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

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List of publications

Publications in peer-reviewed journals

Submitted for publication:

80. 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).

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

Published:

78. N. Picqué, T.W. Hänsch, Interferometry with optical frequency combs, *Photoniques* **113**, 38-42 (2022).

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, *Communications Physics* **5**, 88 (2022).

76. K. Fritsch, J. Brons, M. Iandulskii, K.F. Mak, Z. Chen, N. Picqué, O. Pronin, Dual-comb thin-disk oscillator, *Nature Communications* **13**, 2584 (2022).

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).

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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).
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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).
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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).
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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.

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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.

99. N. Picqué, "Dual-Comb Interferometry with Fiber-Based Comb Synthesizers," in Conference on Lasers and Electro-Optics, Technical Digest Series (Optica Publishing Group, 2022), paper JM4A.4.
98. L. Guillemot, E. Vicentini, T. W. Hänsch, and N. Picqué, "Dual-Comb Digital Holography at Fast Sampling Rate," in Conference on Lasers and Electro-Optics, Technical Digest Series (Optica Publishing Group, 2022), paper SS1A.3.
97. S. Cuyvers, T. Vanackere, T. Vandekerckhove, S. Poelman, C. O. de Beeck, J. De Witte, A. Hermans, K. Van Gasse, N. Picqué, D. Van Thourhout, G. Roelkens, S. Clemmen, and B. Kuyken, "High-Yield Heterogeneous Integration of Silicon and Lithium Niobate Thin Films," in Conference on Lasers and Electro-Optics, Technical Digest Series (Optica Publishing Group, 2022), paper STu4G.2.
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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.
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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,

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List of invited talks

Invited talks at international or national conferences

Forthcoming:
ci107. Integrated Optics conference of SPIE Photonics West, San Francisco CA, USA, 28.1-2.2.2023
ci106. Journées du GdR Elios, Marseille, France 17-18.10.2022
ci105. Workshop Frequency Combs : Fundamentals & Applications, Brussels, Belgium, 12-13.9.2022

Past:
ci104. N. Picqué, "New Trends in Dual-Comb Spectroscopy", International conference on spectral lineshapes, Casetta, Italy, 20-24.6.2022.
ci103. N. Picqué, "Frequency Comb Spectroscopy", Conference of the French Physical Society, Orsay, France, 9-10.6.2022
ci102. N. Picqué and E. Vicentini, "Dual-Comb Hyperspectral Digital Holography", WE Heraeus Seminar "High-precision measurements and the search for a New Physics", Bad Honnef, Germany, 9-13.5.2022
ci101. N. Picqué, "On-chip Frequency Comb Interferometry", European Conference on Integrated Optics, Milan, Italy, 4-6.5.2022
ci100. N. Picqué, "Dual-comb spectroscopy with fiber-based laser systems", CLEO USA, 15-20.5.2022.
ci99. N. Picqué, "Frequency comb spectroscopy of molecules", Topical school "Optical fiber links & frequency combs: from basics to applications", Les Houches, France, 18-22.4.2022.
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, « Interférométrie 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 Genéral 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. 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. 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", 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. N. Picqué, « Peignes de fréquences femtosecondes pour la spectroscopie de Fourier en temps réel », 9eme 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. N. Picqué, « Femtosecond frequency comb Fourier transform spectroscopy», 1er 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 kilometric 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 H_2O 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**, 1rst International Conference on Advanced Vibrational Spectrocopy, 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

s33. "Interferometry with Frequency Combs", Polytechnique Montréal, Online, 6.6.2022.
s32. "Frequency Comb Interferometry", Québec Network for Advanced Materials, Online. 7.4.2022
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 kilometric 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 Tranform Spectroscopy"; Institut für Physikalische Chemie, Bâle (Suisse), 10.5.1999.