachvili, N. Picqué, I.T. Sorokina, Cr:YAG chirped pulse oscillator, *New Journal of Physics*, **10**, 083022 (13 pages), 2008.
35. J. Mandon, E. Sorokin, I.T. Sorokina, G. Guelachvili, N. Picqué, Supercontinua for high resolution absorption multiplex infrared spectroscopy, *Optics Letters* **33**, 285-287, 2008.
34. N. Picqué, G. Guelachvili, La spectroscopie par transformation de Fourier, *Photoniques* **29**, 32-35, 2007.
33. E. Sorokin, I.T. Sorokina, J. Mandon, G. Guelachvili, N. Picqué, Sensitive multiplex spectroscopy in the molecular fingerprint 2.4 μm region with a $\text{Cr}^{2+}:\text{ZnSe}$ femtosecond laser, *Optics Express* **15**, 16540-16545, 2007.
32. J. Mandon, G. Guelachvili, N. Picqué, Frequency Modulation Fourier transform spectroscopy: a broadband method for measuring weak absorptions and dispersions, *Optics Letters* **32**, 2206-2208, 2007.
31. J. Mandon, G. Guelachvili, N. Picqué, F. Druon, P. Georges, Femtosecond laser Fourier transform absorption spectroscopy, *Optics Letters* **32**, 1677-1679, 2007.
30. M. Jacquemet, N. Picqué, G. Guelachvili, A. Garnache, I. Sagnes, M. Strassner, C. Symonds, Continuous-wave 1.55 μm optically-pumped vertical-external-cavity

- surface-emitting laser for broadband multiplex spectroscopy, *Optics Letters* **32**, 1387-1389, 2007.
29. D. Boudjaadar, J.-Y. Mandin, V. Dana, N. Picqué, G. Guelachvili, L. Régalia-Jarlot, X. Thomas, P. Von der Heyden, $^{12}\text{C}^{16}\text{O}_2$ line intensity FTS measurements with 1 % assumed accuracy in the 1.5-1.6 μm spectral range, *Journal of Molecular Spectroscopy* **238**, 108-117, 2006.
28. H. Herbin, N. Picqué, G. Guelachvili, E. Sorokin, I.T. Sorokina, N_2O weak lines observed between 3900 and 4050 cm^{-1} from long path absorption spectra, *Journal of Molecular Spectroscopy* **238**, 256-259, 2006.
27. D. Boudjaadar, J.-Y. Mandin, V. Dana, N. Picqué, G. Guelachvili, $^{12}\text{C}^{16}\text{O}_2$ line intensity measurements around 1.6 μm , *Journal of Molecular Spectroscopy* **236**, 158-167, 2006.
26. V. Girard, R. Farrenq, E. Sorokin, I.T. Sorokina, G. Guelachvili, N. Picqué, Acetylene weak bands at 2.5 μm from intracavity $\text{Cr}^{2+}\text{ZnSe}$ laser absorption observed with time-resolved Fourier transform spectroscopy, *Chemical Physics Letters* **419**, 584-588, 2006.
25. F. Gueye, E. Safari, M. Chenevier, G. Guelachvili, N. Picqué, Intracavity $\text{Cr}^{4+}\text{:YAG}$ laser absorption analyzed by time-resolved Fourier transform spectroscopy, *Applied Physics B* **81**, 1143-1147, 2005.
24. N. Picqué, F. Gueye, G. Guelachvili, E. Sorokin, I.T. Sorokina, Time-resolved Fourier transform intracavity spectroscopy with a $\text{Cr}^{2+}\text{:ZnSe}$ laser, *Optics Letters* **30**, 3410-3412, 2005.
23. H. Herbin, R. Farrenq, G. Guelachvili, N. Picqué, Cation-like Doppler shifts from a neutral molecule in an electrical discharge, *Chemical Physics Letters* **409**, 310-314, 2005.
22. H. Herbin, R. Farrenq, G. Guelachvili, B. Pinchemel, N. Picqué, Perturbation analysis in the $X^4\Phi - C^4\Delta$ rovibronic transitions of $^{48}\text{Ti}^{35}\text{Cl}$ at 3 μm , *Journal of Molecular Spectroscopy* **226**, 103-111, 2004.
21. N. Picqué, G. Guelachvili, Quantitative wideband spectroscopy with kilometeric absorption paths, *Molecular Physics* **101**, 645 - 649 (2003).
20. Jean-Yves Mandin, Victor Dana, David Jacquemart, Nathalie Picqué, Guy Guelachvili, Multispectrum processing approach of weak H_2O profiles recorded with absorption paths ranging from 20 to 120 km, *Journal of Quantitative Spectroscopy and Radiative Transfer* **78**, 353-363, 2003.
19. N. Picqué, G. Guelachvili, A.A Kachanov, High-sensitivity time-resolved intracavity laser Fourier transform spectroscopy with vertical cavity surface emitting multiple quantum well lasers, *Optics Letters* **28**, 313-315, 2003.
18. A. Faye, Q. Kou, R. Farrenq, N. Picqué, G. Guelachvili, Time-Resolved Fourier Transform Spectroscopy applied to collisional relaxation study of the $\text{B}^3\Pi_g v = 0$ level of N_2 in a pulsed electrical discharge, *Journal of Physics D: Applied Physics* **35**, 2704-2710, 2002.
17. G. Giusfredi, P. Cancio, P. De Natale, L. Fallani, N. Picqué, and M. Inguscio, Preliminary results of an accurate measurement of the $^4\text{He} 2^3\text{P}_0 - 2^3\text{P}_1$ fine structure interval, "Frequency Standards and Metrology", P. Gill ed., World Scientific Publishing, UK, 230-237, 2002.
16. Nathalie Picqué, Fast phase-selective detection of transient species with step-scan Fourier transform spectroscopy, *Journal of the Optical Society of America B* **19**, 1706-1710, 2002.
15. Nathalie Picqué, Sensitive instrumental developments in high-resolution laser and Fourier transform spectroscopies, *Vibrational Spectroscopy* **29**, 83-88, 2002.

14. George Birnbaum, Andrew Buechele, Michael E. Thomas, Matthew Banta, Nathalie Picqué, Guy Guelachvili, Jean-Michel Hartmann, Experimental and theoretical studies of absorption in microwindows of the ν_4 band of Methane and Methane-Hydrogen, *Journal of Quantitative Spectroscopy and Radiative Transfer* **72**, 637-654, 2002.
13. G. Guelachvili and N. Picqué, "High-resolution Fourier transform Spectrometry of Gases", in *Handbook of Vibrational Spectroscopy*, J.M. Chalmers and P.R.Griffiths (Eds), John Wiley & Sons, Ltd, Volume **1**, 150 – 164, 2002.
12. N. Picqué, P. Cancio, G. Giusfredi, P. de Natale, "High-stability diode-laser-based frequency reference at 1083 nm using iodine lines at 541.5 nm ", *Journal of the Optical Society of America B* **18**, 692-697, 2001.
11. D. Jacquemart, J.-Y. Mandin, V. Dana, N. Picqué, G. Guelachvili, "A multispectrum fitting procedure to deduce molecular line parameters: application to the 3-0 band of $^{12}\text{C}^{16}\text{O}$ ", *European Physical Journal D* **14**, 55-69, 2001.
10. N. Picqué, G. Guelachvili, S. Civis, Experimental transition dipole moment for the four lowest $\Delta v=1$ bands of ArH^+ in the $^1\Sigma^+$ fundamental state, *Journal of Chemical Physics* **113**, 2134-2138, 2000.
9. N. Picqué, G. Guelachvili, High-information time-resolved Fourier transform spectroscopy at work, *Applied Optics* **39**, 3984-3990, 2000.
8. N. Picqué, G. Guelachvili, Emission spectra of HCN/HNC in the 2-5 μm range of astrophysical interest, *Spectrochimica Acta A* **56**, 681-702, 2000.
7. N. Picqué, G. Guelachvili, V. Dana, J.-Y. Mandin, Line intensities, vibrational transition moment, and self-broadening coefficients for the 3-0 band of $^{12}\text{C}^{16}\text{O}$, *Journal of Molecular Structure* **517/518**, 433-440, 2000.
6. N. Picqué, Wide-band spectroscopic investigation of the state-to-state dependence of ArH^+ ion average mobility in a Ar/He plasma, *Chemical Physics Letters* **310**, 183-188, 1999.
5. N. Picqué, G. Guelachvili, ArH^+ near 5 μm with high resolution double modulation FTS, *Vibrational Spectroscopy* **19**, 295-299, 1999.
4. N. Picqué, G. Guelachvili, High resolution multi-modulation Fourier transform spectroscopy, *Applied Optics* **38**, 1224-1230, 1999.
3. I. Kleiner, L.R. Brown, G. Tarrago, Q. Kou, N. Picqué, G. Guelachvili, V. Dana, J.Y. Mandin, Line positions and intensities for the vibrational system ν_1 , ν_3 , $2\nu_4$ of $^{14}\text{NH}_3$ near 3 μm , *Journal of Molecular Spectroscopy* **193**, 46-71, 1999.
2. M.Y. Allout, J.Y. Mandin, V. Dana, N. Picqué, G. Guelachvili, FTS Generalized Apparatus Function, *Journal of Quantitative Spectroscopy and Radiative Transfer*, **60**, 979-987, 1998.
1. N. Picqué, G. Guelachvili, Absolute Wavenumbers and Self-Induced Pressure Lineshift Coefficients for the 3-0 band of $^{12}\text{C}^{16}\text{O}$, *Journal of Molecular Spectroscopy*, **185**, 244-248, 1997.

Books

- 3.** G. Guelachvili, N. Picqué, Molecular constants mostly from Infrared Spectroscopy Subvolume C: Nonlinear Triatomic Molecules : H₂O (HOH), Part 1 gamma, Series: Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series, Subvolume 20C1beta, Subseries: Molecules and Radicals, G. Guelachvili, (Ed.), 2013, 488 p. Springer Verlag, ISBN 978-3-642-32187-0.
- 2.** G. Guelachvili, N. Picqué, Molecular constants mostly from Infrared Spectroscopy Subvolume C: Nonlinear Triatomic Molecules : H₂O (HOH), Part 1 beta, Series: Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series, Subvolume 20C1beta, Subseries: Molecules and Radicals, G. Guelachvili, (Ed.), 2012, 500 p. Springer Verlag, ISBN 978-3-642-23408.
- 1.** G. Guelachvili, N. Picqué, Molecular constants mostly from Infrared Spectroscopy Subvolume C: Nonlinear Triatomic Molecules : H₂O (HOH), Part 1 alpha, Series: Landolt-Börnstein: Numerical Data and Functional Relationships in Science and Technology - New Series, Subvolume 20C1alpha, Subseries: Molecules and Radicals, G. Guelachvili, (Ed.), 2012, 500 p. Springer Verlag, ISBN 978-3-540-56060-9.

Patents

1. WO/2010/010437 ; CA2731301-A1; EP2310816-A1; KR2011036945-A; US2011261363-A1; JP2011529179-W; CN102246016-A; US8917396-B2

Fourier transform spectrometer with a frequency comb light source

Inventors: N. Picqué, G. Guelachvili, J. Mandon

Applicants: Centre National de la Recherche Scientifique, Université Paris-Sud

2. WO/2010/010438; CA2731303-A1; EP2310817-A2; KR2011036944-A; CN102159926-A; US2011267625-A1; JP2011529180-W; CN102159926-B

Interferometer with frequency combs and synchronization scheme,

Inventors: G. Guelachvili, T.W. Hänsch, N. Picqué,

Applicants: Centre National de la Recherche Scientifique, Max Planck Gesellschaft zur Foerderung der Wissenschaften e.V.

Publications in peer-reviewed conference proceedings or peer-reviewed technical digests.

95. S. Poelman, S. Cuyvers, J. De Witte, A. Hermans, K. Van Gasse, N. Picqué, G. Roelkens, D. Van Thourhout, and B. Kuyken, "Generic Heterogeneous Integration Process Flow for Commercial Foundry Low-Index Photonic Platforms," in *Frontiers in Optics + Laser Science 2021*, C. Mazzali, T. (T.-C.) Poon, R. Averitt, and R. Kaindl, eds., Technical Digest Series (Optica Publishing Group, 2021), paper FM1B.6.
94. N. Picqué, "Solid-State Laser Technology for Frequency-Comb Spectroscopy," in *Laser Congress 2021 (ASSL,LAC)*, (Optica Publishing Group, 2021), paper ATu3A.1.
93. N. Picqué, "Towards a Dual-Comb Spectrometer on a Photonic Chip," in *OSA Optical Sensors and Sensing Congress 2021 (AIS, FTS, HISE, SENSORS, ES)*, S. Buckley, F. Vanier, S. Shi, K. Walker, I. Coddington, S. Paine, K. Lok Chan, W. Moses, S. Qian, P. Pellegrino, F. Vollmer, G. , J. Jágerská, R. Menzies, L. Emmenegger, and J. Westberg, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper ETh2A.1.
92. Z. Wang, X. Chao, J. H. Huh, E. Vicentini, T. W. Hänsch, and N. Picqué, "Dual-Comb Spectroscopy with Frequency Modulation," in *Conference on Lasers and Electro-Optics*, J. Kang, S. Tomasulo, I. Ilev, D. Müller, N. Litchinitser, S. Polyakov, V. Podolskiy, J. Nunn, C. Dorrer, T. Fortier, Q. Gan, and C. Saraceno, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper SM3A.5.
91. E. Vicentini, Z. Wang, K. van Gasse, T. W. Hänsch, and N. Picqué, "Dual-comb digital holography with high spectral resolution," in *Conference on Lasers and Electro-Optics*, J. Kang, S. Tomasulo, I. Ilev, D. Müller, N. Litchinitser, S. Polyakov, V. Podolskiy, J. Nunn, C. Dorrer, T. Fortier, Q. Gan, and C. Saraceno, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper SM1G.1.
90. K. Van Gasse, Z. Wang, G. Roelkens, T. W. Hänsch, B. Kuyken, and N. Picqué, "III-V-on-Silicon 1-GHz Mode-Locked Lasers Towards Frequency-Comb Applications," in *Conference on Lasers and Electro-Optics*, J. Kang, S. Tomasulo, I. Ilev, D. Müller, N. Litchinitser, S. Polyakov, V. Podolskiy, J. Nunn, C. Dorrer, T. Fortier, Q. Gan, and C. Saraceno, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper SM1H.1.
89. K. Van Gasse, Z. Chen, E. Vincentini, J. Huh, S. Poelman, Z. Wang, G. Roelkens, T. W. Hänsch, B. Kuyken, and N. Picqué, "Dual-Comb Spectroscopy with Two On-Chip III-V-on-Silicon 1-GHz Mode-Locked Lasers," in *Conference on Lasers and Electro-Optics*, J. Kang, S. Tomasulo, I. Ilev, D. Müller, N. Litchinitser, S. Polyakov, V. Podolskiy, J. Nunn, C. Dorrer, T. Fortier, Q. Gan, and C. Saraceno, eds., OSA Technical Digest (Optica Publishing Group, 2021), paper SM3A.7.
88. Z. Chen, T. W. Hänsch, and N. Picqué, "Photon-Level Dual-Comb Spectroscopy with Resolved Comb Lines," in *Frontiers in Optics / Laser Science*, B. Lee, C. Mazzali, K. Corwin, and R. Jason Jones, eds., OSA Technical Digest (Optical Society of America, 2020), paper FW7B.7.
87. N. Picqué, "Frequency Comb Spectroscopy: Stop or Go?," in *Frontiers in Optics / Laser Science*, B. Lee, C. Mazzali, K. Corwin, and R. Jason Jones, eds., OSA Technical Digest (Optical Society of America, 2020), paper LTu4A.1.
86. E. Vicentini, Z. Chen, J. H. Huh, G. Galzerano, T. W. Hänsch, and N. Picqué, "High-Spectral-Resolution Imaging Spectroscopy with a Dual-Comb Interferometer," in *Frontiers in Optics / Laser Science*, B. Lee, C. Mazzali, K. Corwin, and R. Jason Jones, eds., OSA Technical Digest (Optical Society of America, 2020), paper LTu2F.3.

- 85.** J. H. Huh, Z. Chen, E. Vicentini, T. W. Hänsch, and N. Picqué, "Dual-Comb Spectroscopy based on Single Electro-Optic Modulation," in *Frontiers in Optics / Laser Science*, B. Lee, C. Mazzali, K. Corwin, and R. Jason Jones, eds., OSA Technical Digest (Optical Society of America, 2020), paper LM5F.3.
- 84.** Z. Wang, Z. Chen, X. Chao, E. Vicentini, T. W. Hänsch, and N. Picqué, "Precise Mid-Infrared Dual-Comb Spectroscopy of Ethylene," in *Frontiers in Optics / Laser Science*, B. Lee, C. Mazzali, K. Corwin, and R. Jason Jones, eds., OSA Technical Digest (Optical Society of America, 2020), paper FW7B.3.
- 83.** K. Van Gasse, J. Huh, Z. Chen, S. Poelman, Z. Wang, G. Roelkens, T. W. Hansch, B. Kuyken, and N. Picque, "III-V-on-silicon mode-locked lasers with 1-GHz line spacing for dual-comb spectroscopy," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2020), paper SF1G.5.
- 82.** Z. Chen, T. W. Hänsch, and N. Picqué, "Precision coherent dual-comb spectroscopy at 3 microns," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2020), paper SM1M.1.
- 81.** A. Shams-Ansari, C. Reimer, N. Sinclair, M. Zhang, N. Picque, and M. Loncar, "Low-repetition-rate Integrated Electro-optic Frequency Comb Sources," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2020), paper STh1O.2.
- 80.** Z. Chen, K. Van Gasse, E. Vicentini, J. Huh, S. Poelman, Z. Wang, G. Roelkens, T. W. Hänsch, B. Kuyken, and N. Picqué, "High-resolution dual-comb gas-phase spectroscopy with a mode-locked laser on a photonic chip," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2020), paper JTh4A.8.
- 79.** T. Nishikawa, A. Oohara, S. Uda, A. Ishizawa, K. Hitachi, N. Picqué, and T. W. Hänsch, "Automatic Interpolation of 25 GHz Mode Spacing in Dual EOM Comb Spectroscopy," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2019), paper SF1I.3.
- 78.** A. Shams-Ansari, M. Yu, Z. Chen, C. Reimer, M. Zhang, N. Picqué, and M. Loncar, "Microring Electro-optic Frequency Comb Sources for Dual-Comb Spectroscopy," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (Optical Society of America, 2019), paper JTh5B.8.
- 77.** J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, and U. Keller, "Free-running, Femtosecond Dual-Comb MIXSEL for Spectroscopy of Acetylene," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (online) (Optical Society of America, 2018), paper JW2A.157.
- 76.** P. Latawiec, A. Shams-Ansari, Y. Okawachi, V. Venkataraman, M. Yu, H. Atikian, G. L. Harris, N. Picqué, A. L. Gaeta, and M. Loncar, "Supercontinuum generation in angle-etched diamond waveguides," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (online) (Optical Society of America, 2018), paper STu3F.6.
- 75.** J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, and U. Keller, "Dual-Comb Spectroscopy with one unstabilized semiconductor laser," in *Advanced Photonics 2018 (BGPP, IPR, NP, NOMA, Sensors, Networks, SPPCom, SOF)*, OSA Technical Digest (online) (Optical Society of America, 2018), paper IM3I.1.
- 74.** Z. Chen, T. Hänsch, and N. Picqué, "Mid-infrared Dual-Comb Spectroscopy at High Signal-to-Noise Ratio around 3 μm ," in *High-Brightness Sources and Light-driven Interactions*, OSA Technical Digest (online) (Optical Society of America, 2018), paper MW4C.6.

73. N. Picqué, "Integrated Photonics for Frequency Comb Generation and Comb-based Molecular Sensing," in *Advanced Photonics 2017 (IPR, NOMA, Sensors, Networks, SPPCom, PS)*, OSA Technical Digest (online) (Optical Society of America, 2017), paper ITh1A.4.
72. N. Picqué, "Nonlinear Optical Technologies for Frequency-Comb Based Molecular Sensing," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (online) (Optical Society of America, 2017), paper SW1M.4.
71. Z. Chen, M. Yan, T. W. Hänsch, and N. Picqué, "Evanescent-Wave Gas Sensing with Dual-Comb Spectroscopy," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (online) (Optical Society of America, 2017), paper SF1M.7.
70. G. Mélen, M. Yan, P. Luo, T. Hänsch, and N. Picqué, "Dual-comb Nonlinear Raman Spectroscopy of Broad Molecular Bands," in *Light, Energy and the Environment*, OSA Technical Digest (online) (Optical Society of America, 2016), paper FW2E.3.
69. M. Yan, P. Luo, K. Iwakuni, G. Millot, T. Hänsch, and N. Picqué, "Mid-infrared and Near-infrared Dual-comb Spectroscopy with Electro-optic Modulators," in *Light, Energy and the Environment*, OSA Technical Digest (online) (Optical Society of America, 2016), paper FTh3B.4.
68. P. Luo, M. Yan, T. Hänsch, and N. Picqué, "Ultra-broadband Dual-comb Coherent Anti-Stokes Raman Spectroscopy," in *Light, Energy and the Environment*, OSA Technical Digest (online) (Optical Society of America, 2016), paper FW2E.2.
67. Z. Chen, M. Yan, G. Mélen, T. Hänsch, and N. Picqué, "Feed-forward Coherent Dual-comb Spectroscopy," in *Light, Energy and the Environment*, OSA Technical Digest (online) (Optical Society of America, 2016), paper FTh3B.6.
66. M. Yan, P. Luo, K. Iwakuni, G. Millot, T. Hänsch, and N. Picqué, "Doppler-limited Frequency-agile Dual-comb Spectroscopy around 3 μm ," in *Imaging and Applied Optics 2016*, OSA technical Digest (online) (Optical Society of America, 2016), paper LT1G.3.
65. M. Yan, P. Luo, K. Iwakuni, G. Millot, T. W. Hänsch, and N. Picqué, "Mid-Infrared Frequency-Agile Dual-Comb Spectroscopy with Doppler-Limited Resolution," in *Conference on Lasers and Electro-Optics*, OSA Technical Digest (2016) (Optical Society of America, 2016), paper SW4H.4.
64. A. Ishizawa, T. Nishikawa, M. Yan, G. Millot, H. Gotoh, T. Hänsch, and N. Picqué, "Optical Frequency Combs of Multi-GHz Line-spacing for Real-time Multi-heterodyne Spectroscopy," in *CLEO: 2015*, OSA Technical Digest (online) (Optical Society of America, 2015), paper SW1G.7.
63. T. Nishikawa, A. Ishizawa, M. Yan, H. Gotoh, T. Hänsch, and N. Picqué, "Broadband Dual-comb Spectroscopy with Cascaded-electro-optic-modulator-based Frequency Combs," in *CLEO: 2015*, OSA Technical Digest (online) (Optical Society of America, 2015), paper SW3G.2.
62. M. Yan, S. Pitois, T. Hovannysyan, A. Bendahmane, T. W. Hänsch, N. Picqué, and G. Millot, "Dual-Comb Spectroscopy With Frequency-Agile Lasers," in *CLEO: 2015 Postdeadline Paper Digest*, (Optical Society of America, 2015), paper JTh5C.6.
61. M. Yan, S. Holzner, T. Hänsch, and N. Picqué, "Broadband dual-comb coherent anti-Stokes Raman spectroscopy at high signal-to-noise ratio," in *CLEO: 2015*, OSA Technical Digest (online) (Optical Society of America, 2015), paper ATh1K.4.
60. N. Picque, "Fourier Transform Spectroscopy with Laser Frequency Combs," in *Fourier Transform Spectroscopy and Hyperspectral Imaging and Sounding of the Environment*, OSA Technical Digest (online) (Optical Society of America, 2015), paper FT2A.1.

59. N. Picque, "Molecular Spectroscopy with Two Laser Frequency Combs: From Vibrational to Doppler-Free Resolution," in *Frontiers in Optics 2015*, OSA Technical Digest (online) (Optical Society of America, 2015), paper LTu5G.4.
58. T. Ideguchi, S. Holzner, B. Bernhardt, G. Guelachvili, T. W. Hänsch, N. Picqué, "Coherent anti-Stokes Raman dual-comb spectroscopy and imaging" *Proc. SPIE. 9279*, Real-time Photonic Measurements, Data Management, and Processing, 92790S (2014).
57. A. Schliesser, N. Picqué, and T. Hänsch, "Mid-Infrared Frequency Combs for Direct Molecular Spectroscopy," in *Frontiers in Optics 2014*, OSA Technical Digest (online) (Optical Society of America, 2014), paper FW5G.2.
56. N. Picqué, "Spectroscopic Sensing with Laser Frequency Combs," in *Advanced Photonics*, OSA Technical Digest (online) (Optical Society of America, 2014), paper SeTh4C.1.
55. M. Yan, T. Ideguchi, S. Holzner, B. Bernhardt, G. Guelachvili, T. W. Hänsch, and N. Picqué, "Coherent Raman Spectroscopy with Femtosecond Laser Frequency Combs," in *Imaging and Applied Optics 2014*, OSA Technical Digest (online) (Optical Society of America, 2014), paper LW3D.2.
54. B. Kuyken, T. Ideguchi, S. Holzner, M. Yan, T. W. Haensch, J. Van Campenhout, P. Verheyen, R. G. F. Baets, G. Roelkens, and N. Picqué, "Octave Spanning Mid-Infrared Frequency Comb Generation in Silicon Nanophotonic Wire Waveguides," in *CLEO: 2014*, OSA Technical Digest (online) (Optical Society of America, 2014), paper ATh4P.2.
53. S. Chaitanya Kumar, A. Esteban-Martin, T. Ideguchi, M. Yan, S. Holzner, T. W. Hänsch, N. Picqué, and M. Ebrahim-Zadeh, "Few-Cycle, Broadband, Mid-Infrared Parametric Oscillator Pumped by a 20-fs Ti:sapphire Laser," in *CLEO: 2014*, OSA Technical Digest (online) (Optical Society of America, 2014), paper SM2I.5.
52. A. Hipke, S. A. Meek, T. W. Hänsch, and N. Picqué, "Highly Multiplexed Dual-Comb Two-Photon Excitation Spectroscopy," in *CLEO: 2013*, OSA Technical Digest (online) (Optical Society of America, 2013), paper CTu3H.3.
51. T. Ideguchi, S. Holzner, B. Bernhardt, G. Guelachvili, N. Picqué, and T. W. Hänsch, "Coherent anti-Stokes Raman dual-comb spectro-microscopy," in *CLEO: 2013*, OSA Technical Digest (online) (Optical Society of America, 2013), paper CTu3H.2.
50. A. Hipke, S. A. Meek, G. Guelachvili, T. W. Hänsch, and N. Picque, "Doppler-free Broad Spectral Bandwidth Two-Photon Spectroscopy with Two Laser Frequency Combs," in *CLEO: 2013*, OSA Technical Digest (online) (Optical Society of America, 2013), paper CTh5C.8.
49. S. Holzner, T. Ideguchi, G. Guelachvili, T. W. Hänsch, and N. Picqué, "Simultaneous Coherent Stokes and Anti-Stokes Raman Spectroscopy with Two Laser Frequency Combs," in *CLEO: 2013*, OSA Technical Digest (online) (Optical Society of America, 2013), paper CTu3E.1.
48. T. Ideguchi, B. Bernhardt, G. Guelachvili, T. Hänsch, and N. Picqué Femtosecond Stimulated Raman Dual-comb spectroscopy in *CLEO:2012*, OSA Technical Digest (CD) (Optical Society of America, 2012)
47. A. Poisson, T. Ideguchi, G. Guelachvili, T. Hänsch, and N. Picqué Adaptive Dual-comb spectroscopy with free-running lasers and resolved comb lines in *CLEO:2012*, OSA Technical Digest (CD) (Optical Society of America, 2012)
46. T. Ideguchi, A. Poisson, G. Guelachvili, T. Hänsch, and N. Picqué, Real-time Dual-comb Spectroscopy of Iodine in the Visible in *CLEO:2012*, OSA Technical Digest (CD) (Optical Society of America, 2012)
45. C. Wang, T. Herr, P. Del'Haye, A. Schliesser, R. Holzwarth, T. W. Haensch, N. Picqué, and T. Kippenberg, Generation of Low Phase-noise Mid-Infrared Optical

Frequency Combs from Crystalline Microresonators in CLEO:2012, OSA Technical Digest (CD) (Optical Society of America, 2012)

44. B. Bernhardt, T. Ideguchi, A. Poisson, T. Hänsch, N. Picqué, and G. Guelachvili, "Fourier Transform Spectroscopy with Laser Frequency Combs," in Fourier Transform Spectroscopy, OSA Technical Digest (CD) (Optical Society of America, 2011), paper FThB1.

43. T. W. Hänsch and N. Picqué, "Dual-comb spectroscopy of molecules," in CLEO/Europe and EQEC 2011 Conference Digest, OSA Technical Digest (CD) (Optical Society of America, 2011), paper EG3_1.

42. C. Wang, T. Herr, P. Del'Haye, A. Schliesser, R. Holzwarth, T. Haensch, N. Picque, and T. Kippenberg, "Mid-Infrared Frequency Combs Based on Microresonators," in CLEO/Europe and EQEC 2011 Conference Digest, OSA Technical Digest (CD) (Optical Society of America, 2011), paper PDB_4.

41. T. Ideguchi, A. Poisson, G. Guelachvili, T. Hänsch, and N. Picqué, "Dual-comb spectroscopy with adaptive sampling," in CLEO/Europe and EQEC 2011 Conference Digest, OSA Technical Digest (CD) (Optical Society of America, 2011), paper CH_P23.

40. C. Wang, T. Herr, P. Del'Haye, A. Schliesser, R. Holzwarth, T. W. Haensch, N. Picqué, and T. Kippenberg, "Mid-Infrared Frequency Combs Based on Microresonators," in CLEO:2011 - Laser Applications to Photonic Applications, OSA Technical Digest (CD) (Optical Society of America, 2011), paper PDPA4.

39. T. W. Hänsch and N. Picqué, "Molecular Spectroscopy with Laser Frequency Combs," in CLEO:2011 - Laser Applications to Photonic Applications, OSA Technical Digest (CD) (Optical Society of America, 2011), paper CThK4.

38. Julien Mandon, Patrick Jacquet, Birgitta Bernhardt, Marion Jacquy, Guy Guelachvili, Theodor W. Hänsch, Nathalie Picqué, Sensitive and Simple Frequency Comb Fourier Transform Spectrometer with a Multipass Cell, in *CLEO/QELS Technical Digest on CD* (Optical Society of America, Washington, DC, 2010), 2 pages (2010).

37. B. Bernhardt, E. Sorokin, P. Jacquet, R. Thon, T. Becker, I.T. Sorokina, T.W. Hänsch and N. Picqué, 2.4 μm Dual-Comb Spectroscopy, in *CLEO/QELS Technical Digest on CD* (Optical Society of America, Washington, DC, 2010), 2 pages (2010).

36. B. Bernhardt, A. Ozawa, P. Jacquet, M. Jacquy, Y. Kobayashi, T. Udem, R. Holzwarth, G. Guelachvili, T.W. Hänsch, N. Picqué, Trace gas detection with frequency comb Fourier transform spectroscopy, in *CLEO/QELS Technical Digest on CD* (Optical Society of America, Washington, DC, 2010), 2 pages (2010).

35. B. Bernhardt, J. Mandon, P. Jacquet, M. Jacquy, A. Ozawa, R. Holzwarth, G. Guelachvili, T. W. Hänsch, N. Picqué, Laser frequency combs for molecular fingerprinting, 2009 IEEE LEOS Annual Meeting Conference Proceedings, paper ThB4, 2 pages, IEEE Lasers and Electro-Optics Society (LEOS) Annual Meeting (2009).

34. P. Jacquet, J. Mandon, B. Bernhardt, R. Holzwarth, G. Guelachvili, T. W. Hänsch, N. Picqué, Frequency Comb Fourier Transform Spectroscopy with kHz Optical Resolution, in *Fourier Transform Spectroscopy* (Optical Society of America, Washington, DC, 2009), paper FMB2, 3 pages (2009).

33. E. Sorokin, V. L. Kalashnikov, J. Mandon, G. Guelachvili, N. Picqué, I.T. Sorokina, Cr:YAG chirped pulse oscillator, O.S.A. Advanced Solid-State Photonics Topical Meeting on CD-Rom, paper WF4, 3 pages (2008).

32. E. Sorokin, I.T. Sorokina, J. Mandon, G. Guelachvili, N. Picqué, Multiplex molecular fingerprinting with a mid-infrared Cr^{2+} :ZnSe femtosecond laser, O.S.A.

Advanced Solid-State Photonics Topical Meeting on CD-Rom, paper TuB6, 3 pages (2008).

31. J. Mandon, E. Sorokin, I.T. Sorokina, G. Guelachvili, N. Picqué, Infrared frequency combs and supercontinua for multiplex high sensitivity spectroscopy, *Annales de Physique* **32**, 199-202 (2007).

30. N. Picqué and G. Guelachvili, “Frequency Modulation FTS: a broadband method for measuring weak absorptions and dispersions”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2007), paper FtuD1, 1 page (2007).

29. N. Picqué, V. Girard, M. Jacquemet, R. Farrenq, G. Guelachvili, Kilometric path lengths in infrared absorption with time-resolved Fourier Transform Spectroscopy, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2007), paper JWA5, 3 pages (2007).

28. E. Sorokin, I.T. Sorokina, G. Guelachvili, M. Jacquemet and N. Picqué, Sensitive broadband mid-IR Cr²⁺:ZnS-laser-based spectrometer, CLEO/QELS Technical Digest on CD, paper CFL5, 2 pages (2006).

27. N. Picqué, V. Girard, F. Gueye, G. Guelachvili, Vacuum operation of a Cr⁴⁺:YAG multimode laser for time-resolved Fourier transform intracavity absorption spectroscopy, Proceedings of the VII th Atmospheric Spectroscopy Applications meeting, 145-145 (2005).

26. V. Girard, R. Farrenq, G. Guelachvili, N. Picqué, Acetylene combination bands around 2.5 μm from time-resolved Fourier transform intracavity laser absorption spectroscopy, Proceedings of the VII th Atmospheric Spectroscopy Applications meeting, 103-106 (2005).

25. N. Picqué, F. Gueye, H. Herbin, V. Girard, R. Farrenq, G. Guelachvili, E. Sorokin, I.T. Sorokina, Mid-infrared time-resolved Fourier transform intracavity Cr²⁺:ZnSe laser absorption spectroscopy: application to CH₄, C₂H₂, CO₂, N₂O. Proceedings of the VII th Atmospheric Spectroscopy Applications meeting, 141-144 (2005).

24. N. Picqué, G. Guelachvili, Femtosecond frequency combs : new trends for Fourier transform spectroscopy, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuA2, 3 pages (2005).

23. F. Gueye, G. Guelachvili, N. Picqué, “Intracavity laser absorption with time-resolved Fourier Transform Spectroscopy”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FMD3, 3 pages (2005)

22. N. Picqué, F. Gueye, G. Guelachvili, E. Sorokin, I.T. Sorokina, V. Dana, J.-Y. Mandin, “High resolution intracavity laser absorption time-resolved Fourier spectroscopy extended to 2.5 μm ”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuD4, 3 pages (2005).

21. H. Herbin, R. Farrenq, G. Guelachvili, N. Picqué, “Doppler-shifted transitions of a neutral molecule revealed by velocity modulation FTS”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuD5, 3 pages (2005).

20. H. Herbin, R. Farrenq, G. Guelachvili, N. Picqué, “Concentration-modulation FT emission spectroscopy of TiCl₄/He plasma. Analysis of the $C^4\Delta-X^4\Phi \Delta v=0$ perturbed transitions of TiCl” , Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuD6, 3 pages (2005).
19. F. Gueye, H. Herbin, R. Farrenq, G. Guelachvili, N. Picqué, J.-Y. Mandin, V. Dana, “Time-resolved FT-ICLAS laboratory spectra at 1 μm . Application to C₂H₂ and N₂”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuD5, 3 pages (2005)
18. F. Gueye, G. Guelachvili, N. Picqué, E. Safari, M. Chenevier, “Time-resolved FT spectroscopy of intracavity Cr⁴⁺YAG laser absorption at 1.5 μm ”, Fourier Transform Spectroscopy/Hyperspectral Imaging and Sounding of the Environment Topical Meetings on CD-ROM (The Optical Society of America, Washington, DC, 2005), paper FTuD9, 3 pages (2005).
17. E. Sorokin, I.T. Sorokina, N. Picqué, F. Gueye and G. Guelachvili, Mid-IR high-resolution intracavity Cr²⁺:ZnSe laser-based spectrometer, in Advanced Solid-State Photonics, *Trends in Optics and Photonics* **98**, 848-852 (2005).
16. G. Guelachvili and N. Picqué, High sensitivity broadband infrared spectroscopy, *SPIE proceedings* **5311**, 33-38 (2004).
15. N. Picqué, “High sensitivity FTS: Quantitative wideband spectroscopy with kilometeric absorption paths.”, in Fourier Transform Spectroscopy, *Trends in Optics and Photonics* **84**, 95-97 (2003).
14. N. Picqué, “High Resolution Time-resolved FTS: Instrumental developments and molecular applications.”, in Fourier Transform Spectroscopy, *Trends in Optics and Photonics* **51**, 146-146 (2001).
13. D. Jacquemart, V. Dana, J.-Y. Mandin, J.-P. Maillard, E. Lellouch, N. Picqué, and G. Guelachvili, “Recent Progress In Fourier Transform Data Analysis methods. Applications to Planetary and Laboratory Spectra”, in Fourier Transform Spectroscopy, *Trends in Optics and Photonics* **51**, 168-170 (2001).
12. N. Picqué, G. Guelachvili, “High-information time-resolved Fourier transform spectroscopy: a routine dynamic tool.”, in Fourier Transform Spectroscopy, *Trends in Optics and Photonics* **51**, 37-38 (2001).
11. N. Picqué, G. Guelachvili, C. Focsa, B. Pinchemel, “High-resolution multimodulation Fourier transform spectroscopy of the TiF⁺ and TiCl⁺ metallic molecular ions.”, in Fourier Transform Spectroscopy, *Trends in Optics and Photonics* **51**, 39-40(2001).
10. G. Modugno, D. Mazzotti, M. Modugno, N. Picqué, G. Giusfredi, P. Cancio, P. de Natale, and M. Inguscio, Spectroscopic tests of the symmetrization postulate and of the statistics for nuclei in molecules, *AIP Conference Proceedings* **545**, R.C. Hilborn, G.M. Tino Eds., 295-301, 2000.
9. P. De Natale, P. Cancio, D. Mazzotti, G. Giusfredi, N. Picqué, High sensitivity spectroscopy with novel non-linear devices, *IEEE Conference Proceedings TH8504*, 346-347, 2000.
8. N. Picqué, G. Guelachvili, Instrumental advances in high-information time-resolved Fourier transform spectroscopy, *Proceedings of the Twelfth International Conference on Fourier Transform Spectroscopy*, Waseda University Press, Tokyo Japan, Koichi Itoh, Mitsuo Tasumi Editors, 223-224, 2000.
7. N. Picqué, G. Guelachvili, Multi-modulation Fourier transform spectroscopy of molecular ions, *Proceedings of the Twelfth International Conference on Fourier*

Transform Spectroscopy, Waseda University Press, Tokyo Japan, Koichi Itoh, Mitsuo Tasumi Editors, 209-210, 2000.

6. N. Picqué, G. Guelachvili, " Processing selective Fourier transform spectra", in *Fourier Transform Spectroscopy: New Methods and Applications*, OSA Technical Digest (Optical Society of America, Washington DC) 146-147 (1999).
5. N. Picqué, G. Guelachvili, "Implementation of a 2ns time resolution high information Fourier transform interferometer", in *Fourier Transform Spectroscopy: New Methods and Applications*, OSA Technical Digest (Optical Society of America, Washington DC) 113-113 (1999).
4. N. Picqué, G. Guelachvili, "Selective high resolution Fourier transform spectroscopy", in *Fourier Transform Spectroscopy: New Methods and Applications*, OSA Technical Digest (Optical Society of America, Washington DC) 21-21 (1999).
3. Nathalie Picqué, Guy Guelachvili, Victor Dana, Jean-Yves Mandin, "Absolute line intensities, vibrational transition moment, and self-broadening coefficients for the 3-0 band of $^{12}\text{C}^{16}\text{O}$.", in *Fourier Transform Spectroscopy: New Methods and Applications*, OSA Technical Digest (Optical Society of America, Washington DC) 148-150 (1999).
2. N. Picqué, G. Guelachvili, Standard-oriented spectroscopic parameters for the 3-0 band of $^{12}\text{C}^{16}\text{O}$ at 1.57 μm , *AIP Conference Proceedings* **430**, J.A. de Haseth Ed., 702-705, 1998.
1. N. Picqué, G. Guelachvili, "Towards Accurate Wavenumber Standards beyond 5000 cm^{-1} ", in *Fourier Transform Spectroscopy*, 1997 OSA Technical Digest (Optical Society of America, Washington DC) **3**, 113-114 (1997).

List of invited talks

Invited talks at international or national conferences

Forthcoming:

- ci102.** International conference on spectral lineshapes, Casetta, Italy, 6.2022.
ci101. European Conference on Integrated Optics, Milan, Italy, 5.2022
ci100. N. Picqué, « Dual-comb spectroscopy with fiber-based laser systems », CLEO USA, 15-20.5.2022.
ci99. Topical school “Fiber links & frequency combs”, Les Houches, France, 4.2022.

Past:

- ci98.** N. Picqué, “Interferometry with two laser frequency combs”, Huawei Strategy and Technology Workshop, Online, 14-16.10.2021.
ci97. N. Picqué, “Solid-State Laser Technology for Frequency-Comb Spectroscopy”, OSA Advanced Solid State Lasers Conference, Online, 3-7.10.2021.
ci96. N. Picqué, “Nonlinear spectroscopy with frequency combs”, 19th European Conference On Non-Linear Optical Spectroscopy (ECONOS), Online, 26-29.9.2021
ci95. N. Picqué, “Frequency comb spectroscopy and interferometry”, **Plenary**, German Physical Society Meeting of the Atomic, Molecular, Plasma Physics and Quantum Optics Section (SAMOP), Online, 20-24.9.2021
ci94. N. Picqué, “Frequency comb spectroscopy and interferometry”, Solvay workshop on dissipative solitons and optical frequency comb generation, Brussels, Belgium, 15-16.9.2021
ci93. N. Picqué, “Towards a Dual-Comb Spectrometer on a Photonic Chip”, OSA Optics and Photonics for Sensing the Environment, Online, 19-22.7.2021
ci92. N. Picqué, “Towards spectroscopy at the quantum limits of few photons and/or few molecules with laser frequency combs”, International Munich Conference on Quantum Science and Technology 2021, Online, 19-22.7.2021
ci91. N. Picqué, « Lasers à peignes de fréquences pour la spectroscopie moléculaire » N. Picqué, Cérémonie de remise du Prix Jean Jerphagnon 2020, Dijon, France, 7.7.2021
ci90. N. Picqué, « Interferométrie par peignes de fréquences pour la spectroscopie et l’holographie numérique », Congrès général de la Société Française d’Optique, Dijon, France, 5-9.7.2021
ci89. N. Picqué, “Mid-Infrared Photonics for Frequency-Comb Generation and Dual-Comb Spectroscopy », CLEO USA, Online, 9-14.5.2021
ci88. N. Picqué, “Broadband frequency comb spectroscopy: Towards the UV?”, Meeting of the Extreme Light Telescope Work Group 2.4, Online, 9.2.2021
ci87. N. Picqué, “Interferometry and spectroscopy with laser frequency combs”, EPIC Online Technology Meeting on Photonic Systems for High-end Research, Online, 2.11.2020
ci86. N. Picqué, “Laser frequency combs and microcombs for molecular sensing” Microcomb, Online, 9.11.2020
ci85. N. Picqué, “Frequency comb spectroscopy: stop or go?”, OSA Frontiers in Optics/Laser Science, **OSA Visionary Speaker (Plenary)**, Online, 14-17.9.2020

- ci84.** Z. Chen, N. Picqué, “Broad-spectral-bandwidth high-resolution dual-comb spectroscopy with single photons”, Photonics West OPTO, San Francisco CA, USA, 1-6.2.2020
- ci83.** N. Picqué, « Spectroscopie par peignes de fréquences ». Congrès général de la Société Française de Physique, Nantes, France, 8-12.7.2019.
- ci82.** N. Picqué, “Broadband Atomic and Molecular Spectroscopy with Optical Frequency Combs”, Gordon Conference on Atomic Physics, Newport RI, USA, 9-14.6.2019.
- ci81.** N. Picqué, Technical workshop on frequency combs, CLEO USA, San Jose, USA, 5-10.5.2019.
- ci80.** N. Picqué, “Frequency comb spectroscopy (2-hour lecture)”, Topical school “Fiber links & frequency combs”, Les Houches, France, 22-26.4.2019.
- ci79.** N. Picqué, Dual-Comb Spectroscopy: A New Analytical Tool for Vibrational Spectroscopy in Gas and Condensed Phases, Gordon Conference on Vibrational Spectroscopy, Biddeford Maine, USA, 23-27.7.2018.
- ci78.** J. Nürnberg, C. G. E. Alfieri, Z. Chen, D. Waldburger, M. Golling, N. Picqué, U. Keller, Dual-Comb Spectroscopy with one unstabilized semiconductor laser, OSA Integrated Photonics Research, Silicon, and Nanophotonics topical meeting, Zurich Switzerland, 2-5.7.2018.
- ci77.** N. Picqué, Dual-comb spectroscopy, 32th European Time and Frequency Forum, Torino Italy, 10-12.4.2018.
- ci76.** N. Picqué, “Optical sensing with dual-comb spectroscopy”, Photonics West, OPTO 2018, San Francisco CA USA, 29.1-2.2.2018.
- ci75.** N. Picqué, “Laser frequency combs for broadband spectroscopy”, **Keynote talk**, 24th General Congress of the International Commission of Optics, Tokyo, Japan, 21-25.8.2017.
- ci74.** N. Picqué, “Integrated Photonics for Frequency Comb Generation and Comb-based Molecular Sensing”, Integrated Photonics Research, Silicon and Nanophotonics OSA topical meeting, New Orleans LA USA, 24-27.7.2017.
- ci73.** N. Picqué, “Laser frequency combs for broadband spectroscopy”, **Keynote talk**, CLEO/EQEC Europe, Munich, Germany, 25-29.6.2017.
- ci72.** N. Picqué, “Nonlinear Optical Technologies for Frequency-Comb Based Molecular Sensing”, CLEO Science & Innovations 4, San Jose CA, USA, 14-19.5.2017.
- ci71.** “N. Picqué”, Molecular Spectroscopy with Laser Frequency Combs: From Vibrational to Doppler-Free Resolution, ECAMP 12: 12th European Conference on Atoms, Molecules and Photons, Frankfurt, Germany, 5-9.9.2016.
- ci70.** N. Picqué, “Coherent Raman spectro-imaging with frequency combs”, SPIE Optics + Photonics, San Diego CA, USA, 28.8-2.9.2016.
- ci69.** N. Picqué, “Advanced laser frequency combs for molecular spectroscopy”, 5th Advanced Lasers and Photon Sources Conference (ALPS '16), Yokohama (Japan), 17-20.05.2016.
- ci68.** N. Picqué, “Molecular Spectroscopy with Two Laser Frequency Combs: From Vibrational to Doppler-Free Resolution”, Frontiers in Optics, San Jose CA, USA, 18-22.10.2015
- ci67.** N. Picqué, “Molecular spectroscopy with laser frequency combs”, International Workshop on Frequency Comb Technology and Applications, Vienna, Austria, 11.9.2015.

- ci66.** N. Picqué, “Vibrational spectroscopy with laser frequency combs”, **Plenary talk**, International Conference on Advanced Vibrational Spectroscopy ICAVS8, Vienna, Austria, 13-17.7.2015.
- ci65.** B. Kuyken, R. Van Laer, F. Leo, D. Vam Thourhout, R. Baets, G. Roelkens, T. Ideguchi, S. Holzner, M. Yan, T.W Hänsch, S. Coen, P. Verheyen, J. Van Campenhout, S.-P. Gorza, S. Combrie, A. De Rossi, F. Raineri, W.M.J. Green, N. Picqué, “Nonlinear optics on a silicon platform for broadband light generation and ultrafast information processing”, Opto-Electronics and Communications Conference (OECC), Shanghai, China, 28.6-2.7.2015.
- ci64.** B.C. Bernhardt, T. Ideguchi, S. Holzner, G. Guelachvili, T.W. Hänsch, N. Picqué, Dual Comb Spectroscopy – Static Fourier Transform Spectroscopy with Frequency Combs, Optical Society of America Topical Meeting on Fourier transform spectroscopy, Lake Arrowhead, California, USA, 1-4.3.2015.
- ci63.** N. Picqué, Fourier transform spectroscopy with laser frequency combs, Optical Society of America Topical Meeting on Fourier transform spectroscopy, Lake Arrowhead, California, USA, 1-4.3.2015.
- ci62.** S. Pitois, N. Picqué, G. Millot, Spectroscopie de Fourier par peignes de fréquences générés par un laser continu, 34eme Journées Nationales d’Optique Guidée, Nice (France), 29-31.10.2014.
- ci61.** Albert Schliesser, Nathalie Picqué, and Theodor Hänsch, « Mid-Infrared Frequency Combs for Direct Molecular Spectroscopy », Frontiers in Optics, Tucson, Arizona United States, October 19-23, 2014.
- ci60.** T. Ideguchi and N. Picqué, « Coherent Raman dual-comb spectroscopy and imaging », SPIE/COS Photonics Asia, Beijing, China, 9-11.10.2014.
- ci59.** N. Picqué, « Spectroscopy using frequency combs », French-German Summer School 2014 SPECMO, Bastia (France), 7-13.09.2014.
- ci58.** T. Ideguchi, N. Picqué, « Coherent Raman Dual Frequency comb spectroscopy », Progress In Electromagnetics Research Symposium (PIERS), Guangzhou, China (8.2014).
- ci57.** N. Picqué, « Sensing with laser frequency combs », Optical Society of America Topical Meeting on Optical Sensors, Barcelona (Spain), 27-31.07.2014.
- ci56.** B. Kuyken, T. Ideguchi, S. Holzner, M. Yan, T.W. Haensch, P. Verheyen, J. Van Campenhout, S. Coen, F. Leo, R. Baets, W.M.J. Green, N. Picqué, G. Roelkens, Towards long wavelength sources integrated on a silicon chip, IEEE Summer Topical Meeting, Montreal (Canada), 14-16.7.2014.
- ci55.** Ming Yan and Nathalie Picqué, « Coherent Raman Spectroscopy with Femtosecond Laser Frequency Combs », International Conference on Laser Applications to Chemical, Security and Environmental Analysis LACSEA, Seattle, Washington United States, July 13-17, 2014
- ci54.** N. Picqué, « Molecular spectroscopy with laser frequency combs », International Workshop on Optical Frequency Combs : from sources to applications, Toulouse (France), 12.02.2014.
- ci53.** N. Picqué, « Spectroscopie par peignes de fréquences femtosecondes », 22eme Congrès Général de la Société Française de Physique, **Plenary talk**, Marseille (France), 01-05.07.2013.
- ci52.** N. Picqué, ‘Linear and nonlinear Fourier transform spectroscopy with laser frequency combs’, The International Symposium on Molecular Spectroscopy, 68th meeting, **Plenary talk**, Columbus, OH (USA), 17-21.06.2013.
- ci51.** N. Picqué, ‘Molecular spectroscopy with laser frequency combs’, New research horizon in Arcetri, Florence (Italy), 11-15.03.2013

- ci50.** N. Picqué, ‘Fourier transform spectroscopy with laser frequency combs’, The 22nd International Conference on High Resolution Molecular Spectroscopy, Prague (Czech Republic), 09.2012.
- ci49.** N. Picqué, ‘Electronic spectroscopy with laser frequency combs’, Electronic Spectroscopy & Dynamics Gordon Research Conference, Bates College ME (USA), 22-27.07.2012.
- ci48.** A. Poisson, T. Ideguchi, G. Guelachvili, T. Hänsch, and N. Picqué, “Adaptive Dual-comb spectroscopy”, Colloque commun de la division de Physique Atomique et Moléculaire et Optique de la SFP et des Journées de Spectroscopie Moléculaire, Metz (France), July 2012.
- ci47.** A. Poisson, T. Ideguchi, G. Guelachvili, T. Hänsch, and N. Picqué, “Adaptive Dual-comb spectroscopy with free-running lasers and resolved comb lines” CLEO Science & Innovation:2012, San Jose CA (USA), May 2012.
- ci46.** N. Picqué, 3 lectures on laser frequency combs and their applications, “Frontiers in spectroscopy”, Lecture series on Frontier Molecular Spectroscopy, Ohio State University, Columbus (OH) USA, 5-7.03.2012.
- ci45.** B. Bernhardt, G. Guelachvili, T.W. Hänsch, N. Picqué, ‘Laser frequency combs for molecular spectroscopy’, Second International Workshop on Spectroscopic Signatures of Molecular Complexes/Ions in our Atmosphere and Beyond, Varanasi (India), 7-10.02.2012
- ci44.** C. Y. Wang, T. Herr, P. Del’Haye, A. Schliesser, J. Hofer, A. Vicet, G. Boissier, P. Grech, R. Holzwarth, T. W. Hänsch, T. J. Kippenberg, , N. Picqué, Mid-Infrared Frequency Combs Based on Microresonators, Photonics West, San Francisco CA (USA), 21-26.01.2012
- ci43.** N. Picqué, ‘Laser frequency combs for optical and spectroscopic diagnostics’, 2nd International Conference Frontiers in Diagnostic Technologies FdT2, Frascati (Italy), 28-30.11.2011.
- ci42.** C. Wang, T. Herr, P. Del’Haye, A. Schliesser, R. Holzwarth, T. W. Hänsch, N. Picqué and T. J. Kippenberg, “Mid-Infrared Frequency Combs based on Microresonators”, IEEE Photonics 2011 (IPC11), Arlington, Virginia (USA), 9-13.10.2011.
- ci41.** N. Picqué, ‘Laser frequency combs for molecular spectroscopy’, International Symposium on "A Revolution in Spectroscopy by the Optical Frequency Combs", Tsukuba (Japan), 25.09.2011.
- ci40.** N. Picqué, ‘Molecular fingerprinting with laser frequency combs’, International conference on Field Laser Applications in Industry and Research Flair 2011, Murnau (Germany), 13-17.09.2011.
- ci39.** N. Picqué, ‘Fourier Transform Spectroscopy with Laser Frequency Combs’, International Symposium on High Resolution Molecular Spectroscopy, Dijon (France), 09.2011.
- ci38.** N. Picqué, ‘Fourier Transform Spectroscopy with Laser Frequency Combs’, Optical Society of America Topical Meeting on Fourier Transform Spectroscopy and Hyperspectral Imaging and Sounding of the Environment, Toronto (Canada), July 2011.
- ci37.** B. Bernhardt, G. Guelachvili, T.W. Hänsch, N. Picqué, “Applications of CEP lasers in spectroscopy: Dual comb spectroscopy”, Journée Lasers Femtosecondes avec Contrôle de la Phase entre la Porteuse et l’Enveloppe, Palaiseau (France), 07.06.2011
- ci36.** N. Picqué, ‘Molecular spectroscopy with laser frequency combs’, International Conference on Laser Spectroscopy ICOLS 11, Aerzen (Germany), 30.05-03.06.2011

- ci35.** N. Picqué, ‘Dual-comb spectroscopy of molecules’, Conference on Lasers and Electro-Optics CLEO Europe, Munich (Germany), 22-26.05.2011.
- ci34.** N. Picqué, ‘Molecular Spectroscopy with Laser Frequency Combs’, Conference on Lasers and Electro-Optics CLEO USA, Baltimore (USA), 1-6.05.2011.
- ci33.** N. Picqué, ‘Laser frequency combs for future space applications’, High Level Science Policy Advisory Committee HISPAC, European Space Agency, Paris (France), 05.04.2011.
- ci32.** N. Picqué, ‘Molecular Spectroscopy with laser frequency combs’, French Israeli Symposium on Non-linear & Quantum Optics FRISNO 11, Aussois (France), 20.03-01.04.2011.
- ci31.** N. Picqué, « Peignes de fréquences femtosecondes : spectroscopies à leurs limites », Conférence de clôture, Journée Nationale de clôture de l’année des 50 ans du laser, Bordeaux (France), 02.12.2010.
- ci30.** G. Guelachvili, T.W. Hänsch, N. Picqué, ‘Molecules play comb games’, International workshop ‘*New experimental and theoretical developments in molecular spectroscopy: Atmospheric and Astrophysical applications*’, Saint-Aubin (France), 22-23.10.2010.
- ci29.** N. Picqué, « Peignes de fréquences femtosecondes: repousser la frontière des mesures de précision de temps et de fréquence », Novela « 50 ans du Laser », Toulouse, 15.10.2010
- ci28.** N. Picqué, ‘Frequency comb Fourier transform spectroscopy’, European Conference on Atoms, Molecules, and Photons 10, Salamanca (Spain), 5-9.7.2010.
- ci27.** P. Jacquet, M. Jacquey, B. Bernhardt, J. Mandon, R. Thon, G. Guelachvili, T.W. Hänsch, N. Picqué, « Femtosecond frequency combs for frontier molecular spectroscopy » Colloque commun de la division de Physique Atomique et Moléculaire et Optique de la SFP et des Journées de Spectroscopie Moléculaire, Orsay (France), 29.6-2.7.2010.
- ci26.** R. Holzwarth, B. Bernhardt, A. Ozawa, T. Udem, T.W. Hänsch, P. Jacquet, M. Jacquey, G. Guelachvili, Y. Kobayashi, N. Picqué, Broadband Spectroscopy with Dual Combs and Cavity Enhancement. International Symposium on Molecular Spectroscopy 65th Meeting, Columbus OH (USA), June 21-25, 2010.
- ci25.** N. Picqué, ‘Real-time broadband spectroscopy with laser frequency combs’, American Physical Society March meeting, Portland OR (USA), 15-19.3.2010. **2010 Beller lectureship award.**
- ci24.** N. Picqué, ‘Static Fourier transform spectrometers with laser frequency combs’, CNES international workshop on new concepts of high performance spectrometers, Toulouse (France) 15.12.2009
- ci23.** N. Picqué, ‘Frequency metrology with ultrawide sources’, Optical Metrology and High field Physics Intensive Program, Bordeaux (France), 7-11.12.2009.
- ci22.** N. Picqué, ‘Cavity-enhanced frequency comb Fourier transform spectroscopy’, Conférence invitée, Eighth international workshop on cavity enhanced spectroscopy, Leiden (Pays-Bas) 2-6.11.2009
- ci21.** N. Picqué, ‘Laser frequency combs for molecular fingerprinting’, The 22nd Annual Meeting of the IEEE Lasers & Electro-Optics Society, Belek-Antalya (Turkey) 4-8.10.2009
- ci20.** N. Picqué, « Interférences entre peignes de fréquences femtosecondes », COLOQ’11, Mouans-Sartoux (France), 7-9.09.09.
- ci19.** J. Mandon, P. Jacquet, B. Bernhardt, M. Jacquey, G. Guelachvili, T.W. Hänsch, N. Picqué, « Peignes de fréquences femtosecondes pour la spectroscopie de Fourier en

temps réel », 9^{ème} Journées des Phénomènes Ultrarapides, Bordeaux (France), 27-30.04.09.

ci18. N. Picqué, « Lasers femtosecondes et cavités en spectroscopie », Réseau des technologies femtosecondes, Orsay (France), 1-2.04.2009.

ci17. N. Picqué, « Spectroscopic sensing with femtosecond frequency combs », International Conference on Nanosystem Engineering and Biophotonics NEBO-2009, Cachan (France), 30.3-1.04.2009.

ci16. N. Picqué, « Spectroscopie par peignes de fréquences femtosecondes », Les marchés porteurs pour la spectroscopie optique, Rendez-vous Optics Valley, Palaiseau (France), 20.01.2009.

ci15. J. Mandon, P. Jacquet, B. Bernhardt, G. Guelachvili, T.W. Hänsch, N. Picqué, « Femtosecond frequency comb Fourier transform spectroscopy », 1^{er} Congrès du GdR Specmo, Paris (France), 20-21.10.2008.

ci14. Guy Guelachvili and Nathalie Picqué, “Femtosecond frequency comb spectroscopy”, International Workshop on Photonics and Applications, Nha Trang, Vietnam, 8-12 September 2008.

ci13. Guy Guelachvili and Nathalie Picqué, “Femtosecond frequency comb spectroscopy”, Infrared Plasma Spectroscopy International Workshop, Greifswald (Germany), 23-25 July 2008.

ci12. Nathalie Picqué, Guy Guelachvili, Evgeni Sorokin, Irina T. Sorokina, "Frequency combs for high-resolution spectroscopy in the infrared", 17th International Laser Physics Workshop, Trondheim (Norway), June 30 - July 4, 2008.

ci11. Irina T. Sorokina, Evgeni Sorokin, Guy Guelachvili, Nathalie Picqué, “Progress in infrared femtosecond lasers and applications”, International Conference "Laser Optics 2008", St.Petersburg (Russia), June 23-28, 2008

ci10. Irina T. Sorokina, Evgeni Sorokin, Guy Guelachvili, Nathalie Picqué, “Femtosecond lasers for sensing in the infrared: taking advantage of the bandwidth”, Photonics West, LASE 2008, San Jose, CA (USA), 19 - 24 January 2008.

ci9. Nathalie Picqué, “Frequency Modulation FTS: a broadband method for measuring weak absorptions and dispersions”, Optical Society of America Topical Meeting on Fourier Transform Spectroscopy and Hyperspectral Imaging and Sounding of the Environment, Santa Fe NM (USA), 11.2-15.2.2007.

ci8. Nathalie Picqué, “Femtosecond frequency combs: new trends for Fourier transform spectroscopy”, Optical Society of America Topical Meeting on Fourier Transform Spectroscopy and Hyperspectral Imaging and Sounding of the Environment, Alexandria VA (USA), 31.1-3.2.2005.

ci7. Nathalie Picqué, “High sensitivity wideband infrared spectroscopy”, XIV-th Symposium on High Resolution Molecular Spectroscopy, Krasnoyarsk (Russie), 6-11.7.2003.

ci6. Nathalie Picqué, “High sensitivity FTS: Quantitative wideband spectroscopy with kilometeric absorption paths”, Optical Society of America Topical Meeting on Fourier Transform Spectroscopy and Optical Remote Sensing, Québec (Canada), 3-6.2.2003.

ci5. Nathalie Picqué, Guy Guelachvili, David Jacquemart, Victor Dana, Jean-Yves Mandin, ICLAS - Time Resolved FTS. Intensity Measurements by Multispectrum Fitting Approach. First Tests on H₂O with Absorption Paths up to 130 Km, Seventh International HITRAN Conference, Cambridge (USA), 19-21.6.2002.

ci4. Nathalie Picqué, “Recent instrumental developments in high resolution laser and Fourier transform spectroscopies.”, **Plenary talk**, 1st International Conference on Advanced Vibrational Spectroscopy, Turku (Finlande), 19-24.8.2001.

ci3. Nathalie Picqué, “High Resolution Time-resolved FTS: Instrumental developments and molecular applications.”, Optical Society of America Topical Meeting on Fourier Transform Spectroscopy and Optical Remote Sensing, Coeur d’Alene (U.S.A), 5-8.2.2001.

ci2. G. Modugno, D. Mazzotti, M. Modugno, N. Picqué, G. Giusfredi, P. Cancio, P. de Natale, and M. Inguscio, «Spectroscopic tests of the symmetrization postulate and of the statistics for nuclei in molecules », "Spin Statistics Connection and Commutation Relations: Experimental Tests and Theoretical Implications" (SPIN2000), Isola di Capri (Italie), May 31 - June 3, 2000.

ci1. Nathalie Picqué, Guy Guelachvili, "Molecular Species: Recent Approach with FTS.", 7th Austrian-Hungarian Conference on Vibrational Spectroscopy, Veszprém (Hongrie), 7-9.4.1999.

Seminar/Colloquium talks

- s31.** “Frequency Comb Interferometry”, Max-Born Institute, Berlin (Germany), Online, 27.01.2022.
- s30.** “Frequency Comb Interferometry and Spectroscopy”, Distinguished Lecture Series, Max-Planck Institute for the Science of Light, Erlangen (Germany), Online, 10.06.2021.
- s29.** “Laser frequency combs for molecules”, Physics Colloquium, Technical University of Graz, Austria, 10.3.2020.
- s28.** “Laser frequency combs for molecules“, Max-Planck Institute for the Science of Light, Erlangen (Germany), 4.7.2019.
- s27.** “Molecular spectroscopy with laser frequency combs”, Colloquium, Max-Planck Institute of Quantum Optics, Garching Germany, 5.6.2018.
- s26.** « Laser frequency combs for molecular spectroscopy and sensing », ETH Zurich (Switzerland), 30.5.2017.
- s25.** « Laser frequency combs for molecular spectroscopy and sensing», Friedrich-Alexander-Universität (Erlangen-Nürnberg, Germany), 3.11.2016.
- s24.** « Laser frequency combs for molecular spectroscopy and sensing», Columbia University (NY, USA), 22.7.2016.
- s23.** « Laser frequency combs for molecular spectroscopy and sensing», Humboldt University of Berlin (Germany), 25.4.2016.
- s22.** « Laser frequency combs for molecular spectroscopy», IMEC, Leuven (Belgium), 12.3.2016.
- s21.** « Laser frequency combs for molecular spectroscopy and sensing», Physics department, Free University of Berlin (Germany), 13.1.2016.
- s20.** « Laser frequency combs for molecular spectroscopy », Optics Colloquium of the Institute of Physics, University of Freiburg (Germany), 16.11.2015.
- s19.** « Molecular spectroscopy with laser frequency combs », Kolloquium of the Max Planck Institut für Quantenoptik, Garching (Germany), 25.6.2013.
- s18.** « Spectroscopie par peignes de fréquences femtosecondes », Thalès R&T, Palaiseau (France), 08.06.2010.
- s17.** « Peignes de fréquences femtosecondes pour la spectroscopie », SPEC CEA, Saclay (France), 05.2010.
- s16.** « Peignes de fréquences femtosecondes pour la spectroscopie », Laboratoire Kastler Brossel, Paris (France), 5.4.2010
- s15.** « Spectroscopie par peignes de fréquences femtosecondes », CORIA, Rouen, 02.2010.
- s14.** « Interferences between frequency combs», Laser spectroscopy division annual meeting, Ringberg (Germany), 31.8-4.9.2009.
- s13.** « Les peignes de fréquences femtosecondes : vers une révolution en spectroscopie », ENS Lyon (France), 10.12.2008.
- s12.** « Molecular Fingerprinting with Femtosecond Frequency combs », Max Planck Institute for the Science of Light, Erlangen-Nuremberg (Germany), 27.10.2008.
- s11.** « Frequency comb Fourier transform spectroscopy », MenloSystems GmbH, Martiensried (Germany), 10.10.2008.

- s10.** « Frequency comb Fourier transform spectroscopy », Laser spectroscopy division annual meeting, Ringberg (Germany), 8-12.9.2008.
- s9.** « Molecular Fingerprinting with Frequency combs », Ludwig Maximilian University of Munich, Munich (Germany), 7.12.2007.
- s8.** « Peignes de fréquences femtosecondes en spectroscopie », Service des Photons, Atomes et Molécules et Laboratoire Francis Perrin, CEA Saclay (France), 11.10.2007.
- s7.** « Lasers et spectroscopie de Fourier : un couplage inattendu pour la spectroscopie multiplex ultrasensible », Laboratoire de Spectrométrie Ionique et Moléculaire, Lyon (France) 8.3.2007.
- s6.** “High sensitivity multiplex infrared spectroscopy”, ETH Zürich (Switzerland), 6.6.2006.
- s5.** “Selectivity and sensitivity from Fourier transform spectroscopy”, Joint Institute for Laboratory Astrophysics JILA, Boulder CO (USA), 10.2.2003.
- s4.** “Wide-band infrared molecular spectroscopy with kilometeric absorption paths”, Howard University, Washington DC (USA), 7.2.2003
- s3.** « Spectroscopie large-bande à hautes résolutions spectrale et temporelle », Laboratoire de Spectrométrie Physique, Grenoble (France), 18.6.2002.
- s2.** "Spectroscopie résolue en temps de molécules stables"; Laboratoire de Photophysique Moléculaire, Orsay (France), 30.11.2001.
- s1.** "New Methods in Selective Fourier Transform Spectroscopy"; Institut für Physikalische Chemie, Bâle (Suisse), 10.5.1999.