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Career History

Harvard College Professor Harvard University	May 3, 2017 - present
Tiantsai Lin Professor of Electrical Engineering Harvard University	Jul. 1st, 2012 – present
Associate Professor of Electrical Engineering Harvard University	Jul. 1st, 2010 – Jun. 30th, 2012
Assistant Professor of Electrical Engineering Harvard University	Jul. 1st, 2006 – Jun. 30th, 2010
Postdoctoral Scholar in Applied Physics Harvard University; Adviser: Federico Capasso	Oct. 1st, 2003 – Jun. 31st, 2006

Education

Ph.D. in Electrical Engineering, **California Institute of Technology** Thesis "Nanophotonics devices based on planar photonic crystals". Adviser: Axel Scherer	1998-2003
M.S. in Electrical Engineering, **California Institute of Technology** Power electronics group. Adviser: Slobodan Ćuk	1997-1998
Diploma in Electrical Engineering, **University of Belgrade** (R. Serbia)	1992-1997

Awards and Recognitions

Alfred P. Sloan Research Fellowship	02/16/2010
NSF CAREER Award	2/1/2009 – 1/31/2014
Kavli Fellow (2013 US Kavli Frontiers of Science participant)	November 2013
Levenson Prize for Excellence in Undergraduate Teaching, Harvard University	2011/12 academic year

Fellow *of* Optical Society of America, **Senior Member** of IEEE and SPIE

Research Interests

We study and engineer light-matter interaction in nanostructures, and apply these effects to develop novel and/or better performing devices & systems. Examples include quantum photonics with diamond color centers, nonlinear nanophotonics (e.g. frequency combs, quantum wavelength conversion), behavior of light in composite metamaterials designed via topology optimization (inverse design), etc. Our efforts span a variety of optical materials (e.g. diamond, silicon, lithium niobate), wavelength ranges (from visible to mid and far infrared), photon energies (from single photons to GW/cm^2 intensities), and include devices that operate both in classical and quantum regimes.

Professional Activities and Services

Organizational committee member for **2014 US Kavli Frontiers of Science** at National Academy of Sciences
Topical Editor for Optics LettersI (April 2010 – December 2012)
Guest Editor for *IEEE J of Selected Topics in Quantum Electronics' special issue on Quantum and Nanoscale Photonics*
Conference Chair: SPIE Photonics West (2010- 211);
Program Committee: OSA Advanced Photonics (2015), SPIE Photonics West (2013-14), SPIE Optics West (2009), SPIE Optics East (2004-2006), OSA International Conference on Nanophotonics (2009-2012), ISCS/IPRM (2010-2012), IEEE LEOS Annual Meeting (2009-2012), CLEO 2014, OSA Nonlinear Optics (2017-)

Teaching & Education

Harvard SEAS courses: ***ES 50****: Introduction to Electrical Engineering* (undergrad, Spring 2008-Fall 2016), ***ES 273:*** *Optics and Photonics* (grad, Fall 2007- 2011), **ES 151:** *Applied Electromagnetism*(Fall 2013), ***ES 177:*** Microfabrication Laboratory (Spring 2015, Spring 2018-), **ES 274:** *Quantum Devices* (Spring 2017 -), ***Biophysics 242r*****:** *Special Topics in Biophysics* (grad, Spring 2008). ***Harvard Extension School***: ***ENSC E-162*** *Nanoscale Optics with Applications in Biotechnology (Fall 2009)*; ***ENSC E-125*** *Introduction to Nanoscience* (together with F. Habbal, Spring 2010).

Currently advising: ***Graduate students (14)*****:** Michelle Chalupnik, Rebecca Cheng, Cleaven Chia, Eliza Cornell, Weiyi Sophie Ding, Jeffrey Holzgrafe, Yaowen Hu, Graham Joe, Bart Machielse, Smarak Maity, Eric Puma, Dylan Renaud, Amirhassan Shams-Ansari, Chen Xie Jin; ***Postdocs (8)*****:** Boris Desiatov, Kazuhiro Kuruma, Benjamin Pingault, Afaq Piracha, Linbo Shao, Neil Sinclair, Mengjie Yu, Di Zhu.

Alumni: ***Graduate students (21):*** Linboa Shao (Harvard SEAS, postdoc), Srujan Meesala (Caltech, postdoc), Young-Ik Sohn (Psi Quantum), Zin Lin (MIT postdoc), Pawel Latawiec (METALENZ, startup); I-Chun Huang (Analog Devices), Cheng Wang (Hong Kong City U., assistant professor), Haig Atikian (Peak Power Optics, startup), Wooyoung Hong (Wildcat Capital Management), Anna Shneidman (Harvard SEAS, postdoc), Michael Burek (Illumina), Pui-Chen Hui (Harvard Medical School, research fellow), Ian Frank (SONOS), Yinan Zhang (Morgan Stanley, Equity Strategist), Raji Shankar (Draper), Birgit Hausmann (Glassdoor, Data Scientist), Jen Choy (U. Wisconsin, assistant professor), Ian Burgess (co-founder, CEO & CTO, Validere), Qimin Quan (Rowland Institute at Harvard, group leader), Parag Deotare

(U. Michigan, assistant professor), Thomas Babinec (Research Associate, Harvard University), ***Postdocs (16):*** Stephan Bogdanovic (Google X), Christian Reimer (HyperLight, startup), Mian Zhang (HyperLight, startup), Vivek Venkataraman (IIT Delhi, Assistant Professor), Stefan Kalchmair (Insight Data Science, Development Engineer), Shota Kita (NTT Basic Research Lab, Research Associate), Khadijeh Bayat (Apple, Senior Optical Engineer), Alejandro Rodriguez (Princeton, Assistant Professor), Daniel Floyd (Esco Ventures, Singapore), Daniel Ramos, Sindy Tang (Stanford, Assistant Professor), Osman Bakr (KAUST, Assistant Professor), Eiji Iwase (Waseda University, Associate Professor), Irfan Bulu (Schlumberger Doll, research scientist), Murray McCutcheon (AbCellera, Business Development Lead), Mughees Khan (Wyss Institute at Harvard, Staff Scientist); ***Interns & Visitors (> 70):*** The partial list can be found at http://nano-optics.seas.harvard.edu.

Entrepreneurship

Co-founder of and board member for *HyperLight Corporation*, VC backed startup commercializing lithium niobate photonic technology.

Patents: Awarded & Filed

1. **US patent** No. 6,466,709: "Photonic crystal microcavities for strong coupling between an atom and the cavity field and method of fabricating the same", A. Scherer, J. Vučković, M. Lončar and H. Mabuchi.
2. **US patent** No. 6,468,823: "Fabrication of optical devices based on two dimensional photonic crystal structures and apparatus made therby", A. Scherer, M. Lončar, T. Doll.
3. **US patent** No. 6,534,798: "Surface plasmon enhanced LED and the method of operation of the same", A. Scherer, J. Vučković and M. Lončar.
4. **US patent** No. WO2002099473 A3: "Methods for controlling positions of guided modes of the photonic crystal waveguides", M. Lončar, J. Vučković and A. Scherer.
5. **US patent** No. 7,079,240: "Photonic Crystal Laser Sources for Chemical Detection", M. Lončar and A. Scherer.
6. **US Patent** No: 8,285,091: "Efficient terahertz sources based on difference-frequency generation in triply-resonant photonic resonators"
7. **US Patent** No. 8,798,414 B2: "High quality factor photonic crystal nanobeam cavity and method of designing and making same", Q. Quan, M. Loncar
8. **US Patent** No. 8,999,105 B2: "Small-scale fabrication systems and methods", M. Loncar, M. D. Lukin, M. J. Burek, N. De Leon, B. Shields
9. **US patent No.** US8415640 B2 "Diamond Nanowires", T. Babinec, B. Hausmann, M.Khan, Y .Zhang, P. R. Hemmer, M. Lončar
10. **US patent** No. 9347829 B2 "Integrated Nanobeam Cavity Array Spectrometer", M. Lončar, Q. Quan and P. B. Deotare
11. **US Patent** WO2015175047 A3 "Method for Large Area Optically detected Magnetic Resonance Imaging of Diamond" Khadijey Bayat, Marko Loncar
12. **US Patent 9,880,356,** "Apparatus for coupling to high-index micro-resonators with tapered optical fibers" (2018)
13. **WO2014090662** Synthetic Diamond Materials for Quantum and Optical Applications and Methods of Making the Same
14. **US patent application** 61/417,779 (2010). "Manipulation of fluids in three-dimensional porous photonic structures with patterned surface properties" J. Aizenberg, I.B. Burgess, B.D. Hatton, M. Lončar, L. Mishchenko,
15. **US patent application** 4062.3799P (2010) "Digital Biosensing with Nanobeam Photonic Crystal Cavities", Q. Quan, F. Vollmer and M. Lončar
16. **US Patent Application, "**System and method for wafer-scale fabrication of free standing mechanical and photonic structures by ion beam etching", Haig Atikian, Marko Loncar
17. **US Patent App. 15/766,845,** "Ultrahigh Resolution Dynamic IC Chip Activity Detection for Hardware Security" (2018)
18. **US Patent App. 15/759,909,** "Wavelength selective optical nanostructures fabricated on the surface of bulk homogenous substrates" (2018)
19. **Provisional patent** (HU 5208, 2014) Nanoscale Label-free Fiber Tip Bioprobes
20. **Provisional patent** (HU 4934, 2013) Device Support Structures From Bulk Substrates
21. **Provisional patent** (HU4382, 2013) Bulk nanomachining method for suspended nanobeam and other free-standing structures

Book Chapters

M. Lončar and A. Scherer, "Microfabricated optical cavities and photonic crystals", *in Optical Microcavities*, edited by K. Vahala, World Scientific, 2004.

Y. Zhang and M. Lončar, "Photonic crystal nanolasers", in *Semiconductor lasers: fundamentals and applications,* edited by A. Baranov and E. Tournie, Woodhead Publishing Limited, 2013

P. Deotare and M. Lončar, "Photonic crystal nanobeam cavities", in *Encyclopedia of Nanotechnology, edited by* G. L. Piazza, Springer-Verlag, 2013

J. T. Choy, B. J. M. Hausmann, M. J. Burek, T. M. Babinec and M. Loncar, "Nanofabrication of photonic devices from single- crystal diamond for quantum information processing (QIP)", *in Quantum information processing with diamond,* edited by Igor Aharonovich and Steven Prawer, Woodhill Publishing, 2014

Submitted Manuscripts Journal Publications

1. M. Yu, Y. Okawachi, R. Cheng, C. Wang, M. Zhang, A. L. Gaeta, M. Lončar, **"**Raman lasing and soliton modelocking in lithium-niobate microresonators", *in review in Light: Science & Applications* (2019)
2. M.Bhaskar, R. Riedinger, B. Machielse, D. Levonian, C. Nguyen, E. Knall, H. Park, D. Englund, M. Loncar, D. Sukachev, and M. Lukin.. "Experimental demonstration of memory-enhanced quantum communication" arXiv: 1909.01323 (2019)
3. S. Maity, L. Shao, S. Bogdanović, S. Meesala, Y. I. Sohn, N. Sinclair, B. Pingault, M. Chalupnik, C. Chia, L. Zheng, K. Lai, and M. Lončar "Coherent Acoustic Control of a Single Silicon Vacancy Spin in Diamond." arXiv:1910.09710v2 (2019)
4. H. Atikian, P. Latawiec, X. Xiong, S. Meesala, S. Gauthier, D. Wintz, J. Randi, D. Bernot, S. DeFrances, J. Thomas, M. Roman, S. Durrant, F. Capasso, and M. Loncar. Submitted. "Diamond Mirror for High Power Lasers." arXiv:1909.06458 (2019)
5. M. Jankowski, C. Langrock, B. Desiatov, A. Marandi, C. Wang, M. Zhang, C. R. Phillips, M. Loncar, and M. M. Fejer. "Ultrabroadband Nonlinear Optics in Nanophotonic Periodically Poled Lithium Niobate Waveguides.", *to appear in Optica* (2019)
6. B. Kohler, C. Reimer, A. Shams-Ansari, R. Zhu, M. Zhang and M. Loncar, **"**Dispersion measurement of microcavities with a frequency-agile electro-optic comb", *in review in Optics Letters* (2019)

Journal Publications

7. C. T. Nguyen, D. D. Sukachev, M. K. Bhaskar, B. Machielse, D. S. Levonian, E. N. Knall, P. Stroganov, R. Riedinger, H. Park, M. Lončar, M. D. Lukin, Quantum network nodes based on diamond qubits with an efficient nanophotonic interface, *Phys. Rev. Lett.* **, 123,** 183602 (2019)
8. C. T. Nguyen, D. D. Sukachev, M. K. Bhaskar, B. Machielse, D. S. Levonian, E. N. Knall, P. Stroganov, R. Riedinger, H. Park, M. Lončar, M. D. Lukin, "An integrated nanophotonic quantum register based on silicon-vacancy spins in diamond", *Phys. Rev. B***, 100,** 165428 (2019)
9. Mengjie Yu, Cheng Wang, Mian Zhang, and Marko Loncar. Submitted. "Chip-Based Lithium Niobate Frequency Combs" *IEEE Photonics Tech. Lett*. 10.1109/LPT.2019.2950567 (2019)
10. Boris Desiatov and Marko Lončar. "Silicon photodetector for integrated lithium niobate photonics." *Applied Physics Letters*, **115**, 2 (2019)
11. A. Shams-Ansari, P. Latawiec, Y. Okawachi, V. Venkataraman, M. Yu, B. Desiatov, H. Atikian, G. L. Harris, N. Picque, A. L. Gaeta, M. Loncar, **"**Supercontinuum generation in angle-etched diamond waveguides", *Optics Letters*, **44**, 4056 (2019)
12. L. Shao, M. Yu, S. Maity, N. Sinclair, L. Zheng, C. Chia, A. Shams-Ansari, C. Wang, M. Zhang, K. Lai, and M. Loncar. "Microwave-to-optical conversion using lithium niobate thin-film acoustic resonators." *Optica*, **6**, 1498 (2019)
13. B. Machielse, S. Bogdanovic, S. Meesala, S. Gauthier, M. J. Burek, G. Joe, M. Chalupnik, Y. I. Sohn, J. Holzgrafe, R. E. Evans, C. Chia, H. Atikian, M. K. Bhaskar, D. D. Sukachev, L. Shao, S. Maity, M. D. Lukin, and M. Loncar. Submitted. "Electromechanical Control of Quantum Emitters in Nanophotonic Devices" *Physical Review X*, **9**, 031022 (2019).
14. Linbo Shao, Smarak Maity, Lue Wu, Amirhassan Shams-Ansari, Young-Ik Sohn, Eric Puma, M.N. Gadalla, Mian Zhang, Cheng Wang, and Marko Lončar. Submitted. "High-Q gigahertz surface acoustic wave cavity on lithium niobate." Phys. Rev. Applied, 12, 1, 14022 (2019)
15. Subedi, Shova D; Fedorov, Vladimir V; Peppers, Jeremy; Martyshkin, Dmitry V; Mirov, Sergey B; Shao, Linbo; Loncar, Marko; Laser spectroscopic characterization of negatively charged nitrogen-vacancy (NV−) centers in diamond, Optical Materials Express, 9. 5. 2076-2087 (2019)
16. Mengjie Yu, Boris Desiatov, Yoshitomo Okawachi, Alexander L. Gaeta, and Marko Lončar. Submitted. "Coherent two-octave-spanning supercontinuum generation in lithium-niobate waveguides." *Optics Letters*, **44**, 1222 (2019)
17. M. Zhang, B. Buscaino, C. Wang, A. Shams-Ansari, C. Reimer, R. Zhu, J. Kahn, and M. Loncar. "Broadband electro-optic frequency comb generation in an integrated microring resonator." *Nature*, **568**, 373(2019)
18. C. Wang, M. Zhang, M. Yu, R. Zhu, H. Hu, and M. Loncar, "Monolithic lithium niobate photonic circuits for Kerr frequency comb generation and modulation." *Nature Communications*, **10**, 978 (2019)

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19. T. Ren, M. Zhang, C. Wang, L. Shao, C. Reimer, Y. Zhang, O. King, R. Esman, T. Cullen, and M. Loncar, "An integrated low-voltage broadband lithium niobate phase modulator." *IEEE Photonics Technology Letters,* 31, 889 (2019)
20. L. He, M Zhang, A. Shams-Ansari, R. Zhu, C. Wang, and M. Loncar. "Low-loss fiber-to-chip interface for lithium niobate photonic integrated circuits." *Optics Letters*, **44**, 2314 (2019).
21. B. Desiatov, A. Shams-Ansari, M. Zhang, C. Wang, and M. Loncar "Ultra-low loss integrated visible photonics using thin-film lithium niobate." *Optica*, **6**, 380 (2019)
22. M. Zhang, C. Wang, Y. Hu, A. Shams-Ansari, T. Ren, S. Fan, and M. Loncar. "Electronically Programmable Photonic Molecule." *Nature Photonics*, **13**, Pp. 36–40 (2019)
23. L. Koehler, P. Chevalier, E. Shim, B. Desiatov, A. Shams-Ansari, M. Piccardo, Y. Okawachi, M. Yu, M. Loncar, M. Lipson, A. Gaeta, and F. Capasso "Direct thermo-optical tuning of silicon microresonators for the mid-infrared." Optics Express, 26, 26, Pp. 34965 (2018)
24. C. Wang, C. Langrock, A. Marandi, M. Jankowski, M. Zhang, B. Desiatov, M. M. Fejer, and M. Lončar "Ultrahigh-efficiency wavelength conversion in nanophotonic periodically poled lithium niobate waveguides" *Optica*, **5**, 1438 (2018)
25. S. Aghaeimeibodi, B. Desiatov, J. H. Kim, C. M. Lee, M. A. Buyukkaya, A. Karasahin, C. J. K. Richardson, R. P. Leavitt, M. Lončar, and E. Waks, "Integration of quantum dots with lithium niobate photonics." Applied Physics Letters, 113, Pp. 221102 (2018)
26. R. E. Evans, M. K. Bhaskar, D. D. Sukachev, C. T. Nguyen, A. Sipahigil, M. J. Burek, B. Machielse, G. H. Zhang, A. S. Zibrov, E. Bielejec, H. Park, M. Lončar, and M. D. Lukin "Photon-mediated interactions between quantum emitters in a diamond nanocavity." Science, 362, 6415, Pp. 662-665 (2018)
27. C. Wang, M. Zhang, X. Chen, M. Bertrand, A. Shams-Ansari, S. Chandrasekhar, P. Winzer, and M. Loncar. "Integrated lithium niobate electro-optic modulators operating at CMOS-compatible voltages." *Nature*, **562**, 101 (2018)
28. S. Maity, L. Shao, Y. I. Sohn, S. Meesala, B. Machielse, E. Bielejec, M. Markha, and M. Loncar "Spectral alignment of single-photon emitters in diamond using strain gradient ." *Physical Review Applied*, **10**, Pp. 024050 (2018)
29. S. Sun, J. L. Zhang, K. A. Fischer, M. J. Burek, C. Dory, K. G. Lagoudakis, Y. K. Tzeng, M. Radulaski, Y. Kelaita, A. Safavi-Naeini, Z. X. Shen, N. A. Melosh, S. Chu, M. Lončar, and J. Vučković. "Cavity-enhanced Raman emission from a single color center in a solid ." Physical Review Letters, 121, Pp. 083601 (2018)
30. L. Wang, C. Wang, J. Wang, F. Bo, M. Zhang, Q. Gong, M. Lončar, and Y. F. Xiao "High-Q chaotic lithium niobate microdisk cavity." Optics Letters, 43, 12, Pp. 2917-2920 (2018)
31. M. A. Lemonde, S. Meesala, A. Sipahigil, M. J. A. Schuetz, M. D. Lukin, M. Loncar, and P. Rabl "Phonon networks with SiV centers in diamond waveguides." Physical Review Letters, 120, Pp. 213603 (2018)
32. S. Meesala, Y. I. Sohn, B. Pingault, L. Shao, H. A. Atikian, J. Holzgrafe, M. Gündoğan, C. Stavrakas, A. Sipahigil, C. Chia, R. Evans, M. J. Burek, M. Zhang, L. Wu, J. L. Pacheco, J. Abraham, E. Bielejec, M. D. Lukin, M. Atatüre, and M. Lončar. 5/29/2018. "Strain engineering of the silicon vacancy center in diamond." *Physical Review B*, **97**, 205444 (2018)
33. Young-Ik Sohn*, Srujan Meesala*, Benjamin Pingault*, Haig A. Atikian, Jeffrey Holzgrafe, Mustafa Gündoğan, Camille Stavrakas, Megan J. Stanley, Alp Sipahigil, Joonhee Choi, Mian Zhang, Jose L. Pacheco, John Abraham, Edward Bielejec, Mikhail D. Lukin, Mete Atatüre, and Marko Lončar. "Controlling the coherence of a diamond spin qubit through its strain environment." Nature Communications 9, Pp. 2012. (2018)
34. Zin Lin, Benedikt Groever, Federico Capasso, Alejandro W. Rodriguez, and Marko Lončar. 4/20/2018. "Topology Optimized Multi-layered Meta-optics." Physical Review Applied, 9, Pp. 044030. (2018)
35. Anna V. Shneidman, Kaitlyn P. Becker, Michael A. Lukas, Nicholas Torgerson, Cheng Wang, Orad Reshef, Michael J. Burek, Kateri Paul, Joseph McLellan, and Marko Loncar. 4/17/2018. "All-Polymer Integrated Optical Resonators by Roll-to-Roll Nanoimprint Lithography." ACS Photonics. (2018)
36. Zin Lin, Lysander Christakis, Yang Li, Eric Mazur, Alejandro W. Rodriguez, and Marko Lončar. 2/23/2018. "Topology-optimized Dual-Polarization Dirac Cones." Physical Review B, 97, Pp. 081408(R) (2018)
37. Jingyuan Linda Zhang, Shuo Sun, Michael J Burek, Constantin Dory, Yan-Kai Tzeng, Kevin A Fischer, Yousif Kelaita, Konstantinos G Lagoudakis, Marina Radulaski, Zhi-Xun Shen, Nicholas A Melosh, Steven Chu, Marko Loncar, and Jelena Vuckovic. 1/29/2018. "Strongly Cavity-Enhanced Spontaneous Emission from Silicon-Vacancy Centers in Diamond." Nano Letters, 18, 2, Pp. 1360-1365. (2018)

Journal Publications (cntd.)

38. Cheng Wang, Mian Zhang, Brian Stern, Michal Lipson, and Marko Loncar. 1/22/2018. "Nanophotonic Lithium Niobate Electro-optic Modulators." Optics Express, 26, 2, Pp. 1547-1555.
39. Y. I. Sohn, R. Miller, V. Venkataraman, and M. Lončar, "Mechanical and optical nanodevices in single-crystal quartz." to appear in *Applied Physics Letters*, arXiv:1710.03372 (2017)
40. P. Latawiec, V. Venkataraman, A. Shams-Ansari, M. Markham, and M. Loncar. "An integrated diamond Raman laser pumped in the near-visible." *Optics Letters,* **43**, 318 (2018)
41. M. Zhang, C. Wang, R. Cheng, A. Shams-Ansari, and M. Loncar, "Monolithic Ultrahigh-Q Lithium Niobate Microring Resonator." *Optica,* **4**, 1536 (2017).
42. Young-Ik Sohn, Rachel Miller, Vivek Venkataraman, and Marko Lončar. 12/2017. "Mechanical and optical nanodevices in single-crystal quartz." Applied Physics Letters, 111, Pp. 263103. (2017)
43. C. Wang, Z. Li, M. H. Kim, X. Xiong, X. F. Ren, G. C. Guo, N. Yu, and M. Loncar, "Metasurface-assisted phase-matching-free second harmonic generation in lithium niobate waveguides", *Nature Communications*, **8**, 2098, (2017)
44. S. Bogdanovic, M. S.Z. Liddy, S. B. van Dam, L. C. Coenen, T. Fink, M. Loncar, and R. Hanson, "Robust nano-fabrication of an integrated platform for spin control in a tunable microcavity", *APL Photonics,* **2**, 126101 (2017)
45. X. Jiang, L. Shao, S. X. Zhang, X. Yi, J. Wiersig, L. Wang, Q. Gong, M. Loncar, L. Yang, and Y. F. Xiao, "Chaos-assisted broadband momentum transformation in optical microresonators." *Science*, **358**, 344 (2017).
46. O. Reshef, P. Camayd-Muñoz, D. I. Vulis, Y. Li, M. Lončar, and E. Mazur, "Direct Observation of Phase-Free Propagation in a Silicon Waveguide." *ACS Photonics*, **4**, 2385 (2017)
47. M. Soltani, M. Zhang, C. Ryan, G. J. Ribeill, C. Wang, and M. Loncar, "Efficient quantum microwave-to-optical conversion using electro-optic nanophotonic coupled resonators." *Physical Review A*, **96**, 043808 (2017)
48. Z. Lin, M. Lončar, and A. W. Rodriguez "Topology optimization of multi-track ring resonators and 2D microcavities for nonlinear frequency conversion." *Optics Letters*, **42**, 2818 (2017).
49. Y. Okawachi, M. Yu, V. Venkataraman, P. M. Latawiec, A. G. Griffith, M. Lipson, M. Loncar, and A. Gaeta, "Competition between Raman and Kerr effects in microresonator comb generation." *Optics Letters*, **42**, 2786 (2017).
50. M. J. Burek, C. Meuwly, R. E. Evans, M. K. Bhaskar, A. Sipahigil, S. Meesala, D. D. Sukachev, C. T. Nguyen, J. L. Pacheco, E. Bielejec, M. D. Lukin, and M. Lončar, "A fiber-coupled diamond quantum nanophotonic interface." *Phys. Rev. Applied*, **8**, 024026 (2017)
51. M. K. Bhaskar, D. D. Sukachev, A. Sipahigil, R. E. Evans, M. J. Burek, C. T. Nguyen, L. J. Rogers, P. Siyushev, M. H. Metsch, H. Park, F. Jelezko, M. Lončar, and M. D. Lukin "Quantum Nonlinear Optics with a Germanium-Vacancy Color Center in a Nanoscale Diamond Waveguide." *Physical Review Letters*, 118, 223603 (2017)
52. C. Palacios-Berraquero, D. M. Kara, A. R.-P. Montblanch, M. Barbone, P. Latawiec, D. Yoon, A. K. Ott, M. Lončar, A. C. Ferrari, and M. Atature, "Large-scale quantum-emitter arrays in atomically thin semiconductors." *Nature Communications*, **8**, 15093. (2017)
53. Z. Li, M. H. Kim, C. Wang, Z. Han, S. Shrestha, A. Christopher Overvig, M. Lu, A. Stein, A. Murthy Agarwal, M. Lončar, and N. Yu, "Controlling propagation and coupling of waveguide modes using phase-gradient metasurfaces." *Nature Nanotechnology*, 5, 12 (2017)
54. H. Atikian, S. Meesala, M. Burek, Y. I. Sohn, J. Israelian, A. Patri, N. Clarke, A. Sipahigil, R. Evans, D. Sukachev, R. Westervelt, M. Lukin, and M. Loncar "Novel fabrication of diamond nanophotonics coupled to single-photon detectors." SPIE Newsroom, DOI: 10.1117/2.1201611.006765
55. S. Bogdanovic, S.B. van Dam, C. Bonato, L.C. Coenen, A.J. Zwerver, B. Hensen, M.S.Z. Liddy, T. Fink, A. Reiserer, M. Loncar, and R. Hanson, "Design and low-temperature characterization of a tunable microcavity for diamond-based quantum networks." Applied Physics Letters, 110, 171103. (2017)
56. D. I. Vulis, Y. Li, O. Reshef, P. Camayd-Muñoz, M. Yin, S. Kita, M Lončar, and E. Mazur, "Monolithic CMOS-compatible zero-index metamaterials", Optics Express, 25, 12381 (2017)
57. C. Wang, X. Xiong, N. Andrade, V. Venkataraman, X. F. Ren, G. C. Guo, and M Lončar, "Second harmonic generation in nano-structured thin-film lithium niobate waveguides", Optics Express, 6, 25: 6963-6973 (2017)
58. H. A. Atikian, P. Latawiec, M. J. Burek, Y. I. Sohn, S. Meesala, N. Gravel, A. B. Kouki, and M. Loncar "Freestanding nanostructures via reactive ion beam angled etching." *APL Photonics*, 2, 051301 (2017).
59. S. Kita, Y. Li, P. Camayd-Muñoz, O. Reshef, D. I. Vulis, R. W. Day, E. Mazur, and M Lončar, "On-chip all-dielectric fabrication-tolerant zero-index metamaterials", Optics Express, 7, 8326 (2017)

Journal Publications (cntd.)

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201. M. Lončar, T. Doll, J. Vučković and A. Scherer, "Design and fabrication of silicon photonic crystal optical waveguides", *J. of Lightwave Tech.*, **18** (10), pp. 1402-1411 (2000).

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Invited Conference Talks

1. M. Lončar, Frequency Comb Workshop, Capri Island, Italy, October 13-15, 2019
2. M. Lončar, IEEE Microwave Photonics, Ottawa, Canada October 8-9, 2019 **[plenary]**
3. M. Lončar, ECOC, Dublin, Ireland, September 23-25, 2019
4. M. Lončar, Applied Materials Workshop, Aug 22-23, 2019, California
5. M. Lončar, IEEE Rapid Conference. Aug 19-21, 2019 Florida
6. M. Lončar, "Integrated LiNbO3 Photonics and Applications", OSA Nonlinear Optics Conference, Waikoloa Beach Resort, Big Island, Hawaii, July 17, 2019
7. M. Lončar, "Quantum Photonics with Diamond and Lithium Niobate", IEEE Summer Topicals, Ft. Lauderdale, FL, July 9, 2019
8. M. Lončar, "New Opportunities with Old Materials", CLEO Europe, Munich, Germany, June 23, 2019
9. M. Lončar, "Nano and Quantum Photonics with Diamond, Tech Connect, Boston, MA, June 18, 2019
10. M. Lončar, "Shine-On, You Nanostructured Diamond", LATSIS Symposium on Diamond Photonics , EPFL, Lausanne, May 19, 2019 (public lecture)
11. M. Lončar, "Integrated LiNbO3 Photonics and Applications", OSA CLEO, San Jose, CA, May 6, 2019
12. M. Lončar, "Integrated LiNbO3 Photonics and Applications", OSA OFC, San Diego, CA, March 4, 2019
13. M. Lončar, "Electro-Optic and Kerr Frequency Combs in Lithium Niobate" (panel), OSA OFC, San Diego, CA, March 5, 2019
14. M. Lončar, "Integrated LiNbO3 Photonics", SPIE Photonics West, San Francisco, CA, 2019
15. M. Lončar, "Integrated LiNbO3 Photonics", 2019 PQE Conference, Snow Bird, UT, January 6-11, 2019.
16. M. Lončar, "Integrated LiNbO3 Photonics for Energy-Efficient and High-Bandwidth Optical Links", Advanced Data Center Architectures and Technologies workshop, Stanford University, December 4, 2018
17. M. Lončar "New opportunities with old materials", Nature Conference on Nanophotonics and Integrated Photonics, Nanjing, China on 9-11 Nov, 2018
18. M. Lončar, "Integrated LiNbO3 Photonics", 2018 IEEE Photonics Conference to be held on 30 Sept - 4 October 2018, Hyatt Regency Reston, Reston, Virginia, USA,
19. M. Lončar, "Integrated LiNbO3 Photonics", 2nd International Workshop on Asymmetric Microcavity and Wave Chaos, Fuzhou, China, May 18-20, 2018
20. M. Lončar, "Nano- and Quantum-Photonics With Diamond", Rank Prize Meeting, Grasmere, UK, April 23 – 27, 2018
21. M. Lončar, Keynote Talk at 7th IEEE International Conference on Photonics, Langkawi, Malaysia , April 9-11, 2018
22. M. Lončar "Photonic and Phononic Interfaces for Diamond Spin Qubits" NSF-Convergence Workshop on Quantum Elements of Secure Communication, Arlington, VA, Dec 3, 2017
23. M. Lončar (given by Cheng Wang), OSA IPR, Novel Optical Materials and Applications, July 24-27, 2017
24. M. Lončar, "Photonic and Phononic Interfaces for Spin Qubits", Fronteers in Quantum Materials and Devices, San Sebastian, Spain (July 13 and 14, 2017)
25. M. Lončar, "Nano- and Quantum-Photonics with Diamond", Quantum Nanophotonics Workshop, IST Austria (June 5 – 9, 2017)
26. M. Lončar, "Diamond – An Engineer's Best Friend", IEEE LEOS Boston Chapter Workshop, Lexington, MA (May 12, 2017)
27. M. Lončar, "Photonic and Phononic Interfaces for SpinQubits", NSF Quantum Science Workshop, Arlington, VA (May 1-2, 2017)
28. M. Lončar, "Quantum Nanophotonics and Optomechanics with Diamond", Quantum Nanophotonics Conference, Benasque, Spain (February 27 – March 3, 2017)
29. M. Lončar, "Diamond Nanoscale Photonics and Mechanics", ISDRS Conference, Arlington, VA (December 7, 2016)
30. M. Lončar, "Diamond – A Quantum Engineer's Best Friend", IEDM Conference, San Francisco, CA (December 3-6, 2016)
31. M. Lončar, "Diamond Photonics", OSA Frontiers in Optics, Rochester, NY (October 21, 2016)

Invited Conference Talks (cntd.)

32. M. Lončar, “Quantum Photonics and Optomechanics with Diamond Photonic Crystals”, PECS XII, York, UK (July 17 – 21, 2016)
33. M. Lončar, “On-Chip Frequency Combs in Visible and mid-IR Wavelength Range”, Microresonator based optical frequency combs and their applications, MonteVeritte, Switzerland (July 6 – 9, 2016)
34. M. Lončar, “Diamond – An Engineer’s Best Friend”, NanoCity 2016 Conference, Amsterdam, The Netherlands (June 21, 2016)
35. M. Lončar, P. Latawiec, V. Venkataraman, M. J. Burek, Y. Okawachi, A. L. Gaeta, M. Markham, A. Edmonds, D. Twitchen, "Diamond Nonlinear Photonics" CLEO 2016, San Jose CA, June 2016 [given by P. Latawiec]
36. M. Lončar, "Quantum and Nonlinear Photonic with Diamond " SPIE Photonics Europe, Brussels, Belgium (Apr. 5, 2016)
37. M. Lončar, "Diamond Optomechanics and Quantum Photonics" Gordon Research Conference on Optomechanical Systems in Quantum Regime, Ventura, CA (Mar. 6 – Mar. 11, 2016)
38. M. Lončar, P. Latawiec, V. Venkataraman, M. J. Burek, "On-Chip diamond frequency combs and Raman lasers”, SPIE Photonics West, San Francisco, CA (Feb. 15, 2016) [given by P. Latawiec]
39. M. Lončar "Diamond Quantum Nanophotonics”, SPIE Photonics West, San Francisco, CA (Feb. 17, 2016) [given by M. Burek]
40. M. Lončar “Diamond Nanophotonics and Optomechanics”, International Symposium on Nanoscale Transport and Technology (ISNTT2015), Atsugi, Japan, (November 17-20, 2015)
41. M. Lončar “Diamond – A Quantum Engineer’s Best Friend”, Purdue Quantum Center Kick-Off Workshop University of Purdue, (October 14-15, 2015)
42. M. Lončar “Diamond – A Quantum Engineer’s Best Friend”, NSF Sponsored Workshop on Quantum Information on a Chip, University of Padua (Italy), (October 12-14, 2015)
43. M. Lončar “Nonlinear Diamond Photonics”, OSA Nonlinear Optics, Kauai, Hawaii (July 26-31, 2015)
44. M. Lončar “Nonlinear Photonics with Lithium-Niobate and Diamond”, OSA IPR Topical Meeting, Boston, MA (June 29, 2015)
45. M. Lončar “Diamond Nanophotonics”, Summer quantum school organized by DTU, Denmark (June 6-12, 2015)
46. M. Lončar “On-Chip Lasers”, NSF-Taiwanese Ministry of Science Billateral Meeting & Workshop, Taipei, Taiwan (May 29, 2015)
47. M. Lončar “Quantum and Nonlinear Nanophotonics with Diamond”, APS/CNM Users Meeting, Argonne, IL (May 11-14, 2015)
48. M. Lončar “Diamond Photonics – Towards Applications in Harsh Environments”, SPIE Defense, Commercial Sensing and Security Conference, Baltimore, MD (April 20-24, 2015)
49. M. Lončar “Diamond Photonics”, SPIE Optics and Optoelectronics Symposium, Prague, Czech Republic (April 13-16, 2015)
50. M. Lončar “Diamond Nanophotonics and Nanomechanics”, University of Cambridge Winter School, Oxford, UK (March 20-23, 2015)
51. M. Lončar, “Diamond Nanomechanics”, APS March Meeting, San Antonio, TX (March 5, 2015)
52. M. Lončar, “Diamond Nanophotonics and Nanomechanics”, SPIE Photonics West, San Francisco, CA (February 12, 2015)
53. M. Lončar, “Diamond Frequency Combs”, PQE, Snowbird, Utah (January 5-9, 2015)
54. M. Lončar, “Control of Light-Matter Interaction Using Metal & Dielectric Nanostructures” MRS Fall Meeting, Boston, MA (December 4, 2014)
55. M. Loncar, “Diamond Quantum Nanophotonics and Nanomechanics “American Vacuum Society, Baltimore, MD (November 9-14, 2014)
56. M. Loncar, “Light-matter interaction in diamond”, Frontiers of Optics, Tucson, Arizona (October 19-23, 2014)
57. M. Lončar, “Diamond - engineer’s best friend”, Plenary talk at Cornell’s Nanofabrication Facility Conference, Ithaca, NY (September 18, 2014)
58. M. Loncar, “Diamond photonics”, Group IV Photonocs, Paris, France (August 27-29, 2014)
59. M. Loncar, “Diamond photonics”, Optics and Photonics, San Diego, CA (August 17-21, 2014)
60. M. Loncar, “Diamond frequency combs”, Microresonator based optical frequency combs and their applications, MonteVeritte, Switzerland (August 17-20, 2014)
61. M. Loncar, “Nonlinear diamond photonics”, OSA Nonlinear Photonics Conference, Barcelona, Spain (July 27-31, 2014)

Invited Conference Talks (cntd.)

62. M. Lončar, "Quantum Nanophotonics and Nanomechanics with Diamond", EIPBN – 58th International Conference on Electron, Ion and Photon Beam Technology and Nanofabriction, Washington DC (May 27-30, 2014)
63. M. Lončar, "Diamond – Engineer's best friend", MRS New Diamond and Nano Carbon Conference, Chicago, IL (May 26-28, 2014)
64. M. Lončar, "Diamond Photonics & Applications: frequency combs, cavity QED & optomechanics", SPIE Photonics West (February, 2014)
65. M. Lončar (talk given by Michael Burek), PQE, Snowbird, Utah (January 2014)
66. M. Lončar, "Diamond Nanophotonics, Quantum Optics and NEMS", MRS Fall Meeting, December 2013
67. M. Lončar, MediNano Conference, Nice, France (October 30, 2013)
68. M. Lončar "Opto-mechanical Interaction in Flexible Photonic Crystals", APS FiOS and Laser Science Conference, Orlando, Florida (October 10, 2013)
69. M. Lončar "Diamond Nanophotonics and Quantum Optics", Rank Prize Foundation Workshop, Manchaster, UK (September 25, 2013)
70. M. Lončar "Opto-mechanical Interaction in Flexible Photonic Crystals", PIERS 2013, Stockholm, Sweden (August 13, 2013)
71. M. Lončar "Diamond Nanophotonics and Quantum Optics", PIERS 2013, Stockholm, Sweden (August 12, 2013)
72. M. Lončar, CLEO Pacific Rim, Kyoto, Japan (6/30 – 7/4, 2013)
73. M. Lončar "Diamond Photonics and Quantum Optics", Kavli Nexus Workshop, Puerto Rico (June 1, 2013)
74. M. Lončar "Diamond Photonics and Quantum Optics", MRS Spring Meeting, San Francisco (April 5, 2013)
75. M. Lončar "Optomechanics with photonic crystals in silicon and diamond", SPIE Photonics West (February 5, 2013)
76. M. Lončar Nanophotonics Conference, Trieste, Italy, (December 6, 2012)
77. M. Lončar, FACSS Conference, Kansas City (October 1, 2012)
78. M. Lončar, SPRC Annual Symposium, Stanford University (Sept 17, 2012)
79. M. Lončar, "Photonic crystal nanobeam cavities and applications", PECS X Workshop, Santa Fe (NM), June 3-8, 2012
80. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", SPIE Photonics West, San Francisco (CA), January 2012.
81. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", Harvard-Australia Symposium on Diamond Photonics, Melbourne (Australia), January 2012.
82. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", PQE, Snow Bird (UT), January 2012
83. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", MRS Fall Meeting, Boston, MA (November 28 – December 2, 2011)
84. M. Lončar *et al*, "Mid-Infrared Photoni Crystals in Silicon", IEEE Group IV Photonics, London, England (September 14-16, 2011)
85. M. Lončar *et al*, "Group IV Nanophotonics: From Silicon to Diamond", Photonica – III International School and Conference on Photonics, Belgrae, Serbia (August 29 – September 2, 2011) **(tutorial)**
86. M. Lončar *et al*, "Diamond nanophotonics and quantum optics",22nd European Conference on Diamond, Diamond-Like Materials, Carbon Nanotubes and Nitrides, Garmisch-Partenkirchen, Germany (September 4-8, 2011)
87. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", SPIE Optics and Photonics, San Diego, CA (August 21-25, 2011)
88. M. Lončar, Q. Quan and P. Deotare, "Ultra-sensitivie, label-free, biosensors and on-chip spectrometers", TechConnect World Conferences & Expo 2011 (Nanotech), June 13th-16th, Boston, USA
89. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", Haraeus Diamond Workshop, Physikzentrum Bad Honnef, Germany, (April 5-7, 2011)
90. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", 2nd International Workshop on Fundamentals of Light-Matter Interaction, Porto de Galinhas – PE, Brazil (February 13-16, 2011)
91. M. Lončar *et al*, "Diamond nanophotonics and quantum optics", SPIE Photonics West, San Francisco, CA (January 23-29, 2011)
92. M. Lončar *et al*, "Group IV Nanophotonics: From Silicon to Diamond", Joint Harvard & KEO Photonic Workshop, Cambridge, MA (December, 2010)

93. M. Lončar, T. Babinec, J. Choy, B. Hausmann, I. Bulu, Y. Zhang, M. Khan, M. W. McCutcheon, "Diamond Nanophotonics and Quantum Optics", Artificial Atoms in Diamond: From Quantum Physics to Applications, Harvard University, Cambridge, MA (November 11-13, 2010)
94. M. Lončar, P. B. Deotare, I. W. Frank, Q. Quan, Y. Zhang, I. B. Burgess, R. Shankar, M. W. McCutcheon, I. Bulu, "Photonic Crystal Nanobeam Cavities", European Optical Society (EOS) Bi-annual General Meeting, Paris, France (October 26-28, 2010).
95. M. Lončar, "Nanophotonics meets quantum optics", Summer School of the German Physical Society, Physikzentrum Bad Honnef, Germany, September 19-24 (2010) **(tutorial)**
96. M. Lončar *et al.,* "Photonic crystal nanobeam cavities and lasers", 37th International Symposium on Compound Semiconductors (ISCS/IPRM), Takamatsu City, Japan (May 31- June 4, 2010).
97. M. Lončar *et al*., "Single photon sources based on diamond nanowires", Optical Data Storage (SPIE Topical Meeting), University of Colorado, Boulder (May 24-26, 2010).
98. M. Lončar, P.B. Deotare, I.W. Frank, Y. Zhang, A. Conwill, M. Khan, M.W. McCutcheon, Q. Quan, "Photonic Crystal Nanobeam Cavities and Their Applications", CLEO 2010, San Jose, CA (May 16-21, 2010)
99. M. Lončar *et al.*, "Nanophotonic devices based on diamond", Workshop on Nano-optics, Plasmonics, and Advanced Materials, NIST, Gaithersburg, MD (April 19-22, 2010).
100. M. Lončar *et al*., "Focused ion beam milling for optoelectronics and quantum optics", 2nd International Workshop on FIB for Photonics/ 15th European Conf. on Integrated Optics, Cambridge, UK (April 6-7, 2010).
101. M. Lončar *et al.*, "Reconfigurable optical filters and cavity QED with Photonic Crystal Nanobeam Cavities", SPIE Photonics West Conference, San Francisco, CA (January 23-28, 2010)
102. M. Lončar, "Reconfigurable Optical Filters Based on Photonic Crystal Nanobeam Cavities", IEICE Symposium on Si Photonics, University of Tokyo, Japan (November 18, 2009)
103. M. Lončar, "Optical Nanostructures for Advanced Communication Systems", Workshop on Nanophysics, RIKEN, Tokyo, Japan (November 12-17, 2009)
104. M. Lončar, "Nanophotonics and Applications in Optical and Quantum Information Processing", CMOS Emerging Technologies, Vancouver, Canada (September 23 – 25, 2009)
105. M. Lončar, P.B. Deotare, M.W. McCutcheon, M. Khan, Y. Zhang, I.W. Frank, T.M. Babinec, D.E. Chang, M.D. Lukin, "High-Q photonic crystal cavities and their applications", Integrated Photonics and Nanophotonics Research and Applications, Honolulu, Hawaii (12-17th July, 2009)
106. M. Lončar, "Nanophotonics Platform for Quantum Information Processing in Diamond," Frontiers in Nanoscale Science and Technology Workshop, Harvard University, MA (May 29-31, 2009)
107. M. Lončar, "Focused Ion Beam Milling for Nanophotonics, Optoelectronics and Quantum Optics", SPIE Photonics West, San Jose, CA (January 2009).
108. M. Lončar, "Nanophotonics platform for quantum information processing in diamond", SPIE Photonics West, San Jose, CA (January 2009).
109. M. Lončar, "Light-matter interaction in nanoscale optical devices", SPIE ISOM/ODS, Waikoloa, Hawaii, 2008
110. M. Lončar, "Optomechanical interaction in nanophotonic devices", PQE 38, Snowbird, UT, 2008
111. M. Lončar, "Waveguides and photonic structures in diamond", Quantum Diamond, Lancefeld, Australia, 2007
112. M. Lončar, L. Diehl, B. G. Lee, F. Capasso, R. Parehia, O. Painter, M. Giovannini and J. Faist, "Optofluidic QCL Platform: On-chip sensing and widely tunable lasers", SPIE Optics and Photonics, San Diego, August 14,, 2006.
113. M. Lončar, S. K. Tang, M. Troccoli and F. Capasso, "Optofluidic mid-infrared laser platform based on holey quantum cascade lasers", SPIE Optics East, Boston, MA October 23-26, 2005.
114. M. Lončar, M. L. Adams and A. Scherer, "Chemical sensors based on photonic crystal nanolasers", SPIE Optics East, Philadelphia, PA, October 25-28, 2004.
115. M. Lončar, T. Yoshie, A. Scherer, P. Gogna and Y. Qiu, "Low-threshold triangular lattice photonic crystal laser based on high-Q cavity designs", Materials Research Society (MRS) Fall Meeting, Boston, MA, Dec. 2-6 2002.
116. M. Lončar, T. Yoshie, J. Vučković, A. Scherer, H. Chen, D. Deppe, P. Gogna, Y. Qiu, D. Nedeljković, and T. P. Pearsall, "Nanophotonics based on Planar Photonic Crystals", presented at IEEE Lasers and Electro-Optics Society Annual Meeting, Glasgow, Scotland, Nov. 10-14 2002.
117. M. Lončar, T. Yoshie, A. Scherer, P. Gogna and Y. Qiu, "Low-threshold photonic crystal laser", Photonic and Electromagnetic Crystal Structures (PECS IV) workshop, Los Angeles, CA, Oct. 28-31 2002.
118. M. Lončar, J. Vučković, T. Yoshie, O. Painter and A. Scherer, "Photonic crystals and their applications to efficient light emitters", Microoptics Conference, Osaka, Japan, Oct. 24-26 2001.

Seminars

Oak Ridge National Lab	09/10/19	Yale University	11/23/11
ETH, Zurich	06/28/19	General Electric	09/22/11
MIT Lincoln Labs	04/18/19	ETH Zurich	07/12/11
Purdue University	04/09/19	NanoTerra	06/17/11
U. Penn	04/04/19	Lincoln Labs	04/14/11
Northrop Grumman	03/07/19	Harvard Catalyst	04/01/11
Caltech, Distinguished Kavli Lecture	03/06/19	Laboratory for Phys. Sciences & U. Maryland	03/16/11
City U. Hong Kong	11/13/18	Harvard Quantum Optics Center (Inaugural)	03/01/11
U. California, Berkeley	10/23/18	Draper Labs	02/10/11
Stanford U	10/22/18	BBN Technologies	01/19/11
U. Texas, Austin	10/17/18	Physical Sciences Inc.	12/15/10
USTC	05/22/18	University of Twente (The Netherlands)	09/24/10
Nankai University	05/19/18	Brown University	09/10/10
Peking University	05/18/18	Schlumberger-Doll (Cambridge, MA)	06/30/10
Tsinghua University	05/17/18	Yokohama National Univ., Japan	05/31/10
Sunny, Polytech	05/01/18	Industry Outreach workshop (Harvard)	05/07/10
U. Kabangsaan, Malaysia	04/12/18	UMASS Lowell	03/10/10
U. Wisconsin, Madison	04/03/18	Cornell University	03/11/10
Laboratory for Physical Sciences, MD	01/31/18	Princeton University	12/07/09
Cornell U.	11/21/17	Columbia University	11/09/09
U. Mass. Amherst	11/13/17	Caltech	10/27/09
TU Eindhoven	10/19/17	Purdue University	10/23/09
Master Dynamics, Hong Kong	06/29/17	MIT	10/07/09
MIT, Cambridge, MA	06/27/17	University of California, Berkeley	10/02/09
Draper Lab, Cambridge, MA	06/21/17	University of Arizona, School of Optics	10/01/09
MIT, Cambridge MA	05/22/17	Stanford University	09/28/09
TU Delft, The Netherlands	06/09/17	University of Pennsylvania	09/18/09
Saudi Aramco, Houston, TX	05/09/17	Harvard University	09/11/09
Harvard U (GSAS Alumni)	04/08/17	Advanced Energy Consortium, Austin	09/03/09
Keio University, Yokohama, Japan	01/12/17	University of Waterloo, Canada	05/07/09
Texas A & M, College Station, TX	12/01/16	Sharp Laboratories	03/27/09
IBM Watson Lab, NY	11/14/16	MIT	12/02/08
Northrop Grumman, CA	10/26/16 – 10/27/16	University of Washington	04/08/08
Northrop Grumman, CA	10/2/16 – 10/4/16	Penn State University, College Park	05/14/07
EPFL, Switzerland	5/27/16	Schlumberger-Doll Research, Cambridge, MA	03/16/07
TU Eindhoven, The Netherlands	03/30/16	MIT Lincoln Labs, Lexington, MA	12/01/06
U. Cambridge, UK	02/22/16	Georgia Institute of Technology	04/17/06
TNO, Delft	01/28/16	University of Pennsylvania	03/30/06
TU Delft, The Netherlands	11/27/15	University of Michigan, Ann Arbor	03/22/06
Science Café, Amherst MA	04/27/15	University of Maryland, College Park	03/16/06
Element 6, Oxford, UK	03/20/15	Rice University	03/08/06
Bristol University, UK	03/19/15	University of Texas, Austin	03/06/06
University of Southampton, UK	03/18/15	University of Illinois, Chicago	02/22/06
Tufts University (Biomed. Dept.)	12/08/14	Harvard University	02/09/06
Delft University, Netherlands	11/23-24/14	University of Arizona, School of Optics	12/06/05
Army Research Lab	06/27/14	Massachusetts Institute of Technology	10/28/05
DTU, Denmark	06/18-21/14	Lincoln Labs, Lexington, MA,	
University of Toronto, Canada	04/25/14	(LEOS Photonic Crystal Workshop)	04/13/05
MIT	04/09/14	Rowland Institute, Harvard	12/15/04
Tufts University (EE Dept.)	03/04/14	Physical Sciences Inc.	05/25/04
University of Calgary, Canada	02/26/14	Harvard University	03/18/03
Harvard University	09/16/13	CREOL School of Optics	02/10/03
NTT Basic Research Lab	07/10/13	Columbia University	01/27/03
Keio University	07/09/13	IBM Watson Research Laboratories	01/23/03
Yokohama National University	07/09/13	University of California, San Diego	01/15/03
Kyoto University	07/08/13	Cornell Nanofabrication Facility	07/01/02
Osaka University (Mizuochi and Fujita groups)	07/05/13	Bell Laboratories	03/29/02
Osaka University (Kawata group)	07/04/13	University of California, Riverside	03/06/02
University of Tokyo	06/27/13	University of Wisconsin, Madison	02/25/02
University of Alabama, Birmingham	01/16/13	Kyoto University, Japan	10/27/01

Stanford University	11/12/12	Yokohama National University, Japan	10/22/01
MIT	11/07/12	Stanford Res. Inst. Internat., Menlo Park, CA	05/12/00
Duke University	10/01/12	Corning, Fontainebleau, France	Aug., Nov. 1999
Russian Quantum Center, Moscow, Russia	05/18/12		
Lebedev Institute, Moscow, Russia	05/16/12		
Academic City, Novosibirsk, Russia	05/15/12		
U. Waterloo, Institute for Quantum Computing	12/01/11		

Conference Presentations by Group Members (incomplete)

1. C. Wang, M. Zhang, X. Xiong, B. Stern, V. Venkataraman, X. F. Ren, G. C. Guo, M. Lipson, M. Loncar, "Integrated Lithium Niobate Platform for Nonlinear Optics and Electro-Optic Applications", OSA Nonlinear Optics Conference, Hawaii, July 17-21, 2017
2. Young-Ik Sohn*, Srujan Meesala*, et al, "Protecting the spin coherence of SiV centers from thermal noise using diamond MEMS", CLEO/ QELS (2017)
3. M. Zhang et al, "Micrometer scale Lithium Niobate Electro-optic Modulators", CLEO (2017)
4. I. C. Huang et al, "SiV center in plasmonic nanoresonators", SPIE OPTO (2017)
5. Srujan Meesala*, Young-Ik Sohn*, Haig Atikian, Jeffrey Holzgrafe, Mian Zhang, Michael Burek, Marko Loncar, "Strain engineering of diamond silicon vacancy centers in MEMS cantilevers", APS DAMOP 2016, Providence RI, June 2016
6. L. Shao, M. Zhang, and M. Lončar, "Diamond Color Center Based FM Microwave Demodulator," CLEO 2016, San Jose CA, June 2016.
7. Haig Atikian, Srujan Meesala, Alp Sipahigil, Ruffin Evans, Denis Sukachev, Jose Pacheco, Edward Bielejec, Michael Burek, Adarsh Patri, Johan Israelian, Nigel Clarke, Robert Westervelt, Mikhail Lukin and Marko Loncar, "Diamond nanophotonics structures integrated with superconducting nanowire single photon detectors" SPIE Commercial + Scientific Sensing and Imaging, Blatimore, MD, April 2016 **[invited]**.
8. M.J. Burek, C. Meuwly, J. Rochman, V. Venkataraman, and M. Lončar, "Integrated nanophotonics in bulk single-crystal diamond substrates" *SPIE Photonics West 2016*, San Francisco, CA, February 13-18, 2016.
9. M.J. Burek, J.D. Cohen, S.M. Meenehan, T. Ruelle, S. Meesala, O. Painter, and M. Lončar, "Diamond optomechanical crystals" *SPIE Photonics West 2016*, San Francisco, CA, February 13-18, 2016.
10. Y. Li, S. Kita, P. Munoz, O. Reshef, D. I. Vulis, M. Loncar, and E. Mazur, "Homogenization of two-dimensional Dirac-cone metamaterial," SPIE Photonics West. (San Francisco), 2015.
11. Haig Atikian, Srujan Meesala, Johan Israelian, Adrash Patri, Nigel Clarke, Robert Westervelt and Marko Loncar, "Diamond Photonic Structures Integrated with Superconducting Nanowire Single Photon Detectors" SIngle Photon Workshop 2015, Geneva, Switzerland (2015)
12. Y. Li, S. Kita, P. Munoz, O. Reshef, D. I. Vulis, M. Loncar, and E. Mazur, "Integrated impedance-matched photonic Dirac-cone metamaterials," SPIE Photonics West. (San Francisco), 2015.
13. Y. Li, S. Kita, P. Munoz, O. Reshef, D. I. Vulis, M. Loncar, E. Mazur, "Integrated impedance-matched photonic Dirac-cone metamaterials". META 2015, New York, NY
14. D. Vulis, O. Reshef, P. Munoz, S. Kita, Y. Li, M. Loncar, E. Mazur, "Integrated super-couplers based on zero-index metamaterials". META 2015, New York, NY **[invited]**
15. M. Burek, P. Latawiec, I-C. Huang, X. Xiong, H. Atikian, V. Venkataraman, S. Kita, M. Loncar, "Quantum and Nonlinear Nanophotonics with Diamond". META 2015, New York, NY **[invited]**
16. Sukachev, D., R. Evans, A. Sipahigil, M. Burek, K. Jahnke, L. Rogers, F. Jelezko, K. De Greve, N. de Leon and C. Nguyen, et al "Quantum optics with silicon-vacancy centers in diamond." APS MArch Meeting (2015)
17. N. de Leon, R. Evans, K. De Greve, M. Goldman, A. High, M. Markham, A. Stacey, D. Twitchen, M. Loncar and H. Park, M. Lukin "Quantum Optics in the Solid State with Diamond Nanophotonics."APS March Meeting (2015).
18. Y. Li, S. Kita, P. Muñoz, O. Reshef, D. Vulis, M. Loncar and E. Mazur,". Integrated impedance-matched photonic Dirac-cone metamaterials". CLEO/ QELS 2015, San Jose, CA
19. Z. Lin., X. Liang, M. Loncar, S. Johnson and A. Rodriguez," Cavity-enhanced second harmonic generation via topology optimization". Frontiers in Optics 2015.
20. V. Venkataraman and M. Lončar, "On-chip Nonlinear Photonics with Novel Materials: Diamond, Silicon-on-sapphire, Lithium-niobate," SPIE Photonics North, Ottawa, ON, Canada, June 2015. **[invited]**
21. Stefan Kalchmair, Raji Shankar, Shota Kita, Christopher Mittag, Irfan Bulu, Marko Loncar, Cascaded Four-Wave Mixing in Silicon-on-Sapphire Microresonators at λ=4.5 μm, CLEO: Science and Innovations (2015), May 10, 2015

Conference Presentations by

22. Stefan Kalchmair, Romain Blanchard, Tobias Mansuripur, Guy-Mael de Naurois, Laurent Diehl, Christian Pflügl, Mark F. Witinski, Federico Capasso, Marko Loncar, Sampled Grating Quantum Cascade Lasers with High Tuning Stability, CLEO: Science and Innovations (2015), May 10, 2015

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23. G.M. De Naurois, S. Kalchmair, T.S. Mansuripur, R. Blanchard, L. Diehl, C. Pflügl, M. Loncar, F. Capasso, Genetically Optimized Multi-Wavelengths QCL, CLEO: Science and Innovations (2014), June 8, 2014
24. S. Kita, Y. Li, P. Munoz, O. Reshef, D. Vulis, B. Day, E. Mazur, C. Lieber, and M. Lončar, " On-Chip Super-robust All-Dielectric Zero Index Material," CLEO (San Jose), FM3C.2, 2015.
25. M.J. Burek, Chu Y., Liddy M.S.Z., Patel P., Rochman J., Lukin M.D., and Lončar M., "Fabrication of high quality factor optical nanocavities in bulk single-crystal diamond" *EIPBN 2015*, San Diego, CA, May 26-29, 2015.
26. Young-Ik Sohn, Marko Lončar, "Free-standing Nanostructures in Single-crystal Quartz", EIPBN, San Diego, CA, May 27, 2015
27. P. Latawiec, Y. -I. Sohn, M. Burek, M. Loncar, "Faraday Cage Reactive Ion Etching: Simulation and Experiments", EIPBN, San Diego, CA, May 27, 2015 **(poster)**
28. Srujan Meesala, Young-Ik Sohn, Haig A. Atikian, Michael J. Burek, Samuel Kim, Jennifer Choy, and Marko Loncar, "Strain coupling of diamond nitrogen vacancy centers to nanomechanical resonators", CLEO/QELS:2015 , San Jose, CA, June 8-13, 2015
29. C. Wang, M.J. Burek, Z. Lin, H.A. Atikian, V. Venkataraman, I.C. Huang, P. Stark, and M. Lončar, "Integrated Lithium Niobate Nonlinear Optical Devices", CLEO 2015, San Jose, CA, May 10-15, 2015 [**invited**]
30. P.-C. Hui, A. Rodriguez, D. Woolf, E. Iwase, M. Khan, F. Capasso and M. Loncar, "Strong Mechanical Nonlinearity of Optomechanically Driven Suspended Photonic Crystal Membrane", CLEO 2015, San Jose, CA, May 10-15, 2015
31. I.-C. Huang*, R. Jensen*, O. Chen, J. Choy, T. Bischof, M. Bawendi, M. Lončar, "Optical Trapping of a Colloidal Quantum Dot", CLEO/QELS (San Jose), FF2C-5, 2015.
32. V. Venkataraman and M. Lončar, "Diamond photonics," SPIE Optics + Photonics North, San Diego, CA, August 2014. **[invited]**
33. S. Kita, Y. Li, P. Munoz, O. Reshef, D. Vulis, E. Mazur, and M. Lončar, "Demonstration of On-Chip Double Zero Index Material for Planar Device Applications," MRS Fall Meeting, no. L17.02, Boston, 2014.
34. Shota Kita, Yang Li, Philip Munoz, Orad Reshef, Daryl Vulis, Marko Lončar, Eric Mazur, " On-Chip Double Zero Index Material for Planar Device Applications," PECS-XI (Shanghai, China) (May 2014)
35. C. Wang, Q. Quan, S. Kita, and M. Lončar, "Slot-mode Photonic Crystal Nanobeam Cavity for Single-protein Sensing", PECS-XI, Shanghai, China, May, 2014 **(poster)**
36. Y. Yao,., M. A. Kats, R. Shankar, M. Loncar, F. Capasso, Y. Song and J. Kong "Ultra-Compact Mid-IR Modulators Based on Electrically Tunable Optical Antennas". 2014 IEEE Photonics Society Summer Topical Meeting Series.
37. Y. Yao, R. Shankar, P. Rauter, Y. Song, J. Kong, M. Loncar and F. Capasso,." Mid-infrared graphene detectors with antenna-enhanced light absorption and photo-carrier collection". CLEO/QELS: 2014, San Jose, CA, 8-13 June 2014
38. Q. Quan,, F. Liang, W. Hong, D. Schaak and M. Loncar (2014). Nanoscale fiber tip probe for biomedical sensing. SPIE NanoScience+ Engineering, International Society for Optics and Photonics.
39. D. Yang, S. Kita, C. Wang, Q. Quan, M. Loncar, H. Tian and Y. Ji, "A Novel Nanoslotted Quadrabeam Photonic Crystal Cavity Sensor with High Sensitivity and High Q-factor", CLEO/QELS: 2014, San Jose, CA, 8-13 June 2014
40. K. Bayat, J. Choy, A. V. Shneidman, S. Meesala, M. Farrokh Baroughi and M. Loncar, "Uniform and large volume microwave magnetic coupling to NV centers in diamond using split ring resonators". CLEO/QELS: 2014, San Jose, CA, 8-13 June 2014
41. K. Bayat,, W. K. C. Sun, W. Gilpin, M. F. Baroughi and M. Loncar (2014). Formation of Nitrogen vacancy center ensembles in Diamond Nanowires. CLEO/QELS: 2014, San Jose, CA, 8-13 June 2014
42. I.-C. Huang, J. Choy, R. Jensen, M. Bawendi, M. Lončar, "Bowtie Plasmonic Aperture for Single Quantum Emitter Absorption Measurement", CLEO/QELS (San Jose), JTh2A-97, 2014 (poster).
43. R. Evans,, N. de Leon, K. De Greve, Y. Chu, B. Shields, B. Hausmann, M. Burek, P. Maletinsky, A. Zibrov and H. Park, M. Lukin, "Quantum optics in the solid state with diamond nanophotonics". APS March Meeting (2014).
44. M.J. Burek, Chu Y., Liddy M.S.Z., Patel P., Rochman J., M.D. Lukin, and M. Lončar, "High-Q optical nanocavities in bulk single-crystal diamond" *CLEO 2014*, San Jose, CA, June 8-13, 2014 [invited oral].
45. M.J. Burek, Chu Y., Liddy M.S.Z., Patel P., Rochman J., M.D. Lukin, and M. Lončar, "High-Q optical nanocavities in bulk single-crystal diamond" *New Diamond and Nano Carbons 2014*, Chicago, IL, May 25-29, 2014 [oral].
46. M.J. Burek, Chu Y., Liddy M.S.Z., Patel P., Rochman J., Lukin M.D., and Lončar M., "High-Q optical nanocavities in bulk single-crystal diamond" *PECS-XI*, Shanghai China, May 11-15, 2014 [oral].
47. D. I. Vulis, Y. Li, S. Kita, P. Munoz, O. Reshef, M. Loncar, and E. Mazur, "Design and characterization of a double zero refractive index metamaterial," MRS Fall Meeting (Boston), 2014.

Conference

Presentations by Group Members (cntd.)

48. D. I. Vulis, Y. Li, S. Kita, P. Munoz, O. Reshef, M. Loncar, and E. Mazur, "Experimental design and homogenization properties of a double zero refractive index metamaterial," SPIE Photonics West. (San Francisco),
49. Y. Li, S. Kita, P. Munoz, O. Reshef, D. I. Vulis, M. Loncar, and E. Mazur, "Homogenization of two-dimensional Dirac-Cone metamaterial," MRS fall meeting (Boston), 2014.
50. B.J.M. Hausmann, V. Venkataraman, I. Bulu, P. Deotare and M. Lončar "An on-chip diamond optical parametric oscillator" MRS, Boston, Dec 1-6, 2013 **(invited)**
51. Shota Kita, Daniel Vega Ramos, Ian Frank, Parag Deotare, Michael Burek, Cheng Wang, Marko Loncar, "Nanobeam Transducer Based on Photonic Crystal Nanocavities toward Ultlahigh Sensitive Mass Spectrometry," MRS Fall Meeting (Boston, US), UU6.08, Dec. 2013
52. R. Shankar, I. Bulu, M. Lončar, "Integrated high-quality factor silicon-on-sapphire ring resonators for mid-infraraed applications," *IEEE Int'l Conf. on Group IV Photonics*, Seoul, South Korea, August 28-30, 2013.
53. B. Hausmann, I. Bulu, V. Venkataraman, P. Deotare, M. Loncar, "An on-chip optical parametric oscillator in diamond", Nonlinear Optics Topical Meeting, Kohale Coast, Hawaii (July 21-26, 2013)
54. R Shankar, Y Yao, J Frish, I Frank, Y Song, J Kong, F Capasso, M Loncar, "Electro-Optic tuning of mid-infrared photonic crystal cavities using graphene",CLEO/QELS:2012 , San Jose, CA, May 6-11, 2013
55. R Shankar, I Bulu, M Loncar, "Integrated high-quality factor silicon-on-sapphire resonators for mid-infrared applications" CLEO/QELS:2012 , San Jose, CA, May 6-11, 2013
56. M.J. Burek, D. Ramos, N.P. de Leon, B.J. Shields, B.M. Hausmann, Y. Chu, Q. Quan, A.S. Zibrov, H. Park, M.D. Lukin, and M. Lončar, "Free-standing nanoscale mechanical and photonic devices fabricated in single-crystal diamond" *EIPBN 2013*, Nashville, TN, May 28-31, 2013 [oral].
57. D. Woolf, P. C. Hui, A. W. Rodriguez, E. Iwase, M. Khan, R. Ng, S. G. Johnson, F. Capasso, and M. Lončar, "Cavity optomechanics and the Casimir force: dynamics and applications," SPIE Photonics West , San Francisco, California, USA, February 2-7, 2013
58. Ian B Burgess, Bryan A Nerger, Kevin P Raymond, Alexis Goulet-Hanssens, Thomas A Singleton, Mackenzie H Kinney, Anna V Shneidman, Natalie Koay, Christopher J Barrett, Marko Lončar, Joanna Aizenberg, "Wetting in Color: From photonic fingerprinting of liquids to optical control of liquid percolation", SPIE Photonics West 2013, San Francisco, California, USA, February 2-7, 2013
59. Michael B Frish, Raji Shankar, Irfan Bulu, Ian Frank, Matthew C Laderer, Richard T Wainner, Mark G Allen, Marko Lončar, Progress toward mid-IR chip-scale integrated-optic TDLAS gas sensors", SPIE Photonics West 2013, San Francisco, California, USA, February 2-7, 2013
60. Y. Chu, N. de Leon, R. Evans, B. Hausmann, B. Shields, M. Burek, M. Markham, A. Stacey, D. Twitchen, H. Park, M. Loncar and M. Lukin "Quantum nanophotonics with nitrogen vacancy centers in diamond." APS March Meeting 2013.
61. J. Choy, B. Hausmann, I. Bulu, E. Janitz, and M. Lončar, "Plasmonic gratings for improving single photon collection for color centers in diamond," Material Research Society (MRS) Fall Meeting , Boston, MA, Nov 2012 **[invited]**
62. Eiji Iwase, Pui-Chuen Hui, David Woolf, Alejandro W. Rodriguez, Mughees Khan, Steven G. Johnson, Federico Capasso, Marko Lončar, "Towards optical manipulation of Casimir force using free-standing membranes with engineered optical and mechanical properties," CLEO/QELS:2012 , San Jose, CA, May 6-11, 2012 **(invited)**
63. Pui-Chuen Hui; David Woolf; Eiji Iwase; Irfan Bulu; Alejandro Rodriguez; Mughees Khan; Parag Deotare; Steven Johnson; Federico Capasso; Marko Lončar, "Dynamics of a tethered silicon photonic crystal membrane due to optical gradient, photothermal and Casimir forces," CLEO/QELS:2012 , San Jose, CA, May 6-11, 2012
64. M.J. Burek, B.J. Shields, N.P. de Leon, B.M. Hausmann, Y. Chu, Q. Quan, M.D. Lukin, and M. Lončar, "Angle-etched free-standing photonic crystal nanobeam cavities in single-crystal diamond" *CLEO 2012*, San Jose, CA, May 6-11, 2012 [oral].
65. David Woolf, Pui-Chuen Hui, Eiji Iwase, Alejandro Rodriguez, Alexander McCauley, Igor Lovchinsky, Mughees Khan, Steven Johnson, Marko Lončar, Federico Capasso, "Optical Bonding And Antibonding Forces In Asymmetric Geometries For Casimir Force Detection," CLEO/QELS:2011 , Baltimore, MD, May 4, 2012 **(invited)**
66. I.B. Burgess, "Innovation in the cracks between disciplines: The journey from undergraduate education to interdisciplinary research," 1st Annual Integrated Science Symposium - Synthesis, McMaster University, Hamilton, ON, Canada, March 29, 2012 **(invited)**
67. B.J.M. Hausmann et al,, "Diamond photonics - Towards cQED," Hasselt Diamond Workshop, Hasselt, Belgium, March 14, 2012 **(invited)**
68. J. Choy, "Single photon sources based on nanostructured diamond," Quantum Innovators Workshop, Institute for Quantum Computing , Waterloo, Canada, Sept 2012

Conference

Presentations by Group Members (cntd.)

69. B.J.M. Hausmann*, Y. Chu* et al, "Optical Diamond Nanocavities for Integrated Quantum Networks," ICAP, Paris-Massy Palaiseau, France, July 23, 2012
70. D. Ramos,P.B. Deotare, I. Bulu, and M. Lončar, "Thermo-optic and Optomechanical Mixing in Photonic Devices," PECS-X, Santa Fe, NM, June 3-8, 2012
71. M.J. Burek, B.M. Hausmann, B.J. Shields, N.P. de Leon, Y. Chu, Q. Quan, M.D. Lukin, and M. Lončar, "Photonic crystal nanobeam cavities in single-crystalline diamond" *PECS-X*, Santa Fe, NM, June 3-8, 2012 [poster].
72. I.B. Burgess, A.V. Shneidman, K.P. Raymond, N. Koay, M. Kinney, M. Kolle, J. Aizenberg, and M. Lončar, "Wetting in Color," PECS-X, Santa Fe, NM, June 3-8, 2012 **(poster – 3rd place award)**
73. P.Deotare et al, "Improving Optomechanical Contributions in Silicon Photonic Devices" PECS-X, Santa Fe, NM, June 3-8, 2012 **(poster – 1st place award)**
74. I. W. Frank, et al "Photonic Crystal Nanobeam Cavity Based Graphene Elec-tro-Optic Modulators", PECS-X, Santa Fe, NM, June 3-8, 2012
75. I.B. Burgess, K.P. Raymond, M.H. Kinney, N. Koay, A.V. Shneidman, M. Kolle, M. Lončar, and J. Aizenberg,, "Colorimetry for Organic Liquid Identification," 95th Canadian Chemistry Conference and Exhibition, Calgary, AB, Canada, May 30, 2012
76. R. Shankar, I. Bulu, R. Leijssen, and M. Lončar, "Mitigation of optical bistability in Si-based mid-infrared photonic crystal cavities using surface treatments," CLEO/QELS: 2012, San Jose, CA, May 6-11,2012 [Poster]
77. Q. Quan, I.B. Burgess, S.K.Y. Tang, D.L. Floyd, and M. Lončar, "High-Q, Low Index-Contrast Polymeric Photonic Crystal Nanobeam Cavities," CLEO/QELS: 2012, San Jose, CA, May 11, 2012
78. A.V. Shneidman, I.B. Burgess, M. Kolle, Q. Quan, J. Aizenberg, and M. Lončar, "Bio-inspired tunable disorder in a 3D photonic crystal via highly controlled partial wetting and drying," CLEO/QELS: 2012, San Jose, CA, May 11, 2012
79. I.B. Burgess, K.P. Raymond, N. Koay, A.V. Shneidman, M. Kolle, M. Lončar, and J. Aizenberg, "Highly selective colorimetric differentiation of organic liquids in 3D photonic crystals," CLEO/QELS: 2012, San Jose, CA, May 9, 2012
80. J.T. Choy, I. Bulu, B.M. Hausmann, T.M. Babinec, and M. Lončar, "Diamond-silver apertures with plasmonic gratings," CLEO/QELS: 2012, San Jose, CA, May 8,2012
81. P. B. Deotare, I. Bulu, I. Frank, Q. Quan, R. Ilic and M. Loncar "All optical control of optomechanical filters.", CLEO/QELS: 2012, San Jose, CA, May 8,2012.
82. P. B. Deotare, L. Kogos, Q. Quan, R. Ilic and M. Loncar, "On-chip integrated spectrometer using nanobeam photonic crystal cavities". CLEO/QELS: 2012, San Jose, CA, May 8,2012.
83. B. Hausmann, P. B. Deotare, I. Bulu and M. Loncar "Diamond photonic devices for non-linear optics", CLEO/QELS: 2012, San Jose, CA, May 8,2012.
84. Q. Quan et al.,, "High-Q, Low-index Contrast Photonic Crystal Nanobeam Polymeric Cavities," CLEO/QELS: 2012, San Jose, CA, May 8,2012
85. C. Evans, J. Bradley, J.T. Choy, O. Reshef, P. Deotare, M. Lončar, E. Mazur, "Submicrometer-width TiO2 waveguides," CLEO/QELS: 2012, San Jose, CA, May 7,2012
86. T.M. Babinec, H. Fedder, M. Doherty, J. Choy, I. Bulu, P.R. Hemmer, J. Wrachtrup, and M. Lončar, "Design of Diamond Photonic Devices for Spintronics," CLEO/QELS: 2012, San Jose, CA, May 6-11,2012
87. I.B. Burgess, K.P. Raymond, N. Koay, A. Shneidman, M. Kolle, M. Lončar, J. Aizenberg, "Wetting as a basis for a highly selective colorimetric indicator for organic liquids," APS March Meeting, Boston, MA, Mar 1,2012
88. N. de Leon, B. Shields, Y. Chu, B. Hausmann, M. Burek, H. Park, M. Loncar and M. Lukin, "Controlling emission of nitrogen-vacancy centers in diamond with nanoscale photonic interfaces", APS March Meeting, Boston, MA, Mar 1,2012
89. S. Hong, P. Maletinsky, M. Grinolds, L. Luan, B. Hausmann, M. Lukin, R. Walsworth, M. Loncar and A. Yacoby (2012). Optimizing the resolution and the sensitivity of a scanning NV magnetometer. APS March Meeting, Boston, MA, Mar 1,2012
90. B. Shields,, N. de Leon, B. Hausmann, Y. Chu, M. Burek, P. Maletinsky, Q. Quan, A. Zibrov, H. Park and M. Loncar. M. Lukin "A Light-Matter Interface with NV Centers". APS March Meeting, Boston, MA, Mar 1,2012
91. K.P. Raymond, I.B. Burgess, N. Koay, M. Kolle, M. Lončar, J. Aizenberg, "Wetting in Color: Designing a colorometric indicator for wettability," APS March Meeting, Boston, MA, Feb 27,2012
92. J. Bradley, C. Evans, J.T. Choy, O. Reshef, P.B. Deotare, and M. Lončar, E. Mazur, "TiO2 Nanophotonic Waveguides for On-Chip Nonlinear Optical Devices," SPIE Opto, San Francisco, CA, January 2012
93. D. N. Woolf, P. Hui, E. Iwase, A. Rodriguez, M. Khan, S. G. Johnson, M. Loncar, F. Capasso, "Optomechanical cooling, amplification, and bistability in coupled-mode suspended waveguide geometries", SPIE Photonics West, San Francisco (CA), January 2012.

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94. M. B. Frish, D. R. Scherer, R. T. Wainner, M. G. Allen, R. Shankar and M. Loncar "Monolithic integrated-optic TDLAS sensors". SPIE Defense, Security, and Sensing, International Society for Optics and Photonics (2012)
95. T. M. Babinec, J. T Choy, B. J. M. Hausmann, I. Bulu, M. Khan, P. R. Hemmer, and M. Loncar, "Nanophotonic Devices for Nitrogen-Vacancy Centers", Harvard-Australia Symposium on Diamond Photonics, Melbourne (Australia), January 2012 **(invited)**
96. B. Hausmann et al, "A diamond quantum router of single photons at room temperature", MRS Fall meeting, Boston, MA, USA, November 28, 2011
97. Q. Quan et al,, "Label-free Detection with Photonic Crystal Cavities," MicroTas 2011, Seattle, WA, Oct. 2nd-6th, 2011 [Poster]
98. J. T. Choy, J. D. B. Bradley, I. B. Burgess, P. B. Deotare, C. C. Evans, E. Mazur, M. Lončar, "Integrated optical resonators in titanium dioxide thin films for the visible wavelengths," MRS Fall 2011, Boston, Massachussets, November 28 – December 2, 2011. **[poster]**
99. B. Hausmann et al., "Diamond Nanophotonics", Advanced Diamond Science and Technology, Michigan State University, Detroit, MI, USA, October 31, 2011 **[invited]**
100. Q. Quan et al, "Label-free Detection with Photonic Crystal Cavities" (poster), MicroTas 2011, Oct. 2nd-6th, Seattle, USA **[poster]**
101. P. B. Deotare, I. W. Frank, I. Bulu, Y. Zhang, Q. Quan, R. Ilic, and Lončar M, "All-Optical Control of Opto-Mechanical Properties of Photonic Crystal Nano-Beam Filter", IEEE Group IV Photonics, London, September 2011 **[The Best Presentation Award]**
102. P. Maletinsky,, S. Hong, M. Grinolds, B. Hausmann, R. Walsworth, M. Lukin, M. Loncar and A. Yacoby, "Monolithic diamond probes for nanoscale magnetic imaging using single spins in diamond". APS March Meeting 2011.
103. J. Choy *et al*, "Diamond nanophotonics and quantum optics", International Materials Research Congress (IMRC), Cancun, Mexico (August 14-18, 2011) **[invited]**
104. Q. Quan et al, ""Ultrasensitive, Handheld, Real-Time Biomedical Sensor For Diagnostics and Food Safety", TechConnect World Conferences & Expo 2011, June 13th-16th, Boston, USA
105. J. Bradley, C. Evans, J. Choy, O. Reshef, P. B. Deotare, M. Lončar, and E. Mazur, "TiO_2 Nanophotonic Waveguides for On-Chip Nonlinear Optical Devices", SPIE Opto, San Francisco, 2012
106. I.B. Burgess, L. Mishchenko, B.D. Hatton, M. Kolle, M. Lončar, and J. Aizenberg, "Multilevel chemical encryption in 3D photonic crystals," ACS Colloid and Surface Science Symposium, Montreal, Canada, June 19th-22nd, 2011
107. I.B. Burgess, M. Lončar, and J. Aizenberg, "Chemically Encoded 3D Photonic Crystals: From Multilevel Encryption to Colorimetric Fluid Identification," TechConnect World 2011, Boston, MA, June 13th-16th, 2011
108. I.B. Burgess, L. Mishchenko, B.D. Hatton, M. Kolle, M. Lončar, and J. Aizenberg, "3D Photonic crystals with Patterned surface chemistry: From multilevel encryption to simple diagnostics," 94th Canadian Chemistry Conference and Exhibition, Montreal, Canada, June 5th-9th, 2011
109. Q. Quan, I.B. Burgess, P.B Deotare, I.W. Frank, S.K. Tang, D. Folyd, R. Illic, F. Vollmer and M. Lončar, "Ultrasensitive on-chip photonic crystal nanobeam sensor using optical bistability," CLEO/QELS 2011, Baltimore, MD , May 5, 2011
110. I.B. Burgess, L. Mishchenko, B.D. Hatton, M. Kolle, M. Lončar, and J. Aizenberg, "Encrypting messages in 3D photonic crystals with patterned surface chemistry," CLEO/QELS 2011, Baltimore, MD , May 2, 2011
111. Bulu, B.M. Hausmann, J.T. Choy, T.M. Babinec, and M. Lončar, "Plasmonic Apertures: A Scalable Plasmonic Architecture for Enhanced Diamond Single Photon Sources," CLEO/QELS 2011, Baltimore, MD , May 6, 2011
112. D. Woolf, P. Hui, E. Iwase, A.W. Rodriguez, A.P. McCauley, M. Kahn, S. Johnson, M. Lončar, and F. Capasso, "Optical bonding and antibonding forces in assymetric geometries for Casimir force detection," CLEO/QELS 2011, Baltimore, MD , May 4, 2011 **[invited]**
113. B.M. Hausmann, J.T. Choy, Q. Quan, M.W. McCutcheon, P. Maletinsky, T.M. Babinec, Y. Chu, A. Kubanek, A. Yacoby, M.D. Lukin, and M. Lončar, "On-Chip single crystal diamond resonators.," CLEO/QELS 2011, Baltimore, MD , May 5, 2011
114. J.T. Choy, B.M. Hausmann, T.M. Babinec, I. Bulu, and M. Lončar, "Enhanced Single Photon Emmission by Diamond-Plasmon Nanostructures.," CLEO/QELS 2011, Baltimore, MD , May 4, 2011
115. B.M. Hausmann, J.T. Choy, Q. Quan, M.W. McCutcheon, P. Maletinsky, T.M. Babinec, Y. Chu, A. Yacoby, M.D. Lukin, and M. Lončar, "Single crystal diamond resonators on-chip," Haraeus Diamond Workshop, Physikzentrum Bad Honnef, Germany, April, 2011 **[poster – The Best Poster Award]**
116. T.M. Babinec, B.M. Hausmann, J.T. Choy, Y. Zhang, and M. Lončar, "Single Photon Waveguides in Diamond: Nanowire and Nanobeam," Haraeus Diamond Workshop, Physikzentrum Bad Honnef, Germany, April, 2011 **[poster]**

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117. J.T. Choy, B.M. Hausmann, T.M. Babinec, I. Bulu, M. Khan, P. Maletinsky, A. Yacoby, and M. Lončar, "Enhanced Single Photon Emission by Diamond-Plasmon Nanoapertures," Haraeus Diamond Workshop, Physikzentrum Bad Honnef, Germany, April, 2011 **[poster]**
118. P.B. Deotare, I.W. Frank, Q. Quan, Y. Zhang, and M. Lončar, "Optically reconfigurable photonic crystal nanobeam filter and modulator (7946-38)," SPIE Photonics West, San Francisco, CA, January 26, 2011
119. I.B. Burgess, Y. Zhang, B.D. Hatton, J. Aizenberg, M. Lončar, "On substrate photonic-crystal nanobeam cavities in electron-beam resist, 7027-02 (oral)," SPIE Photonics West, San Francisco, CA, January 2011
120. Bulu, Y. Zhang, and M. Lončar, "High Q/V photonic crystal cavities for cavity QED and microwave photonics applications," SPIE Photonics West, San Francisco, CA, January, 2011
121. F. Degirmenci, I. Bulu, M. Lončar, and F. Capasso, "Waveguide integrated plasmonic platform for sensing and spectroscopy," SPIE Photonics West, San Francisco, CA, January, 2011
122. R. Shankar, R. Leijssen, and M. Lončar, "Silicon Membrane Photonic Crystal Cavities for the Mid-Infrared," SPIE Photonics West, San Francisco, CA, January 24, 2011
123. Q. Quan et al., "Spontaneous emission control with on-chip nanoslot waveguides, nanoring resonators and nanobeam cavities," Frontiers in Nanoscale Science and Technology Workshop, Tokyo, Japan, January 4-7, 2011 **[poster]**
124. T.M. Babinec, "Quantum Photonic Devices Based on Single Color Centers in Diamond Nanostructures," MRS Fall 2010, Boston, Massachussets, November 30, 2010
125. J.T. Choy, O. Bakr, T.M. Babinec, B.M. Hausmann, P.B. Deotare, I. Bulu, J. Bradley, R. Jensen, L. Marshall, E. Mazur, M. Bawendi, M. Lončar, "Optical Characterization of Diamond Nanoparticles and Their Applications," MRS Fall 2010, Boston, Massachussets, November 29, 2010
126. J.T. Choy, B.M. Hausmann, T.M. Babinec, I. Bulu, Y. Zhang, Q. Quan, M. Khan, M.W. McCutcheon, S. Hong, M. Grinolds, P. Maletinsky, A. Yacoby, M.D. Lukin, and M. Lončar, "Diamond Nanophotonics," Harvard Smithsonian Institute of Theoretical Atomic and Molecular Physics (ITAMP) Seminar Series., Cambridge, MA, Nov. 12, 2010 **[poster]**
127. Sindy K.Y. Tang, "Continuously Tunable Dye Laser Using Dissolving Drops in Microchannels," AIChE (American Institute of Chemical Engineers) 10th Annual meeting, Salt Lake City, NV, November 8, 2010 **[invited**]
128. A.W. Rodriguez, "Modeling Fluctuation-Induced Interactions.," Harvard Smithsonian Institute of Theoretical Atomic and Molecular Physics (ITAMP) Seminar Series., Cambridge, MA, October 28,2010 **[invited]**
129. T. Babinec *et al*, "Diamond nanophotonics and quantum optics", Australian Optical Society (December 2010) **[invited]**
130. Sindy K.Y. Tang, "Optics at liquid-liquid interfaces," IEEE Photonics Society Winter Topical Meeting on Optofluidics, Keystone, CO, January 2011 **[invited]**
131. Thomas M. Babinec, "Diamond Nanotechnology: The Diamond Nanowire Single Photon Antenna," Boston chapter of the IEEE Photonics Society Seminars, MIT Lincoln Labs, MA, Oct. 14, 2010 **[invited]**
132. I.W. Frank, P.B. Deotare, M.W. McCutcheon, Q. Quan, Y. Zhang, A.M. Conwill, and M. Lončar, "Reconfigurable Filters: Photonics Put in Motion Via Capacitive Force and Dielectrophoresis," PECS-IX, Granada, Spain, September 27, 2010
133. R. Shankar, I. Bulu, R. Leijssen, and M. Lončar, "Silicon-Based Mid-Infrared Photonic Crystal Cavities," PECS-IX, Granada, Spain, September 30, 2010
134. P.B. Deotare, Q. Quan, I.W. Frank, Y. Zhang, and M. Lončar, "Integrated All-Optical Reconfigurable Photonic Crystal Nanobeam Filters," PECS-IX, Granada, Spain, September 29, 2010 **[poster – Best Poster Award]**
135. M.W. McCutcheon, P.B. Deotare, Y. Zhang, and M. Lončar, "High-Q, TM-polarized photonic crystal nanocavities," PECS-IX, Granada, Spain, September 29, 2010 **[poster]**
136. Q. Quan et al., "On chip amplifier with Photonic Crystal Nanobeam Cavity," PECS-IX, Granada, Spain, September 29, 2010 **[poster]**
137. Y. Zhang et al., "Low-threshold photonic crystal nanobeam lasers and high-Q GHz resonators," PECS-IX, Granada, Spain, September 29, 2010 **[poster]**
138. T.M. Babinec*, B.M. Hausmann*, J.T. Choy*, Q. Quan, I. Bulu, Y. Zhang, O. Bakr, M. Khan, J. Sokol, M.W. McCutcheon, J. Maze, P. Hemmer, and M. Lončar, "Diamond Nanophotonics," Diamond Research Conference, Cambridge, England, July 13-16, 2010 **[poster]**
139. Y. Zhang, Mughees Khan, Parag Deotare, Ian W. Frank, Irfan Bulu, Yong Huang, Jae-Hyun Ryou, Russell Dupuis, Marko Lončar, "Photonic crystal nanobeam lasers," 7th International Symposium on Compound Semiconductors (ISCS/IPRM), Takamatsu City, Japan , May 31 - June 4, 2010
140. T. M. Babinec, B. Hausmann, M. Khan, Y. Zhang, P. Hemmer, M. Lončar, "Triggered Single Photon Emission from a Diamond Nanowire Antenna", CLEO 2010

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141. B.M. Hausmann, "Top-Down Fabricated Hybrid Diamond-Plasmon Nanoparticles," CLEO/QELS: 2010, San Jose, California, May 16-21, 2010
142. Q. Quan, et al, "Deterministic Design of Ultrahigh Q and Small Mode Volume Photonic Crystal Nanobeam Cavities," CLEO/QELS: 2010, San Jose, California, May 16-21, 2010
143. Q. Quan, J. Choy, M. Lončar, "Broadband waveguide-QED system on a chip", CLEO 2010 **[poster]**
144. Y. Zhang, M. Khan, Y. Huang, J. H. Ryou, P. Deotare, R. Dupuis, M. Lončar, "Photonic crystal nanobeam lasers", CLEO 2010
145. Bulu and M. Lončar, "Waveguide Integrated Plasmonic Devices," CLEO/QELS: 2010, San Jose, California, May 16-21, 2010 **[poster]**
146. Q. Quan et al., "Photonic Crystal Nanobeam Cavities," Nano-optics, Plasmonics and Advanced Materials Workshop, NIST, Gaithersburg, MD, April 19-22, 2010
147. I.W. Frank, *et al.,* "Dynamically reconfigurable nanobeam photonic crystal cavitie," SPIE Photonics West, OPTO: Photonic and Phononic Crystal Materials and Devices IX, San Francisco, California (January 26, 2010)
148. M. Khan, *et al.*, "1D Si3N4 nanobeam cavities," SPIE Photonics West, OPTO: Photonic and Phononic Crystal Materials and Devices IX, San Francisco, California (January 26, 2010).
149. T.M. Babinec, B. Hausmann, M. Khan, Y. Zhang, J. Maze, P. Hemmer, M. Lončar, "Efficient Single Photon Sources Based on Diamond," MRS Fall 2009, Boston, Massachussets, December 1-3, 2009
150. B. M. Hausmann, *et al*., "Fabrication of Diamond Nanostructures for Quantum Information Processing Applications", MRS Fall Meeting, Boston (December 2009)
151. P.B. Deotare and M. Lončar, "Photonic Crystal Nanobeam Cavities for Reconfigurable Nanophotonics and Cavity QED," Asia Communications and Photonics Conference and Exhibition (ACP) Technical, Shanghai, China, November 6, 2009 **[invited]**
152. D.N. Woolf, M. Lončar, and F. Capasso, "Optomechanics with surface plasmons: attractive and repulsive forces between planar metal surfaces," SPIE Optics and Photonics, San Diego, CA (August 4, 2009)
153. I.B. Burgess, M.W. McCutcheon, A.W. Rodriguez, J. Bravo-Abad, Y. Zhang, S.G. Johnson, and M. Lončar, "Efficient Difference Frequency Generation in Triply Resonant Nonlinear Cavities," OSA Nonlinear Optics Topical Meeting, Honolulu, Hawaii (July 12-17th, 2009)
154. Q. Quan et al., "A Broadband Waveguide QED System On Chip," The International Conference on Quantum Foundation and Technology, Shanghai, China, July 17-22, 2009
155. T.M. Babinec, B. Hausmann, M. Khan, K. Martinick, M.W. McCutcheon, P. Hemmer, and M. Lončar, "Fabrication and Characterization of Diamond Nanowires with Embedded Nitrogen Vacancy Color Centers for Nanophotonic Devices," New Diamond and Nano Carbons Conference, Traverse City, MI (June 10, 2009)
156. Y. Zhang, M.W. McCutcheon, and M. Lončar, "High Quality Factor Photonic Crystal Nanocavities in 'Impossible Scenarios': Dual-Polarization, Low-Index Materials and Air-Band Modes," CLEO/IQEC, Baltimore, MD (65, 2009)
157. P.B. Deotare and M. Lončar, "High Quality Factor 1D Photonic Crystal Cavities in Silicon," CLEO/IQEC, Baltimore, MD (June 5, 2009)
158. T.M. Babinec, B. Hausmann, M. Khan, K. Martinick, M.W. McCutcheon, P. Hemmer, and M. Lončar, "A Single Photon Source Based on Diamond Nanowires," CLEO/IQEC, Baltimore, MD (June 4, 2009) **[post-deadline]**
159. M.W. McCutcheon, D.E. Chang, Y. Zhang, M.D. Lukin and, M. Lončar, "Frequency Conversion of Spontaneously Emitted Photons in a Nonlinear Photonic Crystal Nanocavity," CLEO/IQEC, Baltimore, MD (June 1st, 2009) **[invited]**
160. Y. Zhang and M. Lončar, "Submicron Diameter Micropillar Cavities with High Quality Factor and Ultra-Small Mode Volume," CLEO/IQEC, Baltimore, MD (June 3, 2009)
161. Y. Zhang, M. S. Bradley, J. R. Tischler, V. Bulovic, and M. Lončar, "Nanocavity-induced strong coupling in J-aggregate" PECS VIII (153), Sydney, Australia (April 7, 2009) **[poster] [PRIZE: 2nd best poster]**
162. Y. Zhang, M.W. McCutcheon, and M. Lončar, "High quality factor photonic crystal nanocavities in 'impossible scenarios'," PECS VIII (53), Sydney, Australia (April 6, 2009) **[poster]**
163. M.W. McCutcheon and M. Lončar, "Ultra-high Q/V double mode photonic crystal nanocavity for nonlinear frequency conversion," PECS VIII, Sydney, Australia (April 6, 2009)
164. P.B. Deotare and M. Lončar, "Coupled High Quality Factor 1D Photonic Crystal Cavities," PECS VIII, Sydney, Australia (April 6, 2009) **[poster]**
165. M.W. McCutcheon, and M. Lončar, "High Q/V photonic crystal nanocavity design in low refractive index materials," SPIE Photonics West (7223-32), San Jose, CA (January 27, 2009)
166. Y. Zhang, and M. Lončar, "Ultra-high Q/V nanocavities based on sub-micron diameter micropillars and semiconductor nanowires," SPIE Photonics West (7223-31), San Jose, CA (January 27, 2009)

167. P.B. Deotare, M. Khan, and M. Lončar, "Vapor phase release of silicon nanostructures for optomechanics applications," SPIE Photonics West (7205-09), San Jose, CA (January 27, 2009)
168. T.M. Babinec, K. Smith, M. Khan, and M. Lončar, "Photonic Devices Fabricated in Single-Crystal Diamond Using Focused Ion Beam Milling," MRS, Boston, MA (December 2008)
169. M. Khan, M.W. McCutcheon, T.M. Babinec, P.B. Deotare, and M. Lončar, "Design, Fabrication, and Characterization of Si3N4 Photonic Crystal Nanocavities for Diamond-based Quantum Information Processing Applications," MRS Fall Meeting, Vol.1108-1152E, Boston, MA (December 2008)