

JEAN-JACQUES ZONDY

CURRICULUM VITAE



Zondy, Jean-jacques

Physicist, PhD, Director of Research
Nonlinear Optician, Laser Physicist, Optical Metrologist
French Citizen, born November 7, 1959 (Diégo-Suarez, Madagascar)
Native origin: Chinese (father)/Madagascan (mother)

Professional Address

Present: 2004 =>
Senior Research Scientist
Group Leader (Laser Physics and Nonlinear Optics group)
Institut National de Métrologie (LNE-INM/Cnam)
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Former (1989 - 2004) :
LNE-SYRTE/Observatoire de Paris
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Fields of Interest

- **Coherent Optics and Laser Physics** (*Theory & experiments*)
Linear optics, birefringent optics,
Atomic and molecular Physics, Laser frequency stabilization
Laser precision spectroscopy and measurements,
- **Nonlinear Optics and Quantum Optics** (*Theory & experiments*)
Parametric Frequency conversion (SHG, SFG, DFG, OPA),
Cascaded second-order processes, Kerr effect
Nonlinear Optical Materials (characterization)
Nonlinear dynamics, chaotic dynamics,
Nonlinear optical structure (walkoff-compensated structures)
Self-phase-locked dynamics in optical systems
- **Optical frequency metrology**
Optical clocks, high precision measurements,
Femtosecond frequency combs, length metrology
- **Laser instrumentation**
Laser system development (DPSSL, semiconductor);
Optical Parametric Oscillators (OPOs), DFG laser spectrometers
Single-frequency lasers
- **Trace gas sensing for environmental and medical issues**
Spectroscopic Breath analysis (LAS, CRDS; ...)
Laser-based optical sensors

Education

- Habilitation thesis (Director of Research title), 2001 (Univ. Paris-Sud 11)
- PhD in Physics (Specialty: Lasers, Atomic and Molecular Physics), 1986 (Univ. Paris Sud 11)
- Master Sc. Physics, 1981, (Univ. Paris Sud 11)
- Bachelor Sciences, 1978 (French Highschool - Lycée français Sadi-Carnot, Diégo-Suarez (MD))

Appointments and Academic history

- 1988 – present: Research Physicist (LNE, former French National Bureau of Standards)
- 2005 : Founded a personal private consulting & sales company,
Nonlinear Optics Technologies (NLOT),
 22 bd Saint Denis, 75010 Paris, France
 URL: <http://www.nlo-technologies.fr>
 E-mail: sales@nlo-technologies.fr
Company's activities :
 - providing scientific consulting in lasers and nonlinear optics for academics & industry
 - distributing optical components and laser/NLO crystals
- 1993 – present: Referee for most major international physics and optics journals edited by
 - Optical Society of America, OSA (*Opt. Lett., Appl. Opt., Opt. Express, J. Opt. Soc. Am. B*)
 - American Physical Society, APS (*Phys. Rev. A, Phys. Rev. E; Phys. Rev. Lett.*)
 - Elsevier (*Opt. Commun., Opt. & Laser Technol., Mat. Sci., ...*)
 - Springer (Appl. Phys. B)
 - Institute of Physics Publishing, IOP (*J. Opt. A: Pure Appl. Opt., etc...*)
 - European Physical Society (J. Phys. D, ...)
- 1996 – 1999 : Coordinator of EU research project (FP4 INCO-Copernicus program)
- Since 1999: Referee (Evaluator) for research projects submitted to EU programs (FP5-FP6, INTAS); Referee of national French research proposals submitted to ANR (Agence Nationale de la Recherche)
- 2001 – 2005: Served as sub-program committee member (*Category 4: Applications of Nonlinear Optics*) of annual CLEO-USA conferences

Thesis supervision

- Supervised 8 PhD students and 6 postdocs since 1992
- 2008 => 2 PhD students under supervision; 1 postdoc supervision.

Research Activities

- Leads the *Lasers & Nonlinear Optics group* of the Laser/Length section of LNE-INM-Cnam (2 PhD, 1 postdoc, 1 Research engineer)
- Diode-pumped Solid-State Laser (DPSSL) development, with intra-cavity SHG
- Optical Parametric Oscillators (OPOs) development in the vis/mid-IR range, continuous-wave and nanosecond regimes. Milestone: first to demonstrate cw parametric oscillation with chalcogenide IR crystals (AgGaS₂, 1997 and LiInS₂, 2004)
- Since 2008: Laser spectroscopy/trace gas detection - Workpackage Leader of the *Breath Analysis for early disease diagnosis* project (EU FP7 program -ERANET - IMERA+)

Major professional achievements

- 1995 => present: Contribution to the characterization and laser applications of a new family of ternary lithium-containing chalcogenide mid-IR nonlinear materials (LiInS₂, LiInSe₂, LiGaS₂, LiGaTe₂...): a) first cw OPO demonstration with a mid-IR ternary chalcopyrite - AgGaS₂ (1998); b) first demonstration of nanosecond OPO with LiInSe₂ (2005).
- 2003 Invention (Theory and 1st demonstration) of monolithic walkoff-compensating periodic structures (2N-OCWOCs) for enhanced parametric up-or-down conversion with birefringent nonlinear crystals.
- 2004 First demonstration of a cw phase-coherent “frequency divide-by-3” OPOs self-phase-locked by cascaded second-order nonlinearities for applications in nonlinear dynamics and quantum optics.

Publications and Patents (see Annex I)

- More than 70 peer-reviewed scientific publications in international journals and more than 80 conference proceedings papers
- 1998: Patent filed (as inventor) on Crystal walkoff-compensating periodic structure (filed by Cristal Laser S.A., the French KTP crystal grower)
- 2008: patent filed (as co-inventor) by CNRS-LNE on a yellow laser based on doubly-resonant SFG of Nd:YAG cw single-frequency lasers

Professional memberships

- Since 1994: Member, OSA (Optical Society of America)
- Since 2009: Member, EOS (European Optical Society)

Annex I: List of publications in peer-reviewed journals

1. J.-J. Zondy, J.P. Galaup and H. Dubost, "Coherent pulsations in the vibrational fluorescence of CO and NO in solid N₂", *J. Lumin.* **38** (1987) 255-257.
2. M. Le Berre, E. Ressayre, A. Tallet and J.-J. Zondy, « Lyapunov vectors treatment for bifurcations in retarded differential systems », *J. Phys.* (Paris), **vol. 49**, no C-2, June 1988, pp 389-92.
3. J.-J. Zondy, M. Le Berre, E. Ressayre and A. Tallet, « Spatiotemporal instabilities in a saturable homogeneously broadened ring cavity », *J. Phys.* (Paris), **Vol 49**, no C-2, June 1988, pp487-90.
4. M. Le Berre, E. Ressayre, A. Tallet and J.-J. Zondy, « Linear analysis of single feedback mirror spatio-temporal instabilities », *J. Opt. Soc. Am.* **B7**(7) (1990) pp1346-1360.
5. J.-J. Zondy, "**Comparative theory of walkoff limited type-II versus type-I second harmonic generation with gaussian beams**", *Opt. Commun.* **81**(6), 427-440 (1991).
6. F. Nez, M.D. Plimmer, S. Bourzeix, L. Julien, R. Felder, O. Acef, J.-J. Zondy, Ph. Laurent, A. Clairon, M. Abed, Y. Millerieux and P. Juncar, "Precise frequency measurement of the 2S-8S/8D transitions in atomic hydrogen: New determination of the Rydberg constant", *Phys. Rev. Lett.* **69**(16) (1992) 2326-2329.
7. O. Acef, J.-J. Zondy, M. Abed, D.G. Rovera, A.H. Gerard, A. Clairon, P. Laurent, Y. Millerieux and P. Juncar, "A CO₂ to visible optical frequency synthesis chain: Accurate measurement of the 473 THz HeNe/I2 laser", *Opt. Commun.* **97** (1993) 29-34.
8. J.-J. Zondy, M. Abed and A. Clairon, "Type-II frequency doubling at $\lambda=1.30 \mu\text{m}$ and $\lambda=2.53 \mu\text{m}$ in flux-grown potassium titanyl phosphate", *J. Opt. Soc. Am.* **B 11**(10) (1994) 2004-2015.
9. J.-J. Zondy, M. Abed and S. Khodja, "**Twin-crystal walkoff-compensated type-II second-harmonic generation: Single-pass and cavity-enhanced experiments in KTiOPO₄**", *J. Opt. Soc. Am.* **B 11**(12), 2368-2379 (1994).
10. J.-J. Zondy, "Experimental investigation of single and twin AgGaSe₂ crystals for CW 10.2 μm SHG", *Opt. Commun.* **119** (1995) pp320-326 (1995).
11. B. de Beauvoir, F. Nez, L. Julien, B. Cagnac, F. Biraben, D. Touahri, L. Hilico, O. Acef, A. Clairon and J.-J. Zondy, « **Absolute frequency measurement of the 2S-8S/D transition in hydrogen and deuterium: New determination of the Rydberg constant** », *Phys. Rev. Lett.* **78**(3), 440-443 (1997).
12. D. Touahri, O. Acef, A. Clairon, J.-J. Zondy, R. Felder, L. Hilico, B. de Beauvoir, F. Biraben, F. Nez, "Frequency measurement of the 5S(1/2-F=3) – 5D(5/2-F=5) two-photon transition in rubidium", *Opt. Commun.* **133**, (1997) 471-478.
13. J.-J. and D. Touahri, "Updated thermo-optic coefficients of AgGaS₂ from temperature tuned noncritical $3\mu\text{m} \rightarrow 2\mu\text{m} + \mu\text{m}$ infrared parametric amplification", *J. Opt. Soc. Am.* **B 14**(6) (1997) 1331-1338.
14. B. Boulanger, J.P. Fève, G. Marnier, D. Bonnin, P. Villeval and J.-J. Zondy, « Absolute measurement of quadratic nonlinearities from phase-matched second-harmonic generation in a single KTP crystal cut as a sphere », *J. Opt. Soc. Am.* **B 14**(6) (1997) 1380-1386.
15. K. Stoll, J.-J. Zondy and O. Acef, "**Fourth-harmonic generation of a continuous-wave CO₂ laser by use of an AgGaSe₂/ZnGeP₂ doubly resonant device**", *Opt. Lett.* **22**(17), 1302-1304 (1997).
16. J.-J. Zondy, D. Touari and O. Acef, "**Absolute value of the d₃₆ nonlinear coefficient of AgGaS₂: prospect for a low-threshold doubly resonant oscillator-based 3:1 frequency divider**", *J. Opt. Soc. Am.* **B 14**(10), 2481-2497 (1997).
17. J.-J. Zondy, "**The effect of focusing in type-I and type-II difference-frequency generations**", *Opt. Commun.* **149** (1998) 181-206.
18. B. de Beauvoir, F. Nez, L. Hilico, L. Julien, F. Biraben, B. Cagnac, J.-J. Zondy, D. Touari, O. Acef and A. Clairon, « Transmission of an optical frequency through a 3km long optical fiber », *Eur. Phys. Journal* **D 1**(2) (1998) pp227-229.
19. D. Lee, T. Kaing and J.-J. Zondy, "**An all-diode laser based, dual cavity AgGaS₂ difference-frequency spectrometer for the 9 – 11 μm range**", *Appl. Phys.* **B 67**, 363-367 (1998).
20. A. Douillet and J.-J. Zondy, "**Low-threshold, self-frequency-stabilized AgGaS₂ continuous-wave optical parametric oscillators**", *Opt. Lett.* **23**(16), 1259-1261 (1998).
21. J.P. Fève, J.-J. Zondy, B. Boulanger, R. Bonnenberger, X. Cabriol, B. ménaert, and G. Marnier, « Optimized blue light generation in optically contacted walkoff compensated RbTiAsO₄ and KTiOP(1-x)As(x)O₄ », *Opt. Commun.* **161** (1999) 359-369.
22. T. Kaing, J.-J. Zondy, A. Yelisseyev, S. Lobanov and L. Isaenko, "Improving the power and spectral performance of a 27-33 THz AgGaS₂ difference-frequency spectrometer", *IEEE Trans. Instr. Meas.* **48**(2) (1999) 592-595.

23. A. Douillet and J.-J. Zondy, A. Yelisseyev, L. Isaenko and S. Lobanov, "**Stability and frequency tuning of thermally loaded continuous-wave AgGaS₂ optical parametric oscillators**", *J. Opt. Soc. Am. B* **16**, 1481-1498 (1999) (special issue on Optical Parametric devices)
24. C. Schwob,, L. Jozefowsky, B. de Beauvoir, L. Hilico, F. Nez, L. Julien, F. Biraben, O. Acef, A. Clairon, "Optical Frequency Measurement of the 2S-12D transitions in Hydrogen and Deuterium: Rydberg constant and lamb Shift Determinations", *Phys. Rev. Lett.* **82** (25), (1999) 4960-4963. **Erratum: The name of J.J. Zondy was inadvertently omitted from the author list of our Letter. The correct author list and affiliations are listed above** [C. Schwob,, L. Jozefowsky, B. de Beauvoir, L. Hilico, F. Nez, L. Julien, F. Biraben, O. Acef, J.-J. Zondy, A. Clairon, "Optical Frequency Measurement of the 2S-12D transitions in Hydrogen and Deuterium: Rydberg constant and lamb Shift Determinations", *Phys. Rev. Lett.* **86**, 4193 (2001)].
25. B. de Beauvoir, C. Schwob, O. Acef, L. Jozefowsky, L. Hilico, F. Nez, L. Julien, A. Clairon, J.-J. Zondy and F. Biraben, "Metrology of the hydrogen and deuterium atoms: Determination of the Rydberg constant and lamb shifts", *Eur. Phys. J. D* **12**, 61-93 (2000).
26. L.Isaenko, I.Vasilyeva, A.Yelisseyev, S.Lobanov, V.Malakhov, L.Dovlitova, J.-J.Zondy, I.Kavun, « **Growth and characterization of LiInS₂ single crystals** », *J.Cryst.Growth*.**218(2-4)** , 313-321 (2000).
27. A. Douillet, J.-J. Zondy, A. Yelisseyev, S. Lobanov and L. Isaenko, « Toward a 3 :1 frequency divider based on parametric oscillation using AgGaS₂ and PPLN crystals », *IEEE Trans. Ultrasonics, Ferroelectrics, and Frequency control*, **47(5)**, (2000), pp. 1127-1133.
28. T.Kaing, J.-J.Zondy, A.Yelisseyev, S.Lobanov, L.Isaenko, "Compact, broadly tunable, Mid-IR source for the spectroscopic investigation of molecular reference lines in the 27-70 33 THz range", *IEEE Transactions on Ultrasonics, ferroelectrics and frequency control*, **47**, No 2 (2000) 506-512.
29. L. Isaenko, A. Yelisseyev, J.-J. Zondy, G. Knippels, I. Thénot and S. Lobanov, "Growth and characterization of single crystals of ternary chalcogenides for laser applications", *Opto-Electron. Rev.* **9**, 135-141 (2000).
30. G.M. Knippels, A.F.G. van der Meer, A.M. MacLeod, A. Yelisseyev, L. Isaenko, S. Lobanov, I. Thénot and J.-J. Zondy, « **Mid-infrared (2.75 – 6μm) second-harmonic generation in LiInS₂**», *Opt. Lett.* **26(9)**, 617-619 (2001).
31. L. Isaenko, A. Yelisseyev, S. Lobanov, V. Petrov, F. Rottermund, J.-J. Zondy, G.M.H. Knippels, " LiInS₂: A new nonlinear crystal for the mid-IR", *Mat. Sci. Semicond.. Proc.* **4(6)**, pp. 665-668 (2001) .
32. J.-J. Zondy, A. Douillet, A. Tallet, E. Ressayre, M. le Berre, « **Theory of self-phase-locked optical parametric oscillators**», *Phys. Rev. A* **63**, 023814 (2001).
33. A. Douillet, J.-J. Zondy, G. Santarelli, A. Makdissi and A. Clairon, «**A Phase-Locked frequency Divide-by-3 Optical parametric Oscillator** », *IEEE Trans. Instrum. & Meas.* **50(2)**, 548-551 (2001).
34. L. Isaenko, A. Yelisseyev, S. Lobanov, F. Rotermond, V. Petrov, G. Sleky, J.-J. Zondy, "**LiInSe₂: A new ternary chalcogenide crystal for nonlinear optical applications in the mid-infrared:**", *J. Appl. Phys.* **91(12)** , 9475-9480 (2002).
35. J.-J. Zondy, A. Douillet, A. Clairon, A. Yelisseyev, L. Isaenko, S. Lobanov, « Thermal effects limitations in mid-infrared cw-OPOs", *J. Mat. Science: Materials in Electronics* **12**, pp.451-460 (2001).
36. G.D. Rovera, F. Ducos, J.-J. Zondy, O. Acef, J.-P. Wallerand, J.C. Knight and P. St J. Russell, "Absolute measurement of an I₂ stabilized Nd:YAG optical frequency standard", *Meas. Sci. Technol.* **13**, pp. 918-922 (2002).
37. I. Courtillot, A. Quessada, R.P. Kovacic, J.-J. Zondy, A. Landragin, A. Clairon, and P. Lemonde, "Efficient cooling and trapping of strontium atoms", *Opt. Lett.* **28**, 468 (2003).
38. J.-J. Zondy, "**Stability of the pump-enhanced self-phase-locked singly resonant parametric oscillator**", *Phys. Rev. A* **67**, 035801 (2003).
39. J.-J. Zondy, Ch. Bonnin, D. Lupinski, "**Second-harmonic generation with monolithic walkoff compensating periodic structures: I. Theory**", *J. Opt. Soc. Am. B* **20(8)** , 1675-1694 (2003).
40. J.-J. Zondy, D. Kolker, Ch. Bonnin, D. Lupinski, "**Second-harmonic generation with monolithic walkoff compensating periodic structures: II. Experiments**", *J. Opt. Soc. Am. B* **20(8)**, 1695-1707 (2003).
41. I. Courtillot, A. Quessada, R.P. Kovacic, J.-J. Zondy, A. Landragin, G. Santarelli, A. Clairon and P. Lemonde, "Cold strontium atoms for an optical frequency standard", *IEEE Trans. Instrum. Meas.* **52(2)**, 255-257 (2003).
42. I. Courtillot, A. Quessada, R.P. Kovacic, A. Bruschi, D. Kolker, J.-J. Zondy, G.D. Rovera, and P. Lemonde, "**A clock transition for a future optical frequency standard with trapped atoms**", *Phys. Rev. A* **68** , 030501(R) (2003).

43. L. Isaenko, A. Yelissev, S. Lobanov, A. Titov, V. Petrov, J.-J. Zondy, P. Krinitsin, A. Merkulov, V. Vedenyapin, J. Smirnova, "Growth and properties of LiGaX₂ (X=S,Se, Te) single crystals for nonlinear optical applications in the mid-IR," *Cryst. Res. Technol.* **38** (3-5), 379-387 (2003).
44. F. Biraben, T.W. Hänsch, M. Fischer, M. Niering, R. Holzwarth, J. Reichert, Th. Udem, M. Weitz, B. de Beauvoir, C. Schwob, L. Jozefowski, L. Hilico, F. Nez, L. Julien, O. Acef, J.-J. Zondy, A. Clairon, "Precision Spectroscopy of Atomic Hydrogen" (review article, Book Chapter), *Lecture Notes in Physics, Volume 570 / 2001*, Chap.:p17, Springer-Verlag Heidelberg (2003).
45. S. Fossier, S. Salaün, J. Mangin, J.-J. Zondy, I. Thénot, W. Shen, P. Petrov, J. Henningsen, A. Yelissev, L. Isaenko, S. Lobanov, G. Sleky, F. Rotermund, V. Petrov, S. Zelt, "**Optical, vibrational, thermal, electrical, damage and phase-matching properties of lithium thioindate**", *J. Opt. Soc. Am. B* **21(11)**, 1981-2007 (2004).
46. J.-J. Zondy, V. Vedenyapin, T. Kaing, D. Lee, A. Yelissev, L. Isaenko, S. Lobanov, "**Doppler spectroscopy of NH₄ and SF₆ in the 10 μ m range using a tunable difference-frequency spectrometer**", *Appl. Phys. B* **78**, 457-463 (2004).
47. S. Carrasco, D.V. Petrov, J.P. Torres, L. Torner, H.Kim, G. Stegeman, J.-J. Zondy, "**Observation of self-trapping of light in walk-off compensating tandems**", *Opt. Lett.* **29(4)**, 382-384 (2004).
48. V. Petrov, A. Yelissev, L. Isaenko, S. Lobanov, A. Titov, and J.-J. Zondy, "Second-harmonic generation and optical parametric amplification in the mid-IR with orthorhombic biaxial crystals LiGaS₂ and LiGaSe₂", *Appl. Phys. B* **78**, 543-546 (2004).
49. A.P. Yelissev, V.A. Drebuschak, A.S. Titov, L.I. Isaenko, S.I. Lobanov, K.M. Lyapunov, V.A. Gruzdev, S.G. Komarov, V. Petrov and J.-J. Zondy, "Thermal properties of the midinfrared nonlinear crystal LiInSe₂", *J. Appl. Phys.* **96(7)**, 3659-3665 (2004).
50. J.-J. Zondy, D. Kolker and F.N.C. Wong, "**Dynamical signatures of self-phase-locking in a triply resonant optical parametric oscillator**", *Phys. Rev. Lett.* **93(4)**, 043902 (2004).
51. W. Chen, E. Poullet, J. Burie, D. Boucher, M. W. Sigrist, J.-J. Zondy, L. Isaenko, A. Yelissev, and S. Lobanov, "Widely tunable continuous-wave mid-infrared radiation (5.5–11 μ m) by difference-frequency generation in LiInS₂ crystal", *Appl. Opt.* **44(19)**, pp. 4123-4129 (2005).
52. R. Letargat, J.-J. Zondy, P. Lemonde, "**75%-efficiency blue generation from an intracavity PPKTP frequency doubler**", *Opt. Commun.* **247**, 471-481 (2005).
54. J.-J. Zondy, V. Vedenyapin, A. Yelissev, L. Isaenko, S. Lobanov, V. Petrov, "**LiInSe₂ nanosecond optical parametric oscillator**", *Opt. Lett.* **30**, 2460-2462 (2005).
55. L. Isaenko, P. Krinitsin, V. Vedenyapin, A. Yelissev, A. Merkulov, J.-J. Zondy, and V. Petrov, "**LiGaTe₂: a new highly nonlinear chalcopyrite optical crystal for the mid-IR**", *Cryst. Growth & Design* **5(4)**, 1325-1329 (2005).
56. J. Friebe, K. Moldenhauer, E.M. Rasel, W. Ertmer, L. Isaenko, A. Yelissev, J.-J. Zondy, " **β -BaB₂O₄ deep UV monolithic walk-off compensating tandem**", *Opt. Commun.* **261**, 300-309 (2006).
57. P. V. Gorelik, F. N. C. Wong, D. Kolker and J.-J. Zondy, "**Cascaded optical parametric oscillation with a dual-grating periodically poled lithium niobate crystal**", *Opt. Lett.* **31(13)**, 2039-2041 (2006).
58. L. Isaenko, A. Yelissev, S. Lobanov, P. Krinitsin, V. Petrov, and J.-J. Zondy, "Ternary chalcogenides LiBC₂ (B = In,Ga; C = S, Se, Te) for mid-IR nonlinear optics", *J. of Non-Crystalline Solids* **352**, 2439–2443 (2006).
59. V. Petrov, L. Isaenko, A. Yelissev, P. Krinitsin, V. Vedenyapin, A. Merkulov, J.-J. Zondy, "Growth and characterization of the chalcopyrite LiGaTe₂: A highly non-linear birefringent optical crystal for the mid-infrared", *J. of Non-Crystalline Solids* **352**, 2434–2438 (2006).
60. J.-J. Zondy, F. Bielsa, A. Douillet, L. Hilico, O. Acef, V. Petrov, A. Yelissev, L. Isaenko, and P. Krinitsin, "Frequency doubling of CO₂ laser radiation at 10.6 μ m in the highly nonlinear chalcopyrite LiGaTe₂", *Opt. Lett.* **32(12)**, 1722-1724 (2007).
61. R. Sarrouf, V. Sousa, T. Badr, G. Xu, and J.-J. Zondy, "**Watt-level single-frequency tunable Nd:YLF/periodically poled KTiOPO₄ red laser**", *Opt. Lett.* **32(18)**, 2732-2734 (2007).
62. D. Kolker, A. K. Dmitriyev, P. Gorelik, F. N. C. Wong, and J.-J. Zondy, "Self-Phase Locking in 3-to-1 Triply and Doubly Resonant Optical Parametric Oscillators", *Laser Physics* **18(6)**, 794–799 (2008), © MAIK "Nauka/Interperiodica" (Russia).
63. R. Sarrouf, T. Badr and J.-J. Zondy, "Intracavity second-harmonic generation of diode-pumped continuous-wave, single-frequency 1.3 μ m Nd:YLiF₄ lasers", *J. Opt. A: Pure & Appl. Opt.* **10**, 104011 (10p) (2008).
64. G. Marchev, A. Tyazhev, V. Vedenyapin, D. Kolker, A. Yelissev, S. Lobanov, L. Isaenko, J.-J. Zondy, V. Petrov, "Nd:YAG pumped nanosecond optical parametric oscillator based on LiInSe₂ with tunability extending from 4.7 to 8.7 microns", *Opt. Express* **17(16)**, 13441-13446 (2009).

65. E. Mimoun, L. De Sarlo, J.-J. Zondy, J. Dalibard, and F. Gerbier, "Sum-frequency generation of 589 nm light with near-unit efficiency", *Opt. Express* **16**(23), 18684-18691 (2008).
66. E. Mimoun, L. de Sarlo, J.-J. Zondy, J. Dalibard, and F. Gerbier, "Experimental realization of a solid-state laser system for Sodium cooling", *Appl. Phys. B*, DOI 10.1007/s00340-009-3844-x (online first, 2009). <http://www.springerlink.com/content/w31q58625258271k/fulltext.pdf>.
67. F. A. Camargo, T. Zanon-Willette, T. Badr, N. U. Wetter and J.-J. Zondy, "Tunable Single Frequency Nd:YVO₄/BiB₃O₆ Ring Laser at 671nm", *IEEE J. Quantum Electron.* **46**(5), 804-809 (2010).
68. A. Rihan, E. Andrieux, T. Zanon-Willette, S. Briaudeau, M. Himbert, J.-J. Zondy, "A pump-resonant signal-resonant optical parametric oscillator for spectroscopic breath analysis", to be published in *Appl. Phys. B* (2010). DOI 10.1007/s00340-010-3996-8.
69. J.-J. Zondy, F. A. Camargo, T. Zanon, V. Petrov, and N. U. Wetter, "Observation of strong cascaded Kerr-lens dynamics in an optimally-coupled cw intracavity frequency-doubled Nd:YLF ring laser", *Opt. Express* **18**(5), 4796-4815 (2010).
70. V. Petrov, O. Bidault, L. Isaenko, J.-J. Zondy, A. Yelisseyev, W. Chen, V. Vedenyapin, A. Tyazhev, S. Lobanov, G. Marchev, D. Kolker, "Optical, thermal, electrical, damage, and phasematching properties of lithium selenoindate", to be submitted in 2010.

Book Chapter

- J.-J. Zondy, V. Petrov, A. Yelisseyev, L. Isaenko, and S. Lobanov, "Orthorhombic Crystals of Lithium Thioindate and Selenoindate for Nonlinear Optics in the Mid-IR", in *Mid-infrared Coherent Sources and Applications*, NATO Science for Peace and Security Series (**Series B: Physics and Biophysics**), **Chap. II**, pp. 67-97, eds. M. Ebrahimzadeh and I. Sorokina, Springer (2007), ISBN 978-1-4020-6462-3 (PB).

Patents

- 1) J.-J. Zondy and Crystal Laser SA, "Structure monolithique obtenue par contact optique de cristaux non linéaires en compensation de walk-off", 1999, Brevet d'invention No 96 01197, *Bulletin officiel de la propriété industrielle No 99/3 du 2/04/99 (No de publication 2 744 248)*
- 2) Brevet d'invention N° 08 03153 (CNRS/LNE). N/Réf. INPI: EPRMN-F644/193/F. Titre: "Dispositif optique de conversion de longueur d'onde, et source de lumière cohérente utilisant un tel dispositif". Inventeurs: GERBIER F., MIMOUN E., DALIBARD J., ZONDY J.-J. (2008).

Annex II: List of publications in conference proceedings or digests

1. J.P. Galaup, J.Y. Harbec, J.-J. Zondy, R. Charneau, H. Dubost, "IR stimulated emission on the 2 to 1 vibrational transition of CO and NO in solid N₂", *Journal de Physique* **46** (C-7), (1985) 229-304. Fith Intl. Conf. on Dynamical Processes in the Excited States of Solids, Villeurbanne, France, 1-4 July 1985.
2. J.-J. Zondy, J.Y. Harbec, J.P. Galaup, R. Charneau, H. Dubost, "Role of stimulated emission upon the kinetics of the vibrational populations of ¹³C¹⁸O diluted in Ar matrix", *Journal de Physique (Paris)*, vol.**46**(C-7) (1985) 305-310. Fith Intl. Conf. on Dynamical Processes in the Excited States of Solids, Villeurbanne, France, 1-4 July 1985.
3. J.-J. Zondy, M. Abed, O. Acef, D. Rovera, A.H. Gerard, A. Clairon, Ph. Laurent, Y. Millerioux, P. Juncar, « High-level accuracy measurement of the absolute frequency of the red He-Ne/I₂ stabilized laser", *Proc. SPIE Vol 1837* (1993) pp405-413. Conf: Frequency-Stabilized Lasers and their Applications, Boston, MA, USA. SPIE 16-18 Nov. 1992.
4. D. Touahri, J.-J. Zondy, O. Acef, L. Hilico, F. Nez, A. Clairon, Y. Millerioux, F. Biraben, L. Julien and R. Felder, "LPTF frequency synthesis chain: results and improvement for the near future", *Proc. of the Conf. on Precision electromagnetic Measurement (CPEM'94)*, Boulder, CO, USA.. Digest No94CH3449-6), IEEE. 1994, pp.325-6.
5. R. Felder, D. Touahri, O. Acef, L. Hilico, J.-J. Zondy, A. Clairon, B. de Beauvoir, F. Biraben, L. Julien, F. Nez, and Y. Millerioux, « Performance of a GaAlAs laser diode stabilized on a hyperfine component of two-photon transition in rubidium at 778nm", *Proceedings of SPIE Vol.2378* (1995) pp 52-57. Conf. on Laser Frequency Stabilization and Noise reduction, San Jose CA, SPIE, 9-10 Feb 1995.
6. J.J. Zondy, D. Touahri, O. Acef, L. Hilico, M. Abed, A. Clairon, Y. Millerioux, R. Felder, B. de Beauvoir, F. Nez, F. Biraben, L. Julien, "Absolute frequency measurement of a diode laser locked on a hyperfine component of 5S_{1/2}-5D_{5/2} two-photon transition of rubidium (λ=778.1nm, ν=385.3 THz)", *SPIE Vol.2378* (1995) 147-155. Conf: Laser Frequency Stabilization and Noise reduction, San Jose CA, SPIE, 9-10 Feb 1995.
7. J.-J. Zondy, M. Abed, S. Khodja, C. Bonnin, B. Rainaud, H. Albrecht, D. Lupinski, "Walkoff-compensated type-I and type-II SHG using twin-crystal AgGaSe₂ and KTiOPO₄ devices", *SPIE-Int. Soc. Opt. Eng. Proceedings of SPIE Vol. 2700* (1996) pp66-72. Conf: Nonlinear Frequency Generation and Conversion, San Jose, CA, USA, 29-31 Jan. 1996 (invited).
8. D. Touahri, O. Acef, L. Hilico, F. Nez, A. Clairon and J.-J. Zondy, « Preliminary absolute frequency measurement of a diode laser locked to a two-photon hyperfine transition of rubidium at 385 THz", *Proc. Of the 20th Biennial Conf. on Precision Electromagnetic Measurements, Braunschweig, 1996. CPEM Digest (Cat No96CH35956)*, IEEE, 1996, pp. 312-313, New York.
9. J.-J. Zondy, D. Touahri, O. Acef, A. Clairon, R. Felder, F. Nez, L. Hilico, "Toward the frequency measurement of a laser diode locked to 5S-5D rubidium two-photon transition (2*385 THz)", *Proc. Of the Fith Symposium on Frequency Standards and Metrology, World Scientific, Singapore (1996) pp.310-315.*
10. D. Touahri, J.-J. Zondy and O. Acef, "30 THz up-conversion of an AlGaAs diode laser using an AgGaS₂ crystal: Bridging several THz frequency gap in the near-infrared", *Proc. of the Fith Symposium on Frequency Standards and Metrology, World Scientific, Singapore (1996) pp.478-9.*Conf: FSFSM'95, Woods Hole, MA, USA.
11. D. Touahri, J.-J. Zondy and O. Acef, "Infrared to visible nonlinear up and down conversion processes using AgGaS₂ crystals", *OSA Trends in Optics and Photonics Series on Advanced Solid State Lasers (Washington DC), Vol.1*, Optical Society of America (1996) pp. 164-167.
12. B. De Beauvoir, L. Hilico, L. Julien, F. Biraben, F. Cagnac, F. Nez, J.-J. Zondy, D. Touahri, O. Acef and A. Clairon, "High resolution spectroscopy of hydrogen and deuterium", *MAIK Nauka/Interperiodica Publishing. Laser Physics, vol. 8(3)*, May-June 1998, pp.561-4, Russia (Second Int. Conf. on Modern Problems of Laser Physics (MPLP), Novosibirsk, Russia, July 28-Aug. 2 (1997).
13. T. Kaing, D. Lee, and J.-J. Zondy, "Diode-laser pumped, 9-11 μm doubly resonant difference-frequency spectrometer using AgGaS₂ crystals", *OSA Trends in Optics and Photonics Series, Proc of the ASSL'98 conference (Coeur d'Alene, Jan. 99), TOPS Vol. XXVI* (1998) pp285-290.
14. D. Lee, T. Kaing and J.-J. Zondy, "All-diode laser based, dual cavity AgGaS₂ difference-frequency spectrometer for the 9 – 11 μm range", *Conf. On Precision Electromagnetic Measurements Digest (Cat No 998CH36254)*, IEEE 1998, pp 157-8, New York, NY.
15. A. Douillet and J.J. Zondy, "Toward a 3:1 frequency divider based on AgGaS₂ optical parametric oscillator", *Digest of CPEM'98, Washington DC, July 6-10 (1998), postdeadline paper WEPA1-6,*
16. J.-J. Zondy, A. Douillet, A. Yelissev, S. Lobanov and L. Isaenko, "Output power optimization of continuous-wave, mid-infrared AgGaS₂ doubly resonant optical parametric oscillators", *OSA Trends in*

- Optics and Photonics Series, TOPS **Vol. XXVI** (1999) pp558-566. Proc of the ASSL'99 conference (Boston, Jan. 99)
17. A. Douillet, J.-J. Zondy, A. Yelisseyev, S. Lobanov and L. Isaenko, « Toward a 3 :1 frequency divider based on parametric oscillation using AgGaS₂ and PPLN crystals », Proc. of the 1999 Joint meeting EFTF-IEEE IFCS, 13-16 April 1999, Besançon (France), IEEE catalog no.99CH36313 /87-654207, Vol.2, pp659-662.
 18. T.Kaing, J.-J.Zondy, A.Yelisseyev, S.Lobanov, L.Isaenko, Compact, broadly tunable, Mid-IR source for the spectroscopic investigation of Molecular reference lines in the 27-70 33 THz range, Proc. of the 1999 Joint meeting EFTF-IEEE IFCS, 13-16 April 1999, Besançon (France), IEEE catalog no.99CH36313 /87-654207, Vol.2, pp734-737.
 19. L. Isaenko, A.Yelisseyev, S. Lobanov, J.-J. Zondy, I.Vasilyeva, A.Kuchyanov "Growth and spectroscopic properties of pure and Nd-doped LiInS₂ single crystals" (oral communication presented by J.-J. Zondy at the E-MRS'99 Spring meeting (European Material Research Society, Strasbourg, May 99)
 20. G. Hagel, R. Battesti, C. Schwob, F. Nez, L. Julien, F. Biraben, O. Acef, J.-J. Zondy, A. Clairon, "Absolute frequency measurement of the 1S-3S transition in Hydrogen", ICAP 2000 – XVII Int. Conf. On Atomic Hydrogen, June 4-9 (2000), Florence (Italy). <http://www.vniim.ru/sgk/psas/>.
 21. J.J. Zondy, A. Douillet, A. Yelisseyev, S. Lobanov, L. Isaenko, "Pure and Ytterbium-doped AgGaS₂ potential for cw parametric oscillation and stimulated emission in the mid-infrared", SPIE Vol **3742**, , pp 260-261. Digest of the 18th Congress of the International Commission for Optics (ICO XVIII *Optics for the Millenium*) 2-6 Aug. 1999, San Francisco, CA (USA)
 22. A. Yelisseyev, S. Lobanov, L. Isaenko, J.J. Zondy, « Spectroscopic study of Neodymium-doped LiInS₂ single crystals", SPIE Vol **3742**, pp 687-688. Digest of the 18th Congress of the International Commission for Optics (ICO XVIII *Optics for the Millenium*) 2-6 Aug. 1999, San Francisco, CA (USA)
 23. L.I.Isaenko, S.I.Lobanov, A.P.Yelisseyev, I.G.Vasilyeva, J.-J.Zondy, "Growth and spectroscopic properties of LiInS₂ single crystals", Crystal Growth Conference, Alexandrov, Russia, oct. 1999.
 24. L.I.Isaenko, A.P.Yelisseyev, S.I.Lobanov,I.G.Vasilyeva, J.-J.Zondy, "Composition-Structure-Property dependence for IR nonlinear single crystals", Abstracts, pp.69-71. The Third Int. conference on single Crystal growth, Strength problems and heat-mass transfer Obninsk, Russia, Sept.1999.
 25. **Seminaire invite:** J.-J. Zondy, "CW parametric oscillators for optical frequency metrology", Journées Scientifiques de l'ONERA *OPO: Fondements et Applications*, 10 oct. 1999. <http://www.onera.fr/congres/jsci99-opo>.
 26. F. Ducos, Y. Hadjar, D. Rovera, J.J. Zondy and O. Acef, "Progress towards absolute frequency measurement of the ¹²⁷I₂-stabilized Nd:YAG laser at 563.2 THz/532 nm", Digest of the Conference on Precision Electromagnetic Measurements (CPEM'2000, Sydney, AUS, 19-19 May 2000), pp 202-203.
 27. A. Douillet, J.J. Zondy, G. Santarelli, A. Clairon, « A phase-locked frequency divide-by-three optical parametric oscillator based on periodically-poled lithium niobate », Digest of the Conference on Precision Electromagnetic Measurements (CPEM'2000, Sydney, AUS, 19-19 May 2000), pp 685-686.
 28. A. Douillet, J.J. Zondy, G. Santarelli, A. Makdissi, A. Clairon, "A phase-coherent 3:1 frequency divider based on a doubly resonant optical parametric oscillator », OSA Trends in optics and Photonics Series Vol. **34**, pp. 300-307 (2000) eds. H. Injeyan, U. Keller & C. Marschall, Optical Soc. America. Conf: ASSL'2000, Feb 13-16 (2000), Davos, Switzerland.
 29. A. Yelisseyev, L. Isaenko, S. Lobanov, J.-J. Zondy, A. Douillet, I. Thénot, Ph. Kupecek, G. Mennerat, J. Mangin, S. Fossier and S. Salaun, "New ternary sulfide for double application in laser schemes", OSA *Trends in Optitics and Photonics Series (TOPS) Vol.34*, pp 56-568 (2000, eds. H. Injeyan, U. Keller & C. Marschall, Optical Soc. America. Conf: ASSL'2000, Feb 13-16 (2000), Davos, Switzerland.
 30. T. Kaing and J.J. Zondy, "metrological investigation of SF₆ by a broadly tunable difference frequency spectrometer in the 27 to 33 THz range", Proc. of the 14th European Frequency and Time Forum, 14-16 March 2000, Torino (Italy), pp 164-168.
 31. A. Douillet, J.J. Zondy, G. Santarelli, A. makdissi, A. Clairon, « Accurate division of optical frequencies by cw optical parametric oscillators : Application to the design of new optical synthesizer", Proc. of the 14th European Frequency and Time Forum, 14-16 March 2000, Torino (Italy), pp 510-514.
 32. J. Mangin, S.Salaun, S.Fossier, P.Strimer, A.Yelisseyev, L.Isaenko, S.Lobanov, J.-J.Zondy, "LiInS₂: useful spectral range and interferometric determination of its thermal expansion, thermo-optic and electro-optic coefficients", Proc. IInd Intl symposium on Laser, Scintillator and nonlinear optical materials, Lyon, France, p.60-63. (2000)
 33. L.Isaenko, A.Yelisseyev, S.Lobanov, J.-J.Zondy, P.Kupecek, I.Vasilyeva, V.Malakhov, P.Berezhnaya, M.Stupak, J.Mangin, S.Salaun, Composition effect on nonlinear properties of LiInS₂ single crystals, Proc. II

- nd International symposium on Laser, Scintillator and nonlinear optical Materials, Lyon, France (2001), p.P20.1-P20.3.
34. L.Isaenko, S.Lobanov, I.Vasilyeva, A.Merkulov, A.Yelisseyev, J-J-Zondy, "Real structure and properties of nonlinear LiInS₂ and LiInSe₂ crystals", **E-MRS-IUMRS ICEM2000**, Strasbourg, France, May 2000, 4 pages.(paper in J.Material Science in Semiconducting Processing)
 35. L.Isaenko, A.Yelisseyev, S.Payne, J.-J.Zondy, "Nonlinear and laser crystals for mid IR region", The 1st Asian Conf. on Crystal Growth and Crystal Technology, Japan, August-Sept.2000 (Extended.abstr: 2 pages)
 36. J.-J. Zondy, A. Douillet, G. Santarelli, A. Clairon, A. Yelisseyev, S. lobanov, L. Isaenko, Nonlinear optical Materials for Mid-infrared cw OPOs : Thermal Effects Limitations (**invited**), British Association for Crystal growth conference (**BACG'2000**), 17-19 sept. 2000, UMIST, Manchester, UK.
 37. L. Isaenko, , A. Yelisseyev , S. Lobanov , J.-J. Zondy, G.M.H. Knippels, I. Thénot, S. Lobanov , "Growth and characterization of single crystals for ternary chalcogenides for laser applications ", Int. Conf. On Solid State Crystals (Material Science and Applications), Zakopane, Poland, October 2000.
 38. L.Isaenko, A.Yelisseyev, S.Payne, J.-J.Zondy, "Nonlinear and laser crystals for mid IR region", The 1st Asian Conf. on Crystal Growth and Crystal Technology, Japan, August-Sept.2000, Ext.abstr: 2 pages
 39. G.M.H. Knippels, A.E.G. Van der Meer, A.M. McLeod, A. Yelisseyev, L. Isaenko, S. Lobanov, I. Thénot, J.-J. Zondy, "Mid-infrared (2.75 –5.0 microns) second-harmonic generation in LiInS₂", paper CMC1, **CLEO'2001** Technical Digest, May 6-11, 2001, Baltimore, USA,
 40. A. Yelisseyev, V. Petrov, V. Nadolimy, L. Isaenko, L. Isaenko, S. Lobanov, G.M.H. Knippels, J.-J. Zondy, "Photoinduced effects in nonlinear LiInS₂ single crystals", Int. Conf. Laser 2001 – World of Photonics (ECLEO-EQEC), June 18-21, 2001, Munich, Germany (Abstract book, p. 176).
 41. L. Isaenko, A. Yelisseyev, L. Vasilyeva, V. Petrov, V. Nadolimy, J. Smirnova, J.-J. Zondy, "Effect of deviation from stoichiometry on photo-induced absorption in LiInS₂ nonlinear crystals", The 8th European Conf. On Solid State Chemistry, ECSSC-8-2001, Oslo, Norway (Abstract book, p. 119).
 42. L. Isaenko, A. Yelisseyev, S. Lobanov, V. Petrov, J.-J. Zondy, G.M.H. Knippels, "LiInS₂, a new nonlinear crystal for the mid-IR", Int. Conf. Materials for Advanced Technologies, Singapore, 1-6 July 2001. Published in J.Material Science in Semiconducting Processing, vol.4, N6 (2002), 665-668.
 43. L. Isaenko, A. Yelisseyev, S. Lobanov, A. Panich, V. Vedenyapin, J. Smirnova, V. Petrov, J.-J. Zondy, G. Knippels, "Characterization of LiInS₂ and LiInSe₂ single crystals for nonlinear applications, Mat. Res. Soc. (MRS) Fall Meeting, Boston (2001). MRS Proc., Vol.692, Progress in Semiconductor Materials for Optoelectronic Applications, eds. E.D.Jones, O.Manasrch, KD Choquette, DJ Friedman, DK Johnstone, 2002, pp.429-434.
 44. J.-J. Zondy, A. Douillet, A. Tallet, E. Ressayre and M. Le Berre, « Theory of self phase-locked optical parametric oscillators", paper QWA3, **QELS'2001** Technical Digest, May 6-11, 2001, Baltimore, USA,
 45. J. Mangin, S. Salaun, S. Fossier, P. Strimmer, J.J. Zondy, A.P. Yelisseyev, S. Lobanov, L. Isaenko, "Optical properties of lithium thioindate", Proc. SPIE Vol. **4269**, pp.49-57 (2001). Photonics West 2001, LASE conf. 4268A (Nonlinear materials, devices and Applications), San Jose, CA, 20-26 Jan. (2001).
 46. J.J. Zondy, A. Douillet, G. Santarelli, A. Clairon, A. Tallet, E. Ressayre, M. Le Berre, « Accurate phase/frequency control of the output of triply resonant optical parametric oscillators: electronic and self phase-locking methods", Photonics West 2001, LASE conf. **4269** (Laser frequency Stabilization, Standards, measurement, and Applications), San Jose, CA, 20-26 Jan. (2001). Oral communication.
 47. F. Biraben, B. de Beauvoir, C. Schwob, O. Acef, L. Josefowsky, L. Hilico, F. Nez, L. Julien, J.J. Zondy, A. Clairon, « Metrology of hydrogen atom : determination of the Rydberg constant and Lamb shift », *invited*, Photonics West 2001, LASE conf. **4269** (Laser frequency Stabilization, Standards, measurement, and Applications), San Jose, CA, 20-26 Jan. (2001). To appear in Proc. SPIE Vol. **4269**.
 48. J.J. Zondy, A. Douillet, G. Santarelli, A. Clairon, A. Tallet, E. Ressayre, M. Le Berre, « Théorie des oscillateurs paramétriques optiques auto-verrouillés en phase », Oral communication, 3^e Rencontres du Non-linéaire 2001, Institut henri-Poincaré, 15-16 feb 2001, Paris (France).
 49. L. Isaenko, A. Yelisseyev, I. Vasilyeva, V. Petrov, V. Nadolimy, J. Smirnova, J.-J. Zondy, "Effect of deviation from stoichiometry on photoinduced absorption in LiInS₂ nonlinear crystals}, Abstract of the 8th European Conf. on Solid State Chemistry (ECSSC-8), Oslo, Norway, p. 119 (2001).
 50. G.D. Rovera, J.-J. Zondy, O. Acef, F. Ducos, J.-P. Wallerand, J.C. Knight, P. St. Russell, "Absolute frequency measurement of an I2-stabilized Nd:YAG optical frequency standard", poster, European Time and Frequency Forum (EFTF 2002), March 2002, St Petersburg (Russia).

51. R.P.Kovacich, I.Courtillot, A.Quessada, J.-J.Zondy, A.Landragin, P.Lemonde, "Sum-frequency generation of high power blue laser light for cooling of neutral strontium atoms", poster CTuK42, CLEO 2002 conference, Long Beach, CA., May 2002.
52. L. Isaenko, A. Yelisseyev, S. Lobanov, V. Petrov, G. Sleky, and J.-J. Zondy, "A new ternary chalcogenide crystal for nonlinear optical applications in the mid-infrared: LiInSe_2 ", oral communication (paper CFJ3), CLEO 2002 conference, Long Beach, CA., May 2002.
53. J.-J. Zondy, V. Laclau, A. Bancel, A. Douillet, A. Tallet, E. Ressayre and M. Le Berre, "Self-phase-locked subharmonic optical parametric oscillator", in Proc. of the 6th Symposium on frequency Standards and Metrology, P. Gill ed., World Scientific, New Jersey, pp. 29-36 (2002).
54. L. Isaenko, A. Yelisseyev, S. Lobanov, A. Panich, V. Vedenyapin, J. Smirnova, V. Petrov, J.-J. Zondy, G. Knippels, "Characterization of LiInS_2 and LiInSe_2 single crystals for nonlinear optical applications", in *Progress in Semiconductor Materials*, ed. By E. D. Jones, M. O. Manasreh, K. D. Choquette, D. Friedman (MRS, Warrendale, Penn, USA, 2002) 429-434.
55. I. Courtillot, A. Quessada, R.P. Kovacich, J.-J. Zondy, A. Landragin, G. Santarelli, P. Lemonde, "Design of a cold atom source for a neutral Strontium optical frequency standard", poster TuP32, Conference on Precision Electromagnetic Measurements (CPEM 2002), June 16-21, Ottawa (Canada).
56. G.D. Rovera, J.-J. Zondy, O. Acef, F. Ducos, J.-P. Wallerand, J.C. Knight, P. St J. Russell, "New results in optical frequency measurements using a femtosecond laser", oral commun.ThB2 at CPEM 2002, June 16-21, Ottawa (Canada).
57. J.-J. zondy and D. Kolker, "Stability of the self-phase-locked pump-enhanced singly-resonant optical parametric oscillator", poster CTuM3, CLEO/QELS 2003 digest (Baltimore), p.118 (2003).
58. V. Petrov, F. NOak, L. Isaenko, A. Yelisseyev, S. Lobanov, A. Titov, F. Rotermund, J.-J. Zondy, "Mid-infrared optical parametric generation in lithium-containing ternary compounds LiAB_2 (A=Ga, In; B=S, Se)", oral commun. CTuN5, CLEO/QELS 2003 digest (Baltimore), p. 130 (2003).
59. J.-J. Zondy, "Second-harmonic generation with monolithic walkoff-compensating structures", oral commun. CTuT1, CLEO/QELS 2003 digest (Baltimore), p. 134 (2003).
60. **Séminaire invité:** J.-J. Zondy, "Génération de seconde-harmonique dans des structures monolithiques à compensation de walk-off", Laboratoire Aimé Cotton, Février 2003.
60. L. Isaenko, A. Yelisseyev, S. Lobanov, A. Titov, P. Krinitsin, V. Petrov, J.-J. Zondy, " LiGaX_2 (X=S, Se): new nonlinear crystals for the mid-IR", poster CWA15, CLEO/QELS 2003 digest (Baltimore), p. 144 (2003).
61. J.-J. Zondy, D. Kolker, "Stability of the self-phase-locked pump-enhanced singly resonant optical parametric oscillator", oral commun. EB5-2-TUE, CLEO/EQEC Europe 2003 (München) digest, p. 47 (2003).
62. A. Quessada, I. Courtillot R.P. Kovacich, A. Bruschi, D. Kolker, G.D. Rovera, J.-J. Zondy, A. Clairon, G. Santarelli, P. Lemonde, "An optical frequency standard using strontium atoms", poster EG6T, CLEO/EQEC Europe 2003 (München) digest, p. 100 (2003).
63. L. Isaenko, A. Yelisseyev, S. Lobanov, A. Titov, P. Krinitsin, J.-J. Zondy, V. Petrov, "Ternary chalcogenides LiBC_2 (B=In, Ga; C=S, Se, Te) for the nonlinear optics", oral commun. CG2-6-WED, CLEO/EQEC Europe 2003 (München) digest, p. 55 (2003).
64. G.D. Rovera, A. Bruschi, D. Kolker, J.-J. Zondy, O. Acef, I. Courtillot, A. Quessada, P. Lemonde, J.-P. Wallerand, J.C. Knight, W.J. Wadsworth, St.J. Russel, "A fs-laser chain for a new optical frequency standard based on cold strontium", oral commun. ThW2-05, Laser Optics 2003 Conf., St-Petersburg (2003).
65. J.-J. Zondy, D. Kolker, "22 times efficiency enhancement of second harmonic generation by using a 10-plate monolithic walkoff-compensating KTP structure", oral commun. WeR1-44, Laser Optics 2003 Conf., St-Petersburg (2003).
66. **Séminaire invité:** J.-J. Zondy, "Self-phase-locked optical parametric oscillators: Theory and Experiments", Quantum Electronic Dept. (Prof. A. Piskarkas group), Université de Vilnius (LT), Sept. 2003.
67. J.-J. Zondy, D. Kolker, "Signatures dynamiques de l'auto-verrouillage de phase dans un oscillateur paramétrique optique triplement résonnant", communication orale aux 7^è Rencontres du Non-Linéaire (Mars 2004), Institut Henri Poincaré, Paris V. Publié dans "Comptes Rendus de la 7^è Rencontre du Non-Linéaire, Paris 2004", pp.311-316, eds. Non-Linéaire Publications, Univ. Paris-Sud (eds. Y. Pommeau, R. Ribotta), ISBN 2-9516773-3-2.
68. **Cours didactique invité**, European Graduate College Workshop 2004, 21 Juin 2004, Hartz (Germany). Titre: "On the optimal design of nonlinear laser sources".
69. J.-J. Zondy, D. Kolker, F.N.C. Wong, "Dynamical signatures of self-phase-locking in a triply resonant optical parametric oscillator", paper CM11, CLEO/IQEC 2004, May 17-20 2004, San Francisco.

70. **Contribution orale invitée:** J.-J. Zondy, D. Kolker, F.N.C. Wong, "Nonlinear dynamics of optical parametric oscillators subject to resonant competing $\chi(2)$ nonlinearities: The 3-to-1 self-phase-locked OPO", conference MPLP-2004 (Modern Problems of Laser Physics), 20-25 août 2004, Novosibirsk (Russie).
71. W. Chen, E. Poullet, R. Boquet, J. Burie, D. Boucher, M.W. Sigrist, J.-J. Zondy, L. Isaenko, A. Yelisseyev, S. Lobanov, "Characterization of linear and nonlinear properties of LiInS₂ and LiInSe₂ crystals via continuous-wave down-conversion in the mid-infrared", postdeadline paper **ThD8**, OSA Topical meeting *Nonlinear Optics: Materials, Fundamentals and Applications*, Aug. 2-6, 2004, Waikoloa, Hawaii.
72. **Contribution orale invitée:** J.-J. Zondy, "Multipair phase-coherent oscillation in the divide-by-3 self-phase-locked OPO: Toward a cw mode-locked OPO?", ICONO-LAT 2005, St Petersburg, Russie (11-15 Mai 2005).
73. J.-J. Zondy, A. Yelisseyev, S. Lobanov, L. Isaenko, V. Petrov, F. Noack, F. Rotermund, "LiInSe₂ Nanosecond Optical Parametric Oscillator", Conference on Lasers and Electro-Optics (CLEO) 2005, paper CThQ5, Technical Digest (CD), Optical Society of America.
74. P. Gorelik, F.N. Wong, D. Kolker, J.-J. Zondy, "Cascaded Optical Parametric Oscillation Using a Dual Grating PPLN Crystal", Conference on Lasers and Electro-Optics (CLEO) 2006, paper CTuZ1, Technical Digest (CD), Optical Society of America.
75. J.-J. Zondy, F. Bielsa, A. Douillet, L. Hilico, O. Acef, V. Petrov, A. Yelisseyev, L. Isaenko, P. Krinitsin, "SHG of CO₂ Laser Radiation at 10.6 μ m in the Highly Nonlinear Chalcopyrite LiGaTe₂", Conference on Lasers and Electro-Optics (CLEO) 2007, paper CThL2, Technical Digest (CD), Optical Society of America.
76. R. Sarrouf, V. Souza, T. Badr, G. Xu, J.-J. Zondy, "Watt-Level Single-Frequency Tunable Nd:YLF/PPKTP Red Laser for Silver Atom Cooling", Conference on Lasers and Electro-Optics (CLEO) 2007, paper CTuD5, Technical Digest (CD), Optical society of America.
77. J.-J. Zondy, R. Sarrouf, T. Badr, V. Sousa, G. Xu, "All-solid State, Single-frequency Tunable Nd:YLiF₄/ppKTP Red Laser Source for Silver and Calcium Atom Spectroscopy", AIP Conference Proceedings Vol. 992, pp 409-414, RIAO/OPTILAS 2007, eds. By N.U. Wetter and J. Frejlich [Proceedings of the 6th Ibero-American Conference on Optics (RIO); 9th Latin-American Meeting on Optics, Lasers and Applications (OPTILAS)], American Institute of Physics (2008).
78. R. Sarrouf, T. Badr, J.-J. ZONDY, "Performance of Tunable Single-frequency Nd:YLiF₄ lasers with Intracavity SHG to 0.66 μ m using pp-KTiOPO₄, BiB₃O₆ and LiB₃O₅", 3rd EPS-QEOD Europhoton 2008 conference on Solid State and Fiber Coherent Light Sources, Paris, Aug. 31st-Sept.5.
79. F. Camargo, R. Sarrouf, T. Badr, T. Zanon-Willette, N. Wetter, and J.-J. Zondy, "High-Power Diode-Pumped Single-Frequency Nd:YLF and Nd:YVO₄ Lasers with Intra-cavity Second-Harmonic Generation to the Red Range", Proc. IEEE Photonics Global 2008, Symposium D- High-Power lasers, pp. D9-D12, Singapore (8-10, dec. 2008).
80. F. Camargo, T. Zanon-Willette, R. Sarrouf, T. Badr, N.U. Wetter, J.-J. Zondy, "1.3 Watt Single-Frequency Nd:YLF/ppKTP Red Laser", Conference on Lasers and Electro-Optics (CLEO) 2009, paper CThZ7, Technical Digest (CD), Optical Society of America.
81. F. Camargo, T. Zanon-Willette, T. Badr, N.U. Wetter, J.-J. Zondy, "620 mW Single-Frequency Nd:YVO₄/BiB₃O₆ Red Laser", Conference on Lasers and Electro-Optics (CLEO) 2009, paper CTuR4, Technical Digest (CD), Optical Society of America.
82. A. Rihan, E. Andrieux, T. Zanon-Willette, S. Briaudeau, M. Himbert, J.-J. Zondy, "A Ti:Sapphire pump-resonant singly-resonant OPO for spectroscopic breath analysis ", oral communication at *Field Laser Application in Industry and Research* conference (FLAIR 2009), Hotel am Badersee, Grainau (Garmisch-Partenkirchen, Germany), sept. 6-11, 2009.
83. F. Camargo, T. Zanon-Willette, T. Badr, N.U. Wetter, J.-J. Zondy, "Optimally-coupled and mode-synchronized intracavity frequency doubled cw Nd :YLF ring laser", contributed oral communication at *1st EOS Topical Meeting on Lasers*, Hotel Hotel La Residenza, Capri, Italy, sept. 27-30, 2009.
84. **Invited seminar:** J.-J. Zondy, "Advanced nonlinear sources for sensitive gas detection", CNR-Istituto Nazionale di Ottica Applicata (INOA), Pozzuoli (Napoli), Italy, oct. 2nd 2009.
85. A. Rihan, E. Andrieux, T. Zanon, S. Briaudeau, M. Himbert, J.-J. Zondy, "A pump-resonant signal-resonant cw optical parametric oscillator for spectroscopic breath analysis", Conference on Lasers and Electro-Optics (CLEO/QELS 2010, San Jose, May 16-21), paper CThY4, Technical Digest (CD), Optical Society of America.