Irina T. Sorokina **May 2018**

Publication list

Books and book chapters

1. I. T. Sorokina, "Broadband Mid-Infrared Solid-State Lasers," in *Mid-Infrared Coherent Sources and Applications*, M. Ebrahim-Zadeh and I. T. Sorokina, eds. (Springer, 2008), pp. 225-260. doi: 10.1007/978-1-4020-6463-0_7
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3. C. Denman, I. T. Sorokina, eds., *Advanced Solid-State Photonics*, OSA Trends in Optics and Photonics (Optical Society of America, 2005), Vol. 98.
4. S. Akturk, M. Kimmel, R. Trebino, S. Naumov, E. Sorokin, I. T. Sorokina, "Pulse-measurement challenges at 1.5 microns: several-cycle pulses and several-element devices," in *Ultrafast Phenomena XIV*, T. Kobayashi, T. Okada, T. Kobayashi, K. Nelson, and S. Silvestri, eds. (Springer Berlin Heidelberg, 2005), pp. 112-114. doi: 10.1007/3-540-27213-5_36
5. I. T. Sorokina, K. L. Vodopyanov, eds., *Solid-State Mid-Infrared Laser Sources*, Topics in Applied Physics (Springer, 2003), p. 558. doi: 10.1007/3-540-36491-9
6. I. T. Sorokina, "Crystalline Mid-Infrared Lasers," in *Solid-State Mid-Infrared Laser Sources*, I. T. Sorokina and K. Vodopyanov, eds. (Springer Berlin / Heidelberg, 2003), pp. 262-358. doi: 10.1007/3-540-36491-9_7
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2. N. Tolstik, E. Sorokin, E. A. Karhu, K. Gorbachenya, S. M. Polyakov, V. E. Kisel, N. Kuleshov, V. Furtula, U. J. Gibson, and I. T. Sorokina, "Spectral-luminescent properties of vapor deposited Cr:ZnS thin films and their application as saturable absorbers for 1.5-μm erbium lasers," Opt. Mater. Express **8**, 522-531 (2018)
3. S. Xie, N. Tolstik, J. C. Travers, E. Sorokin, C. Caillaud, J. Troles, P. S. J. Russell, I. T. Sorokina, "Coherent octave-spanning mid-infrared supercontinuum generated in As2S3-silica double-nanospike waveguide pumped by femtosecond Cr:ZnS laser," Opt. Expr. **24**, 12406-12413 (2016). doi: 10.1364/OE.24.012406
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Invited conference presentations and tutorials

1. N. Tolstik, E. Sorokin, and I. T. Sorokina, "Compact fiber based mid-IR ultrafast lasers and frequency combs", in Photonics Europe, Strasbourg, March 23-26 2018.
2. I. T. Sorokina, "Fiber based mid-IR laser sources and applications", tutorial at COST MP1401 - Winter school on Fiber Laser Sources and Applications", February 13-16 2018, at EPFL, Lausanne.
3. Irina T. Sorokina, "Mid-IR Ultrafast Laser Technology for Science and Industry", tutorial at S&I 2: Advanced Science and Technology for Laser Systems and Facilities, Conference on Lasers and Electro-Optics (CLEO), 14-19 May 2017.
4. I. T. Sorokina, N. Tolstik, R. Richter, R. Chagal, E. Sorokin, "Ultrafast fiber-based lasers beyond 2 μm," in *Laser Congress 2017 (ASSL, LAC),* Nagoya, 1-5 October 2017, p. ATu5A.2.
5. I. T. Sorokina, "Fiber Based Tunable 2-3 um femtosecond lasers and frequency combs for industrial and scientific applications," in *COST MP1401 2nd Annual Conference*, Tel-Aviv 2017.
6. A. Marandi, M. Jankowski, R. Hamerly, S. J. Wolf, E. Sorokin, I. T. Sorokina, P. G. Schunemann, M. M. Fejer, R. L. Byer, "Efficient cascaded half-harmonic generation of mid-IR frequency combs", at SPIE LASE, 1 February 2017, Photonics West 2017, San Francisco.
7. I. T. Sorokina, N. Tolstik, V. V. Dvoyrin, D. Klimentov, R. Richter, E. Sorokin, "Mid-infrared Femtosecond Fiber and Solid-state Laser Technology", at the Ultrafast Optics Conference,16-21 Aug. 2015, Beijing; in 10th Ultrafast Optics Conference (UFO X), (Beijing, 2015).
8. N. Tolstik, V. V. Dvoyrin, D. Klimentov, R. Richter, and I. T. Sorokina *„Physics and Applications of Ultrabroadband Femtosecond Lasers in Mid-IR",* Nordic Days, Trondheim, 10-12 June 2015
9. Irina T. Sorokina, "Recent Progress in Mid-IR Femtosecond Fiber-based Lasers", Laser Ignition Conference'2014, 22-24 April 2014, Yokohama, LSJ, The Laser Society of Japan.
10. I. T. Sorokina, E. Sorokin, "Mid-IR laser sources for gas sensing," in 2nd Laser Ignition Conference, (Yokohama, 2014), p. LIC5-1.
11. Irina T. Sorokina, "Message for LIC'2014 from OSA", Laser Ignition Conference'2014, 22-24 April 2014, Yokohama, LSJ, The Laser Society of Japan
12. N. Tolstik, I. T. Sorokina, A. Pospischil, E. Sorokin, "Graphene mode-locked Cr:ZnS laser with 44 fs pulse duration," in *Advanced Solid-State Lasers Congress*, M. Ebrahim-Zadeh and I. Sorokina, eds. (Optical Society of America, 2013), p. MW1C.1. doi: 10.1364/MICS.2013.MW1C.1
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14. E. Sorokin, N. Tolstik, I. T. Sorokina, "Mid-Infrared Femtosecond Lasers," in *Advanced Solid-State Lasers Congress*, G. Huber and P. Moulton, eds. (Optical Society of America, 2013), p. AF1A.3. doi: 10.1364/ASSL.2013.AF1A.3
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20. I. T. Sorokina, *"Mid-infrared vibronic lasers: the 50 years quest",* at the Solid-State Laser Workshop "Solid State Lasers. 50 years after" in Tarragona, Spain, 19.3 – 20.3.2010
21. I. T. Sorokina, *"Women in physics: a life choice or a life chance?"* IONS, Moscow, 20.6-25.6.2010
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30. I. T. Sorokina, *"Cr^{2+} - based lasers: making good on a promise",* Laser Optics Conference, St. Petersburg, June 26-30, 2006.
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Seminars and Colloquia

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4. "*Mid-infrared femtosecond lasers and their appllications*", Institute for Optical Materials and Technologies, Belarusian National Technical University, September 30th, 2016, Minsk, Belarus.
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9. "*Transition-metal doped II-VI materials: Physics and Applications*" at Friday Physics Colloquium NTNU, 27 Apr. 2012.
10. "*Cr^{2+}:ZnSe Laser: a Ti:Sapphire of the Infrared*", 27 Oct. 20012 at the Stanford Material Sciences Colloquium.
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18. "*Femtosecond solid-state lasers: advances and perspectives*", FFI, Oslo, 29.11.2007
19. "*From solid-state photonics to nanophotonics*"; Seminar, University of Innsbruck, Austria; 6.3.2006.
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21. "*Laser material engineering: from bulk- to nanocrystals*", Seminar, Universität Leoben, Austria; 23.6.2006.
22. "*Challenges in Optics*", Seminar, NTNU, Trondheim, Norway; 6.09.2006.
23. "*Ultrashort pulsed solid-state lasers: bridging the gap between XUV and TH",* Tutorial, at the II International School, Moscow State University, Vyatichi; 10.10-13.10.2006.
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Theses

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Patents

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