

Aho, AT, Viheriälä, J, Koskinen, M, Uusitalo, T, Reuna, J & Guina, M 2020, 'High-Power 1.5 μm Tapered Distributed Bragg Reflector Laser Diodes for Eye-Safe LIDAR', *IEEE Photonics Technology Letters*, vol. 32, no. 19, pp. 1249-1252. <https://doi.org/10.1109/LPT.2020.3019845>

Terryn, L, Calders, K, Disney, M, Origo, N, Malhi, Y, Newnham, G, Raunonen, P, Åkerblom, M & Verbeeck, H 2020, 'Tree species classification using structural features derived from terrestrial laser scanning', *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 168, pp. 170-181. <https://doi.org/10.1016/j.isprsjprs.2020.08.009>

Tan, C, Ceballos, G, Kasabov, N & Subramaniam, NP 2020, 'Fusionsense: Emotion classification using feature fusion of multimodal data and deep learning in a brain-inspired spiking neural network', *Sensors (Switzerland)*, vol. 20, no. 18, 5328. <https://doi.org/10.3390/s20185328>

Asamoah, BO, Mohamed, S, Datta, S, Karvinen, P, Rekola, H, Priimagi, A & Hakala, TK 2020, 'Optically induced crossover from weak to strong coupling regime between surface plasmon polaritons and photochromic molecules', *Optics Express*, vol. 28, no. 18, pp. 26509-26518. <https://doi.org/10.1364/OE.400359>

He, H, Chen, X, Mehmood, A, Raivio, L, Huttunen, H, Raunonen, P & Virkki, J 2020, 'ClothFace: A Batteryless RFID-Based Textile Platform for Handwriting Recognition', *Sensors (Basel, Switzerland)*, vol. 20, no. 17, 4878. <https://doi.org/10.3390/s20174878>

Nechay, K, Mereuta, A, Paranthoen, C, Brevalle, G, Levallois, C, Alouini, M, Chevalier, N, Perrin, M, Suruceanu, G, Caliman, A, Kapon, E & Guina, M 2020, 'High-Power 760 nm VECSEL Based on Quantum Dot Gain Mirror', *IEEE journal of quantum electronics*, vol. 56, no. 4. <https://doi.org/10.1109/JQE.2020.2986770>

Prytz, NB, Qvarngård, D, Härkönen, A, Guina, M & Gallo, K 2020, 'Edge-enhanced optical parametric generation in periodically poled LiNbO_3 ', *Optics Express*, vol. 28, no. 14, pp. 20879-20887. <https://doi.org/10.1364/OE.392833>

Sharma, RO, Rantala, TT & Hoggan, PE 2020, 'Selective hydrogen production at Pt(111) investigated by Quantum Monte Carlo methods for metal catalysis', *International Journal of Quantum Chemistry*, vol. 120, no. 11, e26198. <https://doi.org/10.1002/qua.26198>

Eslami, Z, Ryzkowski, P, Salmela, L & Genty, G 2020, 'Low-noise octave-spanning mid-infrared supercontinuum generation in a multimode chalcogenide fiber', *Optics Letters*, vol. 45, no. 11, pp. 3103-3106. <https://doi.org/10.1364/OL.392282>

Gray, AC, Woods, JRC, Carpenter, LG, Kahle, H, Berry, SA, Tropper, AC, Guina, M, Apostolopoulos, V, Smith, PGR & Gawith, CBE 2020, 'Zinc-indiffused $\text{MgO}:\text{PPLN}$ waveguides for blue/UV generation via VECSEL pumping', *Applied Optics*, vol. 59, no. 16, pp. 4921-4926. <https://doi.org/10.1364/AO.387839>

Shevkunov, I, Katkovnik, V & Egiazarian, K 2020, 'Lensless hyperspectral phase imaging in a self-reference setup based on Fourier transform spectroscopy and noise suppression', *Optics Express*, vol. 28, no. 12, pp. 17944-17956. <https://doi.org/10.1364/OE.393009>

Shevkunov, I, Katkovnik, V, Claus, D, Pedrini, G, Petrov, NV & Egiazarian, K 2020, 'Hyperspectral phase imaging based on denoising in complex-valued eigensubspace', *Optics and Lasers in Engineering*, vol. 127, 105973. <https://doi.org/10.1016/j.optlaseng.2019.105973>

Wu, H, Han, B, Wang, Z, Genty, G, Feng, G & Liang, H 2020, 'Temporal ghost imaging with random fiber lasers', *Optics Express*, vol. 28, no. 7, pp. 9957-9964. <https://doi.org/10.1364/OE.387762>

Meng, F, Lapre, C, Billet, C, Genty, G & Dudley, JM 2020, 'Instabilities in a dissipative soliton-similariton laser using a scalar iterative map', *Optics Letters*, vol. 45, no. 5, pp. 1232-1235. <https://doi.org/10.1364/OL.386110>

- Brandt, F, Hiekkamäki, M, Bouchard, F, Huber, M & Fickler, R 2020, 'High-dimensional quantum gates using full-field spatial modes of photons', *Optica*, vol. 7, no. 2, pp. 98-107. <https://doi.org/10.1364/OPTICA.375875>
- Kocsis, P, Shevkunov, I, Katkovnik, V & Egiazarian, K 2020, 'Single exposure lensless subpixel phase imaging: Optical system design, modelling, and experimental study', *Optics Express*, vol. 28, no. 4, pp. 4625-4637. <https://doi.org/10.1364/OE.379785>
- Tuorila, H, Viheriälä, J, Zia, N, Cherchi, M, Harjanne, M, Isoaho, R, Aalto, T & Guina, M 2020, 'Precise length definition of active GaAs-based optoelectronic devices for low-loss silicon photonics integration', *Optics Letters*, vol. 45, no. 4, pp. 943-946. <https://doi.org/10.1364/OL.382109>
- Moiseev, EI, Maximov, MV, Kryzhanovskaya, NV, Simchuk, OI, Kulagina, MM, Kadinskaya, SA, Guina, M & Zhukov, AE 2020, 'Comparative Analysis of Injection Microdisk Lasers Based on InGaAsN Quantum Wells and InAs/InGaAs Quantum Dots', *Semiconductors*, vol. 54, no. 2, pp. 263-267. <https://doi.org/10.1134/S1063782620020177>
- Nieminen, A, Marini, A & Ornigotti, M 2020, 'Goos-Hänchen and Imbert-Fedorov shifts for epsilon-near-zero materials', *Journal of Optics*, vol. 22, no. 3, 035601. <https://doi.org/10.1088/2040-8986/ab6ae7>
- Viljanen, J, Kalmankoski, K, Contreras, V, Sarin, JK, Sorvajärvi, T, Kinnunen, H, Enestam, S & Toivonen, J 2020, 'Sequential Collinear Photofragmentation and Atomic Absorption Spectroscopy for Online Laser Monitoring of Triatomic Metal Species', *Sensors (Basel, Switzerland)*, vol. 20, no. 2, 533. <https://doi.org/10.3390/s20020533>
- Ukkonen, L, Sydänheimo, L, Ma, S & Björninen, T 2020, Backscattering-based wireless communication and power transfer to small biomedical implants. in BL Gray & H Becker (eds), *Microfluidics, BioMEMS, and Medical Microsystems XVIII.*, 112350A, Progress in Biomedical Optics and Imaging - Proceedings of SPIE, vol. 11235, SPIE, Microfluidics, BioMEMS, and Medical Microsystems, San Francisco, United States, 1/02/20. <https://doi.org/10.1117/12.2552183>
- Habib, M, Briukhanova, D, Das, N, Yildiz, BC & Caglayan, H 2020, 'Controlling the plasmon resonance via epsilon-near-zero multilayer metamaterials', *Nanophotonics*, vol. 9, no. 11, 20200245. <https://doi.org/10.1515/nanoph-2020-0245>
- Kulya, MS, Katkovnik, VY, Egiazarian, K & Petrov, NV 2020, 'Features of correlation measurements of the parameters of pulsed hyperspectral optical fields using an asymmetric interferometer', *Quantum Electronics*, vol. 50, no. 7, pp. 679-682. <https://doi.org/10.1070/QEL17292>
- Fickler, R, Bouchard, F, Giese, E, Grillo, V, Leuchs, G & Karimi, E 2020, 'Full-field mode sorter using two optimized phase transformations for high-dimensional quantum cryptography', *Journal of Optics (United Kingdom)*, vol. 22, no. 2, 024001. <https://doi.org/10.1088/2040-8986/ab6303>
- Korobko, DA, Stoliarov, DA, Itrin, PA, Odnoblyudov, MA, Petrov, AB & Gumenyuk, RV 2020, 'Harmonic mode-locking fiber ring laser with a pulse repetition rate up to 12 GHz', *Optics and laser technology*, vol. 133, 106526. <https://doi.org/10.1016/j.optlastec.2020.106526>
- Huttunen, MJ, Hristu, R, Dumitru, A, Floroiu, I, Costache, M & Stanciu, SG 2020, 'Multiphoton microscopy of the dermoepidermal junction and automated identification of dysplastic tissues with deep learning', *Biomedical Optics Express*, vol. 11, no. 1, pp. 186-199. <https://doi.org/10.1364/BOE.11.000186>
- Mourgias-Alexandris, G, Totovic, A, Tsakyridis, A, Passalis, N, Vyrsoinos, K, Tefas, A & Pleros, N 2020, 'Neuromorphic Photonics with Coherent Linear Neurons Using Dual-IQ Modulation Cells', *Journal of Lightwave Technology*, vol. 38, no. 4, pp. 811-819. <https://doi.org/10.1109/JLT.2019.2949133>
- Ding, C, Koivurova, M, Setälä, T, Turunen, J & Friberg, AT 2020, 'Spectral invariance and scaling law for nonstationary optical fields', *Physical Review A*, vol. 101, no. 3, 033808. <https://doi.org/10.1103/PhysRevA.101.033808>

- Gumenyuk, RV, Korobko, DA & Zolotovskii, IO 2019, 'Stabilization of passive harmonic mode locking in a fiber ring laser', *Optics Letters*, vol. 45, no. 1, pp. 184-187. <https://doi.org/10.1364/OL.45.000184>
- Ometov, A, Bezzateev, S, Voloshina, N, Masek, P & Komarov, M 2019, 'Environmental monitoring with distributed mesh networks: An overview and practical implementation perspective for urban scenario', *Sensors (Switzerland)*, vol. 19, no. 24, 5548. <https://doi.org/10.3390/s19245548>
- Mehmood, A, Chen, X, He, H, Ukkonen, L & Virkki, J 2019, Eco-friendly flexible wireless platforms by 3D printing pen. in *2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019 - Proceedings.*, 9021887, 2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019 - Proceedings, IEEE, pp. 2422-2425, 2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17/12/19. <https://doi.org/10.1109/PIERS-Fall48861.2019.9021887>
- Khan, Z, He, H, Chen, X, Ukkonen, L & Virkki, J 2019, Embroidered and e-textile conductors embedded inside 3D-printed structures. in *2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019 - Proceedings.*, 9021681, IEEE, pp. 1675-1680, 2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17/12/19. <https://doi.org/10.1109/PIERS-Fall48861.2019.9021681>
- Chen, X, He, H, Yang, Y, Gou, M, Sydanheimo, L, Ukkonen, L & Virkki, J 2019, Maintenance-free moisture sensor on dishcloth substrate. in *2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019 - Proceedings.*, 9021487, IEEE, pp. 2418-2421, 2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17/12/19. <https://doi.org/10.1109/PIERS-Fall48861.2019.9021487>
- Mehmood, A, Vianto, V, He, H, Chen, X, Buruk, OO, Ukkonen, L & Virkki, J 2019, Passive UHF RFID-based user interface on a wooden surface. in *2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019 - Proceedings.*, 9021441, IEEE, pp. 1760-1763, 2019 Photonics and Electromagnetics Research Symposium - Fall, PIERS - Fall 2019, Xiamen, China, 17/12/19. <https://doi.org/10.1109/PIERS-Fall48861.2019.9021441>
- Turov, AT, Kulya, MS, Petrov, NV & Gorodetsky, A 2019, 'Resolution and contrast in terahertz pulse time-domain holographic reconstruction', *Applied Optics*, vol. 58, no. 34, pp. G231-G240. <https://doi.org/10.1364/AO.58.00G231>
- Kulya, M, Petrov, NV, Katkovnik, V & Egiazarian, K 2019, 'Terahertz pulse time-domain holography with balance detection: Complex-domain sparse imaging', *Applied Optics*, vol. 58, no. 34, pp. G61-G70. <https://doi.org/10.1364/AO.58.000G61>
- Shevkunov, I, Katkovnik, V, Claus, D, Pedrini, G, Petrov, NV & Egiazarian, K 2019, 'Spectral object recognition in hyperspectral holography with complex-domain denoising', *Sensors (Switzerland)*, vol. 19, no. 23, 5188. <https://doi.org/10.3390/s19235188>
- Difallah, M, Szameit, A & Ornigotti, M 2019, 'Path-integral description of quantum nonlinear optics in arbitrary media', *Physical Review A*, vol. 100, no. 5, 053845. <https://doi.org/10.1103/PhysRevA.100.053845>
- Tomkowski, R, Sorsa, A, Santa-Aho, S, Lundin, P & Vippola, M 2019, 'Statistical evaluation of barkhausen noise testing (BNT) for ground samples', *Sensors (Switzerland)*, vol. 19, no. 21, 4716. <https://doi.org/10.3390/s19214716>
- Hiekkamäki, M, Prabhakar, S & Fickler, R 2019, 'Near-perfect measuring of full-field transverse-spatial modes of light', *Optics Express*, vol. 27, no. 22, pp. 31456-31464. <https://doi.org/10.1364/OE.27.031456>
- Hallman, LW, Ryvkin, BS, Avrutin, EA, Aho, AT, Viheriälä, J, Guina, M & Kostamovaara, JT 2019, 'High Power 1.5um Pulsed Laser Diode with Asymmetric Waveguide and Active Layer Near p-cladding', *IEEE Photonics Technology Letters*, vol. 31, no. 20, pp. 1635-1638. <https://doi.org/10.1109/LPT.2019.2940231>
- Hallman, L, Ryvkin, BS, Avrutin, EA, Aho, AT, Viheriälä, J, Guina, M & Kostamovaara, JT 2019, Double-asymmetric-structure 1.5 μ m high power laser diodes. in *Proceedings of the 2019 IEEE High Power Diode Lasers and Systems Conference, HPD 2019 - Co-located with Photonex 2019*. IEEE, pp. 19-20, IEEE High Power Diode Lasers and Systems Conference, Coventry, United Kingdom, 9/10/19. <https://doi.org/10.1109/HPD48113.2019.8938671>

- Vetter, C, Steinkopf, R, Bergner, K, Ornigotti, M, Nolte, S, Gross, H & Szameit, A 2019, 'Realization of Free-Space Long-Distance Self-Healing Bessel Beams', *Laser and Photonics Reviews*, vol. 13, no. 10, 1900103. <https://doi.org/10.1002/lpor.201900103>
- Klauck, F, Teuber, L, Ornigotti, M, Heinrich, M, Scheel, S & Szameit, A 2019, 'Observation of PT-symmetric quantum interference', *Nature Photonics*. <https://doi.org/10.1038/s41566-019-0517-0>
- Saleh, A, Aalto, A, Ryczkowski, P, Genty, G & Toivonen, J 2019, 'Short-range supercontinuum-based lidar for temperature profiling', *Optics Letters*, vol. 44, no. 17, pp. 4223-4226. <https://doi.org/10.1364/OL.44.004223>
- Aho, A, Viheriälä, J, Virtanen, H, Zia, N, Isoaho, R & Guina, M 2019, 'High power GaInNAs superluminescent diodes emitting over 400 mW in the 1.2 μm wavelength range', *Applied Physics Letters*, vol. 115, no. 8, 081104 . <https://doi.org/10.1063/1.5111012>
- Nechay, K, Kahle, H, Penttinen, J-P, Rajala, P, Tukiainen, A, Ranta, S & Guina, M 2019, 'AlGaAs/AlGaInP VECSELs with Direct Emission at 740-770 nm', *IEEE Photonics Technology Letters*, vol. 31, no. 15, pp. 1245-1248. <https://doi.org/10.1109/LPT.2019.2924289>
- Schraik, D, Varvia, P, Korhonen, L & Rautiainen, M 2019, 'Bayesian inversion of a forest reflectance model using Sentinel-2 and Landsat 8 satellite images', *JOURNAL OF QUANTITATIVE SPECTROSCOPY AND RADIATIVE TRANSFER*, vol. 233, pp. 1-12. <https://doi.org/10.1016/j.jqsrt.2019.05.013>
- Zhang, W, Fickler, R, Giese, E, Chen, L & Boyd, RW 2019, 'Influence of pump coherence on the generation of position-momentum entanglement in optical parametric down-conversion', *Optics Express*, vol. 27, no. 15, pp. 20745-20753. <https://doi.org/10.1364/OE.27.020745>
- Wu, H, Ryczkowski, P, Friberg, AT, Dudley, JM & Genty, G 2019, 'Temporal ghost imaging using wavelength conversion and two-color detection', *Optica*, vol. 6, no. 7, pp. 902-906. <https://doi.org/10.1364/OPTICA.6.000902>
- Ali, I, Suominen, O, Gotchev, A & Morales, ER 2019, 'Methods for simultaneous robot-world-hand-eye calibration: A comparative study', *Sensors (Switzerland)*, vol. 19, no. 12, 2837. <https://doi.org/10.3390/s19122837>
- Kekonen, A, Bergelin, M, Johansson, M, Kumar Joon, N, Bobacka, J & Viik, J 2019, 'Bioimpedance Sensor Array for Long-Term Monitoring of Wound Healing from Beneath the Primary Dressings and Controlled Formation of H_2O_2 Using Low-Intensity Direct Current', *Sensors*, vol. 19, no. 11. <https://doi.org/10.3390/s19112505>
- Kahle, H, Phung, H-M, Penttinen, J-P, Rajala, P, Tukiainen, A, Ranta, S & Guina, M 2019, Double-side pumped membrane external-cavity surface-emitting laser (MECSEL) with increased efficiency emitting > 3 W in the 780 nm region . in *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE, Conference on Lasers and Electro-Optics, San Jose, United States, 5/05/19. <https://doi.org/10.23919/CLEO.2019.8749958>
- Abdallah, Z, Stefszky, M, Ulvila, V, Silberhorn, C & Vainio, M 2019, Frequency Comb Generation in a Continuous-Wave Pumped Second-Order Nonlinear Waveguide Resonator. in *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE, Conference on Lasers and Electro-Optics, San Jose, United States, 5/05/19. <https://doi.org/10.23919/CLEO.2019.8750403>
- Kurka, M, Dyksik, M, Suomalainen, S, Koivusalo, E, Guina, M & Motyka, M 2019, 'GaInAsSb/AlGa(In)AsSb type I quantum wells emitting in 3 μm range for application in superluminescent diodes', *Optical Materials*, vol. 91, pp. 274-278. <https://doi.org/10.1016/j.optmat.2019.03.036>
- Saad-Bin-Alam, M, Reshef, O, Huttunen, MJ, Carlow, G, Sullivan, B, Menard, JM, Dolgaleva, K & Boyd, RW 2019, High-Q resonance train in a plasmonic metasurface. in *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE, Conference on Lasers and Electro-Optics, San Jose, United States, 5/05/19. <https://doi.org/10.23919/CLEO.2019.8750206>

Sadiek, I, Mikkonen, T, Vainio, M, Toivonen, J & Foltynowicz, A 2019, Optical Frequency Comb Photoacoustic Spectroscopy. in *2019 Conference on Lasers and Electro-Optics, CLEO 2019 - Proceedings*. IEEE, Conference on Lasers and Electro-Optics, San Jose, United States, 5/05/19. <https://doi.org/10.23919/CLEO.2019.8749688>

Kerst, T, Malmbeck, R, Ial Banik, NL & Toivonen, J 2019, 'Alpha radiation-induced luminescence by am-241 in aqueous nitric acid solution', *Sensors (Switzerland)*, vol. 19, no. 7, 1602. <https://doi.org/10.3390/s19071602>

Ometov, A, Bezzateev, S, Davydov, V, Shchesniak, A, Masek, P, Lohan, ES & Koucheryavy, Y 2019, 'Positioning information privacy in intelligent transportation systems: An overview and future perspective', *Sensors*, vol. 19, no. 7, 1603. <https://doi.org/10.3390/s19071603>

Vimieiro, RB, Borges, LR, Caron, RF, Barufaldi, B, Bakic, PR, Maidment, ADA & Vieira, MAC 2019, Noise measurements from reconstructed digital breast tomosynthesis. in TG Schmidt, G-H Chen & H Bosmans (eds), *Medical Imaging 2019: Physics of Medical Imaging.*, 109480C, Progress in Biomedical Optics and Imaging - Proceedings of SPIE, vol. 10948, SPIE, IEEE, Medical Imaging, 1/01/00. <https://doi.org/10.1117/12.2512977>

Smirnov, S, Battisti, F & Gotchev, A 2019, 'Layered approach for improving the quality of free-viewpoint depth-image-based rendering images', *Journal of Electronic Imaging*, vol. 28, no. 1, 013049. <https://doi.org/10.1117/1.JEI.28.1.013049>

Nejadsattari, F, Zhang, Y, Bouchard, F, Larocque, H, Sit, A, Cohen, E, Fickler, R & Karimi, E 2019, 'Experimental realization of wave-packet dynamics in cyclic quantum walks', *Optica*, vol. 6, no. 2, pp. 174-180. <https://doi.org/10.1364/OPTICA.6.000174>

Dubietis, A, Couairon, A & Genty, G 2019, 'Supercontinuum generation: Introduction', *Journal of the Optical Society of America B: Optical Physics*, vol. 36, no. 2, pp. SG1-SG3. <https://doi.org/10.1364/JOSAB.36.000SG1>

Ponomarenko, M, Miroshnichenko, O, Lukin, V & Egiazarian, K 2019, Additional lossless compression of JPEG images based on BPG. in *Image Processing: Algorithms and Systems XVII*. IS and T International Symposium on Electronic Imaging Science and Technology, 17th Image Processing: Algorithms and Systems Conference, IPAS 2019, Burlingame, United States, 13/01/19. <https://doi.org/10.2352/ISSN.2470-1173.2019.11.IPAS-263>

Ieremeiev, O, Lukin, V, Ponomarenko, N & Egiazarian, K 2019, Combined no-reference IQA metric and its performance analysis. in *Image Processing: Algorithms and Systems XVII*. IS and T International Symposium on Electronic Imaging Science and Technology, 17th Image Processing: Algorithms and Systems Conference, IPAS 2019, Burlingame, United States, 13/01/19. <https://doi.org/10.2352/ISSN.2470-1173.2019.11.IPAS-260>

Ponomarenko, M, Katkovnik, V & Egiazarian, K 2019, Phase masks optimization for broadband diffractive imaging. in *Image Processing: Algorithms and Systems XVII*. IS and T International Symposium on Electronic Imaging Science and Technology, 17th Image Processing: Algorithms and Systems Conference, IPAS 2019, Burlingame, United States, 13/01/19. <https://doi.org/10.2352/ISSN.2470-1173.2019.11.IPAS-258>

Akpinar, U, Sahin, E, Suominen, O & Gotchev, A 2019, Thin form-factor super multiview head-up display system. in *Stereoscopic Displays and Applications XXX*. IS&T International Symposium on Electronic Imaging, Stereoscopic Displays and Applications Conference, Burlingame, United States, 13/01/19. <https://doi.org/10.2352/ISSN.2470-1173.2019.3.SDA-631>

Ojha, N, Tuomisto, M, Lastusaari, M & Petit, L 2019, 'Phosphate glasses with blue persistent luminescence prepared using the direct doping method', *Optical Materials*, vol. 87, pp. 151-156. <https://doi.org/10.1016/j.optmat.2018.03.063>

Kahle, H, Penttinen, JP, Phung, HM, Rajala, P, Tukiainen, A, Ranta, S & Guina, M 2019, 'Comparison of single-side and double-side pumping of membrane external-cavity surface-emitting lasers', *Optics Letters*, vol. 44, no. 5, pp. 1146-1149. <https://doi.org/10.1364/OL.44.001146>

Huttunen, MJ, Reshef, O, Stolt, T, Dolgaleva, K, Boyd, RW & Kauranen, M 2019, 'Efficient nonlinear metasurfaces by using multiresonant high-Q plasmonic arrays', *Journal of the Optical Society of America B: Optical Physics*, vol. 36, no. 7, pp. E30-E35. <https://doi.org/10.1364/JOSAB.36.000E30>

Mereuta, A, Nechay, K, Caliman, A, Suruceanu, G, Rudra, A, Gallo, P, Guina, M & Kapon, E 2019, 'Flip-chip Wafer-fused OP-VECSELs emitting 3.65 W at the 1.55- μm waveband', *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 25, no. 6. <https://doi.org/10.1109/JSTQE.2019.2922819>

Kulya, M, Petrov, NV, Tsytkin, A, Egiazarian, K & Katkovnik, V 2019, 'Hyperspectral data denoising for terahertz pulse time-domain holography', *Optics Express*, vol. 27, no. 13, pp. 18456-18476. <https://doi.org/10.1364/OE.27.018456>

Toenger, S, Mäkitalo, R, Ahvenjärvi, J, Ryzkowski, P, Närhi, M, Dudley, JM & Genty, G 2019, 'Interferometric autocorrelation measurements of supercontinuum based on two-photon absorption', *Journal of the Optical Society of America B: Optical Physics*, vol. 36, no. 5, pp. 1320-1326. <https://doi.org/10.1364/JOSAB.36.001320>

Sharma, V, Yiannacou, K, Karjalainen, M, Lahtonen, K, Valden, M & Sariola, V 2019, 'Large-scale efficient water harvesting using bioinspired micro-patterned copper oxide nanoneedle surfaces and guided droplet transport', *Nanoscale Advances*, vol. 1, no. 10, pp. 4025-4040. <https://doi.org/10.1039/c9na00405j>

Pitkänen, TP, Raunonen, P & Kangas, A 2019, 'Measuring stem diameters with TLS in boreal forests by complementary fitting procedure', *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 147, pp. 294-306. <https://doi.org/10.1016/j.isprsjprs.2018.11.027>

Trevlakis, SE, Boulogeorgos, AAA, Sofotasios, PC, Muhaidat, S & Karagiannidis, GK 2019, 'Optical wireless cochlear implants', *Biomedical Optics Express*, vol. 10, no. 2, pp. 707-730. <https://doi.org/10.1364/BOE.10.000707>

Piccardi, A, Perumbilavil, S, Kauranen, M, Strangi, G & Assanto, G 2019, Random lasing control with optical spatial solitons in nematic liquid crystals. in P Ribeiro, M Raposo & D Andrews (eds), *PHOTOPTICS 2019 - Proceedings of the 7th International Conference on Photonics, Optics and Laser Technology*. SCITEPRESS, pp. 289-293, International Conference on Photonics, Optics and Laser Technology, Prague, Czech Republic, 25/02/19. <https://doi.org/10.5220/0007575102890293>

Perumbilavil, S, Kauranen, M & Assanto, G 2019, 'Spatiospectral features of a soliton-assisted random laser in liquid crystals', *Optics Letters*, vol. 44, no. 14, pp. 3574-3577. <https://doi.org/10.1364/OL.44.003574>

Habib, M, Ozbay, E & Caglayan, H 2019, 'Tuning plasmon induced reflectance with hybrid metasurfaces', *Photonics*, vol. 6, no. 1, 29. <https://doi.org/10.3390/photonics6010029>

Kerst, T & Toivonen, J 2018, 'Intense radioluminescence of NO/N₂-mixture in solar blind spectral region', *Optics Express*, vol. 26, no. 26, pp. 33764-33771. <https://doi.org/10.1364/OE.26.033764>

Stefszky, M, Ulvila, V, Abdallah, Z, Silberhorn, C & Vainio, M 2018, 'Towards optical-frequency-comb generation in continuous-wave-pumped titanium-indiffused lithium-niobate waveguide resonators', *Physical Review A*, vol. 98, no. 5, 053850. <https://doi.org/10.1103/PhysRevA.98.053850>

Casula, R, Penttinen, J-P, Guina, M, Kemp, AJ & Hastie, JE 2018, 'Cascaded crystalline raman lasers for extended wavelength coverage: Continuous-wave, third-stokes operation', *Optica*, vol. 5, no. 11, pp. 1406-1413. <https://doi.org/10.1364/OPTICA.5.001406>

Rinne, J, Keskinen, J, Berger, PR, Lupo, D & Valkama, M 2018, 'M2M Communication Assessment in Energy-Harvesting and Wake-Up Radio Assisted Scenarios Using Practical Components', *Sensors (Basel, Switzerland)*, vol. 18, no. 11. <https://doi.org/10.3390/s18113992>

Solanpää, J & Räsänen, E 2018, 'Control of Rydberg-state population with realistic femtosecond laser pulses', *Physical Review A*, vol. 98, no. 5, 053422. <https://doi.org/10.1103/PhysRevA.98.053422>

Habib, M, Ozbay, E & Caglayan, H 2018, Tunable Reflection Type Plasmon Induced Transparency with Graphene. in *2018 12th International Congress on Artificial Materials for Novel Wave Phenomena, METAMATERIALS 2018*. IEEE, pp. 170-172, International Congress on Artificial Materials for Novel Wave Phenomena, Espoo, Finland, 27/08/18. <https://doi.org/10.1109/MetaMaterials.2018.8534142>

Shevkunov, I, Katkovnik, V, Petrov, NV & Egiazarian, K 2018, 'Super-resolution microscopy for biological specimens: Lensless phase retrieval in noisy conditions', *Biomedical Optics Express*, vol. 9, no. 11, #340805, pp. 5511-5523. <https://doi.org/10.1364/BOE.9.005511>

Aho, T, Guina, M, Elsehrawy, F, Cappelluti, F, Raappana, M, Tukiainen, A, Khairul Alam, ABM, Vartiainen, I, Kuittinen, M & Niemi, T 2018, Metal/Polymer Back Reflectors with Diffraction Gratings for Light Trapping in III-V Solar Cells. in *2018 IEEE 7th World Conference on Photovoltaic Energy Conversion (WCPEC): A Joint Conference of 45th IEEE PVSC, 28th PVSEC & 34th EU PVSEC*. CONFERENCE RECORD OF THE IEEE PHOTOVOLTAIC SPECIALISTS CONFERENCE, IEEE, pp. 2847-2851, World Conference on Photovoltaic Energy Conversion, 5/12/18. <https://doi.org/10.1109/PVSC.2018.8547661>

Karhu, J, Lehmann, K, Vainio, M, Metsälä, M & Halonen, L 2018, 'Step-modulated decay cavity ring-down detection for double resonance spectroscopy', *Optics Express*, vol. 26, no. 22, pp. 29086-29098. <https://doi.org/10.1364/OE.26.029086>

Saeidi, S, Rasekh, P, Awan, KM, Tüğen, A, Huttunen, MJ & Dolgaleva, K 2018, 'Demonstration of optical nonlinearity in InGaAsP/InP passive waveguides', *Optical Materials*, vol. 84, pp. 524-530. <https://doi.org/10.1016/j.optmat.2018.07.037>

Pertuz, S, Pulido-Herrera, E & Kämäräinen, J-K 2018, 'Focus model for metric depth estimation in standard plenoptic cameras', *ISPRS Journal of Photogrammetry and Remote Sensing*, vol. 144, pp. 38-47. <https://doi.org/10.1016/j.isprsjprs.2018.06.020>

Yadav, A, Chichkov, NB, Gumenyuk, R, Zharebtsov, E, Melkumov, MA, Yashkov, MV, Dianov, EM & Rafailov, EU 2018, Fluorescence bandwidth of 280nm from broadband Ce³⁺-doped silica fiber pumped with blue laser diode. in *2018 International Conference Laser Optics (ICLO)*, 8435861, IEEE, pp. 133-133, International Conference Laser Optics, St. Petersburg, Russian Federation, 4/06/18. <https://doi.org/10.1109/LO.2018.8435861>

Laudyn, UA, Kwaśny, M, Karpierz, MA, Smyth, NF & Assanto, G 2018, 'Accelerated optical solitons in reorientational media with transverse invariance and longitudinally modulated birefringence', *Physical Review A*, vol. 98, no. 2, 023810. <https://doi.org/10.1103/PhysRevA.98.023810>

Katkovnik, V, Shevkunov, I, Petrov, NV & Egiazarian, K 2018, 'Multiwavelength surface contouring from phase-coded noisy diffraction patterns: Wavelength-division optical setup', *Optical Engineering*, vol. 57, no. 8, 085105. <https://doi.org/10.1117/1.OE.57.8.085105>

Alberucci, A, Barboza, R, Jisha, CP & Nolte, S 2018, 'Temporal dynamics of light-written waveguides in unbiased liquid crystals', *Journal of the Optical Society of America B: Optical Physics*, vol. 35, no. 8, pp. 1878-1887. <https://doi.org/10.1364/JOSAB.35.001878>

Härkönen, A, Suomalainen, S, Rantamäki, A, Nikkinen, J, Wang, Y, Griebner, U, Steinmeyer, G & Guina, M 2018, '1.34 μm VECSEL mode-locked with a GaSb-based SESAM', *Optics Letters*, vol. 43, no. 14, pp. 3353-3356. <https://doi.org/10.1364/OL.43.003353>

Mikkonen, R & Mäntysalo, M 2018, 'Evaluation of screen printed silver trace performance and long-term reliability against environmental stress on a low surface energy substrate', *Microelectronics Reliability*, vol. 86, pp. 54-65. <https://doi.org/10.1016/j.microrel.2018.05.010>

Raumonen, P & Tarvainen, T 2018, 'Segmentation of vessel structures from photoacoustic images with reliability assessment', *Biomedical Optics Express*, vol. 9, no. 7, pp. 2887-2904. <https://doi.org/10.1364/BOE.9.002887>

Pirhonen, M, Peltokangas, M & Vehkaoja, A 2018, 'Acquiring respiration rate from photoplethysmographic signal by recursive bayesian tracking of intrinsic modes in time-frequency spectra', *Sensors*, vol. 18, no. 6, 1693. <https://doi.org/10.3390/s18061693>

Virtanen, J, Somppi, S, Törnqvist, H, Jeyhani, V, Fiedler, P, Gizatdinova, Y, Majaranta, P, Väätäjä, H, Cardó, AV, Lekkala, J, Tuukkanen, S, Surakka, V, Vainio, O & Vehkaoja, A 2018, 'Evaluation of dry electrodes in canine heart rate monitoring', *Sensors*, vol. 18, no. 6, 1757. <https://doi.org/10.3390/s18061757>

Rasappa, S, Schulte, L, Borah, D, Hulkkonen, H, Ndoni, S, Salminen, T, Senthamarayanan, R, Morris, MA & Niemi, T 2018, 'Morphology evolution of PS-b-PDMS block copolymer and its hierarchical directed self-assembly on block copolymer templates', *Microelectronic Engineering*, vol. 192, pp. 1-7. <https://doi.org/10.1016/j.mee.2018.02.002>

Laudyn, UA, Piccardi, A, Kwasny, M, Karpierz, MA & Assanto, G 2018, 'Thermo-optic soliton routing in nematic liquid crystals', *Optics Letters*, vol. 43, no. 10, pp. 2296-2299. <https://doi.org/10.1364/OL.43.002296>

Wang, Y, Jing, W, Loiko, P, Zhao, Y, Huang, H, Mateos, X, Suomalainen, S, Härkönen, A, Guina, M, Griebner, U & Petrov, V 2018, 'Sub-10 optical-cycle passively mode-locked Tm:(Lu₂/3Sc₁/3)2O₃ ceramic laser at 2 μm', *Optics Express*, vol. 26, no. 8, pp. 10299-10304. <https://doi.org/10.1364/OE.26.010299>

Mateos, X, Loiko, P, Lamrini, S, Scholle, K, Fuhrberg, P, Suomalainen, S, Härkönen, A, Guina, M, Vatik, S, Vedin, I, Aguiló, M, Díaz, F, Wang, Y, Griebner, U & Petrov, V 2018, 'Ho:KY(WO₄)₂ thin-disk laser passively Qswitched by a GaSb-based SESAM', *Optics Express*, vol. 26, no. 7, pp. 9011-9016. <https://doi.org/10.1364/OE.26.009011>

Kahle, H, Nechay, K, Penttinen, J-P, Tukiainen, A, Ranta, S & Guina, M 2018, 'AlGaAs-based vertical-external-cavity surface-emitting laser exceeding 4 W of direct emission power in the 740–790 nm spectral range', *Optics Letters*, vol. 43, no. 7, pp. 1578-1581. <https://doi.org/10.1364/OL.43.001578>

Aho, T, Guina, M, Elsehrawy, F, Cappelluti, F, Raappana, M, Tukiainen, A, Khairul Alam, ABM, Vartiainen, I, Kuittinen, M & Niemi, T 2018, 'Comparison of metal/polymer back reflectors with half-sphere, blazed, and pyramid gratings for light trapping in III-V solar cells', *Optics Express*, vol. 26, no. 6, pp. A331-A340. <https://doi.org/10.1364/OE.26.00A331>

Elsehrawy, F, Niemi, T & Cappelluti, F 2018, 'Guided-mode resonance gratings for enhanced mid-infrared absorption in quantum dot intermediate-band solar cells', *Optics Express*, vol. 26, no. 6, pp. A352-A359. <https://doi.org/10.1364/OE.26.00A352>

Fedotov, A, Noronen, T, Gumenyuk, R, Ustimchik, V, Chamorovskii, Y, Golant, K, Odnoblyudov, M, Rissanen, J, Niemi, T & Filippov, V 2018, 'Ultra-large core birefringent Yb-doped tapered double clad fiber for high power amplifiers', *Optics Express*, vol. 26, no. 6, pp. 6581-6592. <https://doi.org/10.1364/OE.26.006581>

Kinen, JM, Sahin, E & Gotchev, A 2018, 'Speckle reduction method for image-based coherent stereogram generation', *Optics Express*, vol. 26, no. 5, pp. 5381-5394. <https://doi.org/10.1364/OE.26.005381>

Achimova, E, Abaskin, V, Claus, D, Pedrini, G, Shevkunov, I & Katkovnik, V 2018, 'Noise minimized high resolution digital holographic microscopy applied to surface topography', *Computer Optics*, vol. 42, no. 2, pp. 267-272. <https://doi.org/10.18287/2412-6179-2018-42-2-267-272>

Mehrang, S, Pietilä, J & Korhonen, I 2018, 'An activity recognition framework deploying the random forest classifier and a single optical heart rate monitoring and triaxial accelerometer wrist-band', *Sensors*, vol. 18, no. 2, 613. <https://doi.org/10.3390/s18020613>

- Zhao, Y, Wang, Y, Zhang, X, Mateos, X, Pan, Z, Loiko, P, Zhou, W, Xu, X, Xu, J, Shen, D, Suomalainen, S, Härkönen, A, Guina, M, Griebner, U & Petrov, V 2018, '87 fs mode-locked Tm,Ho:CaYAIO4 laser at ~2043 nm', *Optics Letters*, vol. 43, no. 4, pp. 915-918. <https://doi.org/10.1364/OL.43.000915>
- Cazac, V, Meshalkin, A, Achimova, E, Abashkin, V, Katkovnik, V, Shevkunov, I, Claus, D & Pedrini, G 2018, 'Surface relief and refractive index gratings patterned in chalcogenide glasses and studied by off-axis digital holography', *Applied Optics*, vol. 57, no. 3, pp. 507-513. <https://doi.org/10.1364/AO.57.000507>
- Ponomarenko, M, Gapon, N, Voronin, V & Egiazarian, K 2018, Blind estimation of white Gaussian noise variance in highly textured images. in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-382>
- Voronin, V, Semenishchev, E, Ponomarenko, M & Agaian, S 2018, Combined local and global image enhancement algorithm. in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-220>
- Miroshnichenko, O, Ponomarenko, M, Lukin, V & Egiazarian, K 2018, Compression of signs of DCT coefficients for additional lossless compression of JPEG images. in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-385>
- Sahin, E, Vagharshakyan, S, Bregovic, R, Lee, G & Gotchev, A 2018, Conversion of sparsely-captured light field into alias-free fullparallax multiview content. in *Electronic Imaging: Stereoscopic Displays and Applications XXIX*. Society for Imaging Science and Technology, pp. 1441-1445, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.04.SDA-144>
- Battisti, F, Carli, M, De Paola, E & Egiazarian, K 2018, Deep p-Fibonacci scattering networks. in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-193>
- Katkovnik, V, Ponomarenko, M & Egiazarian, K 2018, 'Lensless broadband diffractive imaging with improved depth of focus: wavefront modulation by multilevel phase masks', *Journal of Modern Optics*. <https://doi.org/10.1080/09500340.2018.1526344>
- Wirdatmadja, S, Johari, P, Balasubramaniam, S, Bae, Y, Stachowiak, MK & Jornet, JM 2018, Light propagation analysis in nervous tissue for wireless optogenetic nanonetworks. in *Optogenetics and Optical Manipulation 2018.*, 104820R, SPIE, Optogenetics and Optical Manipulation, San Francisco, United States, 27/01/18. <https://doi.org/10.1117/12.2288786>
- Ponomarenko, M, Katkovnik, V & Egiazarian, K 2018, Methods and tools for denoising of complex-valued images based on block-matching and high order singular value decomposition. in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-306>
- Virtanen, H, Uusitalo, T, Karjalainen, M, Ranta, S, Viheriala, J & Dumitrescu, M 2018, 'Narrow-linewidth 780 nm DFB lasers fabricated using nanoimprint lithography', *IEEE Photonics Technology Letters*, vol. 30, no. 1, pp. 51-54. <https://doi.org/10.1109/LPT.2017.2772337>
- Wani, OM, Zeng, H, Wasylczyk, P & Priimagi, A 2018, 'Programming Photoresponse in Liquid Crystal Polymer Actuators with Laser Projector', *Advanced Optical Materials*, vol. 6, no. 1, 1700949. <https://doi.org/10.1002/adom.201700949>
- Ryczkowski, P, Närhi, M, Billet, C, Merolla, JM, Genty, G & Dudley, JM 2018, 'Real-time full-field characterization of transient dissipative soliton dynamics in a mode-locked laser', *Nature Photonics*, vol. 12, pp. 221-227. <https://doi.org/10.1038/s41566-018-0106-7>

Ieremeiev, O, Lukin, V, Ponomarenko, N & Egiazarian, K 2018, Robust linearized combined metrics of image visual quality . in *Electronic Imaging: Image Processing: Algorithms and Systems XVI*. Society for Imaging Science and Technology, IS&T International Symposium on Electronic Imaging, 28/01/18. <https://doi.org/10.2352/ISSN.2470-1173.2018.13.IPAS-260>

Kerst, T, Sand, J, Ihantola, S, Peräjärvi, K, Nicholl, A, Hrnccek, E, Toivonen, H & Toivonen, J 2018, 'Standoff alpha radiation detection for hot cell imaging and crime scene investigation', *Optical Review*, vol. 25, no. 3, pp. 429–436. <https://doi.org/10.1007/s10043-018-0413-8>

Nikkinen, J, Savitski, V, Reilly, S, Dziechciarczyk, L, Härkönen, A, Kemp, A & Guina, M 2018, 'Sub-100 ps monolithic diamond Raman laser emitting at 573 nm', *IEEE Photonics Technology Letters*, vol. 30, no. 11, pp. 981-984. <https://doi.org/10.1109/LPT.2018.2806183>

Casula, R, Penttinen, J-P, Kemp, AJ, Guina, M & Hastie, JE 2017, '1.4 μm continuous-wave diamond Raman laser', *Optics Express*, vol. 25, no. 25, pp. 31377-31383. <https://doi.org/10.1364/OE.25.031377>

Sattari, H, Rashed, AR, Ozbay, E & Caglayan, H 2017, 'Bright off-axis directional emission with plasmonic corrugations', *Optics Express*, vol. 25, no. 25, pp. 30827-30842. <https://doi.org/10.1364/OE.25.030827>

Sala, FA, Smyth, NF, Laudyn, UA, Karpierz, MA, Minzoni, AA & Assanto, G 2017, 'Bending reorientational solitons with modulated alignment', *Journal of the Optical Society of America B: Optical Physics*, vol. 34, no. 12, pp. 2459-2466. <https://doi.org/10.1364/JOSAB.34.002459>

Aho, AT, Viheriälä, J, Korpjärvi, V-M, Koskinen, M, Virtanen, H, Christensen, M, Uusitalo, T, Lahtonen, K, Valden, M & Guina, M 2017, 'High-Power 1180-nm GaInNAs DBR Laser Diodes', *IEEE Photonics Technology Letters*, vol. 29, no. 23, pp. 2023-2026. <https://doi.org/10.1109/LPT.2017.2760038>

Nikkinen, J, Härkönen, A & Guina, M 2017, 'Sub-50 ps pulses at 620 nm obtained from frequency doubled 1240 nm diamond Raman laser', *Optics Express*, vol. 25, no. 24, pp. 30365-30370. <https://doi.org/10.1364/OE.25.030365>

Nikkinen, J, Härkönen, A, Leino, I & Guina, M 2017, 'Generation of Sub-100 ps Pulses at 532, 355, and 266 nm Using a SESAM Q-Switched Microchip Laser', *IEEE Photonics Technology Letters*, vol. 29, no. 21, pp. 1816-1819. <https://doi.org/10.1109/LPT.2017.2752421>

Bhavitha, KB, Nair, AK, Perumbilavil, S, Joseph, S, Kala, MS, Saha, A, Narayanan, RA, Hameed, N, Thomas, S, Oluwafemi, OS & Kalarikkal, N 2017, 'Investigating solvent effects on aggregation behaviour, linear and nonlinear optical properties of silver nanoclusters', *Optical Materials*, vol. 73, pp. 695-705. <https://doi.org/10.1016/j.optmat.2017.09.024>

Jisha, CP & Alberucci, A 2017, 'Paraxial light beams in structured anisotropic media', *Journal of the Optical Society of America A: Optics and Image Science, and Vision*, vol. 34, no. 11, pp. 2019-2024. <https://doi.org/10.1364/JOSAA.34.002019>

Gaponenko, M, Wittwer, VJ, Härkönen, A, Suomalainen, S, Kuleshov, N, Guina, M & Südmeyer, T 2017, 'Diode-pumped Tm: KY(WO₄)₂ laser passively modelocked with a GaSb-SESAM', *Optics Express*, vol. 25, no. 21, pp. 25760-25766. <https://doi.org/10.1364/OE.25.025760>

Penttinen, J-P, Leinonen, T, Rantamäki, A, Korpjärvi, V-M, Kantola, E & Guina, M 2017, High power VECSEL prototype emitting at 625 nm. in *Advanced Solid State Lasers 2017: Nagoya, Aichi Japan 1–5 October 2017*, ATu1A.8, Optical Society of America, Laser Congress 2017, Nagoya, Aichi, Japan, 1/10/17. <https://doi.org/10.1364/ASSL.2017.ATu1A.8>

Katkovnik, V & Egiazarian, K 2017, 'Sparse superresolution phase retrieval from phase-coded noisy intensity patterns', *Optical Engineering*, vol. 56, no. 9, 094103. <https://doi.org/10.1117/1.OE.56.9.094103>

Penttinen, JP, Leinonen, T, Burd, S & Guina, M 2017, 'Tunable narrow-linewidth VECSELS for atomic and molecular physics' Paper presented at The 25th Colloquium on High-Resolution Molecular Spectroscopy, Helsinki, Finland, 20/08/17 - 25/08/17, .

Penttinen, J-P, Leinonen, T, Burd, SC, Allcock, DTC, Leibfried, D & Guina, M 2017, 'VECSEL: a versatile laser tool for ion trappers' Paper presented at 1st North American Conference on Trapped Ions, Boulder, United States, 14/08/17 - 18/08/17, .

Katkovnik, V, Shevkunov, I, Petrov, NV & Egiazarian, K 2017, 'Computational super-resolution phase retrieval from multiple phase-coded diffraction patterns: Simulation study and experiments', *Optica*, vol. 4, no. 7, pp. 786-794. <https://doi.org/10.1364/OPTICA.4.000786>

Petronijevic, E, Centini, M, Belardini, A, Leahu, G, Hakkarainen, T & Sibilia, C 2017, 'Chiral near-field manipulation in Au-GaAs hybrid hexagonal nanowires', *Optics Express*, vol. 25, no. 13, pp. 14148-14157. <https://doi.org/10.1364/OE.25.014148>

Stoykova, E, Berberova, N, Kim, Y, Nazarova, D, Ivanov, B, Gotchev, A, Hong, J & Kang, H 2017, 'Dynamic speckle analysis with smoothed intensity-based activity maps', *Optics and Lasers in Engineering*, vol. 93, pp. 55-65. <https://doi.org/10.1016/j.optlaseng.2017.01.012>

Contreras, V, Toivonen, J & Martinez, H 2017, 'Enhanced self-mixing interferometry based on volume Bragg gratings and laser diodes emitting at 405-nm wavelengths', *Optics Letters*, vol. 42, no. 11, pp. 2221-2223. <https://doi.org/10.1364/OL.42.002221>

Reuna, J, Polojärvi, V (ed.), Aho, T (ed.), Aho, A (ed.), Isoaho, R (ed.), Tukiainen, A (ed.) & Guina, M (ed.) 2017, 'Broadband Anti-reflective Coatings for Multi-junction Solar Cells' Paper presented at Optics and Photonics days 2017, Oulu, Finland, 29/05/17 - 31/05/17, pp. 1.

Alberucci, A, Jisha, CP, Smyth, NF & Assanto, G 2017, 'Reply to "comment on 'Spatial optical solitons in highly nonlocal media"', *Physical Review A*, vol. 95, no. 5, 057802. <https://doi.org/10.1103/PhysRevA.95.057802>

Ustimchik, VE, Rissanen, J, Popov, SM, Chamorovskii, YK & Nikitov, SA 2017, 'Anisotropic tapered polarization-maintaining large mode area optical fibers', *Optics Express*, vol. 25, no. 9, pp. 10693-10703. <https://doi.org/10.1364/OE.25.010693>

Turquet, L, Kakko, JP, Jiang, H, Isotalo, TJ, Huhtio, T, Niemi, T, Kauppinen, E, Lipsanen, H, Kauranen, M & Bautista, G 2017, 'Nonlinear imaging of nanostructures using beams with binary phase modulation', *Optics Express*, vol. 25, no. 9, pp. 10441-10448. <https://doi.org/10.1364/OE.25.010441>

Odrizola, A, Solanpää, J, Kylänpää, I, González, A & Räsänen, E 2017, 'Universal scaling relations for the energies of many-electron Hooke atoms', *Physical Review A*, vol. 95, no. 4, 042511. <https://doi.org/10.1103/PhysRevA.95.042511>

Saccone, M, Siiskonen, A, Fernandez-Palacio, F, Priimägi, A, Terraneo, G, Resnati, G & Metrangolo, P 2017, 'Halogen bonding stabilizes a cis-azobenzene derivative in the solid state: A crystallographic study', *ACTA CRYSTALLOGRAPHICA SECTION B: STRUCTURAL SCIENCE, CRYSTAL ENGINEERING AND MATERIALS*, vol. 73, no. 2, pp. 227-233. <https://doi.org/10.1107/S2052520617003444>

Virtanen, H, Uusitalo, T & Dumitrescu, M 2017, 'Simulation studies of DFB laser longitudinal structures for narrow linewidth emission', *Optical and Quantum Electronics*, vol. 49, no. 4, 160. <https://doi.org/10.1007/s11082-017-0993-8>

Leinonen, T, Iakovlev, V, Sirbu, A, Kapon, E & Guina, M 2017, '33 W continuous output power semiconductor disk laser emitting at 1275 nm', *Optics Express*, vol. 25, no. 6, pp. 7008-7013. <https://doi.org/10.1364/OE.25.007008>

Luan, C, Yang, K, Zhao, J, Zhao, S, Li, T, Zhang, H, He, J, Song, L, Dekorsy, T, Guina, M & Zheng, L 2017, 'Diode-pumped mode-locked Tm: LuAG laser at 2 μm based on GaSb-SESAM', *Optics Letters*, vol. 42, no. 4, pp. 839-842. <https://doi.org/10.1364/OL.42.000839>

Jisha, CP & Alberucci, A 2017, 'Spin-orbit interactions in optically active materials', *Optics Letters*, vol. 42, no. 3, pp. 419-422. <https://doi.org/10.1364/OL.42.000419>

Pavelescu, EM, Bălățeanu, N, Spânulescu, SI & Arola, E 2017, 'Very high dose electron irradiation effects on photoluminescence from GaInNAs/GaAs quantum wells grown by molecular beam epitaxy', *Optical Materials*, vol. 64, pp. 361-365. <https://doi.org/10.1016/j.optmat.2016.12.007>

Balanta, MAG, Orsi Gordo, V, Carvalho, ARH, Puustinen, J, Alghamdi, HM, Henini, M, Galeti, HVA, Guina, M & Galvão Gobato, Y 2017, 'Polarization resolved photoluminescence in GaAs_{1-x}Bi_x/GaAs quantum wells', *Journal of Luminescence*, vol. 182, pp. 49-52. <https://doi.org/10.1016/j.jlumin.2016.10.008>

Kovács, PT, Zare, A, Balogh, T, Bregovic, R & Gotchev, A 2017, 'Architectures and codecs for real-time light field streaming', *Journal of Imaging Science and Technology*, vol. 61, no. 1, 010403. <https://doi.org/10.2352/J.ImagingSci.Technol.2017.61.1.010403>

Perumbilavil, S, Piccardi, A, Buchnev, O, Kauranen, M, Strangi, G & Assanto, G 2017, 'All-optical guided-wave random laser in nematic liquid crystals', *Optics Express*, vol. 25, no. 5, pp. 4672-4679. <https://doi.org/10.1364/OE.25.004672>

Egiazarian, K, Danielyan, A, Ponomarenko, N, Foia, A, Ieremeiev, O & Lukin, V 2017, BM3D-HVS: Content-Adaptive denoising for improved visual quality. in *Image Processing: Algorithms and Systems XV*. Electronic Imaging, pp. 48-55, IS&T International Symposium on Electronic Imaging, 1/01/00. <https://doi.org/10.2352/ISSN.2470-1173.2017.13.DPMI-083>

Kordmahaleh, AA, Naghashzadegan, M, Javaherdeh, K & Khoshgoftar, M 2017, 'Design of a 25 MWe Solar Thermal Power Plant in Iran with Using Parabolic Trough Collectors and a Two-Tank Molten Salt Storage System', *International Journal of Photoenergy*, vol. 2017, 4210184. <https://doi.org/10.1155/2017/4210184>

Bomberg, M, Miettinen, H, Wahlström, M, Kaartinen, T, Ahoranta, S, Lakaniemi, A-M & Kinnunen, P 2017, Evaluation of long-term post process inactivation of bioleaching microorganisms. in *22nd International Biohydrometallurgy Symposium*. Solid State Phenomena, vol. 262 SSP, Trans Tech Publications Ltd, pp. 57-60, International Biohydrometallurgy Symposium, 1/01/00. <https://doi.org/10.4028/www.scientific.net/SSP.262.57>

Ieremeiev, O, Lukin, V, Ponomarenko, N & Egiazarian, K 2017, Full-reference metrics multidistortional analysis. in *Image Processing: Algorithms and Systems XV*. Electronic Imaging, pp. 27-35, IS&T International Symposium on Electronic Imaging, 1/01/00. <https://doi.org/10.2352/ISSN.2470-1173.2017.13.IPAS-202>

Mojica, E, Pertuz, S & Arguello, H 2017, 'High-resolution coded-aperture design for compressive X-ray tomography using low resolution detectors', *Optics Communications*, vol. 404, pp. 103-109. <https://doi.org/10.1016/j.optcom.2017.06.053>

Solanpää, J, Ciappina, MF & Räsänen, E 2017, 'Optimal control of photoelectron emission by realistic waveforms', *Journal of Modern Optics*, vol. 64, no. 17, pp. 1784-1792. <https://doi.org/10.1080/09500340.2017.1317857>

Lampio, K & Karvinen, R 2017, 'Optimization of convectively cooled heat sinks', *Microelectronics Reliability*, vol. 79, pp. 473-479. <https://doi.org/10.1016/j.microrel.2017.06.011>

Borges, LR, Bakic, PR, Foi, A, Maidment, ADA & Vieira, MAC 2017, Pipeline for effective denoising of digital mammography and digital breast tomosynthesis. in *Medical Imaging 2017: Physics of Medical Imaging*, 1013206, Progress in biomedical optics and imaging, SPIE, Medical Imaging, 1/01/00. <https://doi.org/10.1117/12.2255058>

Hannula, MK, Lahtonen, KT, Isotalo, TJ, Saari, JS & Valden, MO 2016, 'Thermal Modification of ALD Grown Titanium Oxide Ultra Thin Film for Photoanode Applications' Paper presented at Symposium on Future Prospects for Photonics, Tampere, Finland, 14/12/16 - 15/12/16, .

Assanto, G & Smyth, NF 2016, 'Nonlinear guided waves: Preface', *Journal of Nonlinear Optical Physics and Materials*, vol. 25, no. 4, 1650041. <https://doi.org/10.1142/S0218863516500417>

Slablab, A, Isotalo, TJ, Mäkitalo, J, Turquet, L, COULON, P-E, Niemi, T, Ulysse, C, Kociak, M, Mailly, D, Rizza, G & Kauranen, M 2016, 'Fabrication of Ion-Shaped Anisotropic Nanoparticles and their Orientational Imaging by Second-Harmonic Generation Microscopy', *Scientific Reports*, vol. 6, no. 37469, 37469 . <https://doi.org/10.1038/srep37469>

Nikkinen, J, Korpijärvi, V-M, Leino, I, Härkönen, A & Guina, M 2016, 'Frequency-doubled passively Q-switched microchip laser producing 225 ps pulses at 671 nm', *Optics Letters*, vol. 41, no. 22, pp. 5385-5388. <https://doi.org/10.1364/OL.41.005385>

Burd, SC, Allcock, DTC, Leinonen, T, Penttinen, JP, Slichter, DH, Srinivas, R, Wilson, AC, Jördens, R, Guina, M, Leibfried, D & Wineland, DJ 2016, 'VECSEL systems for the generation and manipulation of trapped magnesium ions', *Optica*, vol. 3, no. 12, 268119, pp. 1294-1299. <https://doi.org/10.1364/OPTICA.3.001294>

Acar, E, Peltonen, S & Ruotsalainen, U 2016, 'Adaptive multiresolution method for MAP reconstruction in electron tomography', *Ultramicroscopy*, vol. 170, pp. 24-34. <https://doi.org/10.1016/j.ultramic.2016.08.002>

Reisberg, L, Pärna, R, Kikas, A, Kuusik, I, Kisand, V, Hirsimäki, M, Valden, M & Nömmiste, E 2016, 'UPS and DFT investigation of the electronic structure of gas-phase trimesic acid', *Journal of Electron Spectroscopy and Related Phenomena*, vol. 213, pp. 11-16. <https://doi.org/10.1016/j.elspec.2016.10.004>

Myllymäki, S, Putaala, J, Hannu, J, Kunnari, E & Mäntysalo, M 2016, 'RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides', *Microelectronics Reliability*, vol. 65, pp. 142-150. <https://doi.org/10.1016/j.microrel.2016.08.021>

Tiihonen, J, Kylänpää, I & Rantala, TT 2016, 'General polarizability and hyperpolarizability estimators for the path-integral Monte Carlo method applied to small atoms, ions, and molecules at finite temperatures', *Physical Review A*, vol. 94, no. 3, 032515. <https://doi.org/10.1103/PhysRevA.94.032515>

Blokhin, SA, Bobrov, MA, Blokhin, AA, Kuzmenkov, AG, Vasil'Ev, AP, Maleev, NA, Dudelev, VV, Soboleva, KK, Sokolovskii, GS, Rantamäki, A, Okhotnikov, O & Ustinov, VM 2016, '1.3 μm InAs quantum dot semiconductor disk laser' Paper presented at 2016 International Conference Laser Optics, LO 2016, St. Petersburg, Russian Federation, 27/06/16 - 1/07/16, pp. R317. <https://doi.org/10.1109/LO.2016.7549727>

Korobko, DA, Okhotnikov, OG, Sysoliatin, AA & Zolotovskii, IO 2016, 'Advanced scheme of amplifier similariton laser' Paper presented at 2016 International Conference Laser Optics, LO 2016, St. Petersburg, Russian Federation, 27/06/16 - 1/07/16, pp. R858. <https://doi.org/10.1109/LO.2016.7549889>

Ustimchik, VE, Vyatkin, MY, Popov, SM, Chamorovskii, YK, Filippov, VN & Nikitov, SA 2016, 'State of polarization in anisotropic tapered fiber with extremely large core diameter' Paper presented at 2016 International Conference Laser Optics, LO 2016, St. Petersburg, Russian Federation, 27/06/16 - 1/07/16, pp. S123. <https://doi.org/10.1109/LO.2016.7549956>

Shvetsov-Shilovski, NI, Lein, M, Madsen, LB, Räsänen, E, Lemell, C, Burgdörfer, J, Arbó, DG & Tokési, K 2016, 'Semiclassical two-step model for strong-field ionization', *Physical Review A*, vol. 94, no. 1, 013415. <https://doi.org/10.1103/PhysRevA.94.013415>

- Piccardi, A, Residori, S & Assanto, G 2016, 'Nonlocal soliton scattering in random potentials', *Journal of Optics*, vol. 18, no. 7, 07LT01. <https://doi.org/10.1088/2040-8978/18/7/07LT01>
- Noronen, T, Okhotnikov, O & Gumenyuk, R 2016, 'Electronically tunable thulium-holmium modelocked fiber laser for the 1700-1800 nm wavelength band', *Optics Express*, vol. 24, no. 13, pp. 14703-14708. <https://doi.org/10.1364/OE.24.014703>
- Burd, SC, Leinonen, T, Penttinen, JP, Allcock, DTC, Slichter, DH, Srinivas, R, Wilson, AC, Guina, M, Leibfried, D & Wineland, DJ 2016, Single-frequency 571nm VECSEL for photo-ionization of magnesium. in *Proceedings of SPIE: Vertical External Cavity Surface Emitting Lasers (VECSELs) VI*. vol. 9734, 973411, SPIE Conference Proceedings, SPIE, San Francisco, SPIE Photonics West, 1/01/00. <https://doi.org/10.1117/12.2213398>
- Akhmediev, N, Kibler, B, Baronio, F, Belić, M, Zhong, WP, Zhang, Y, Chang, W, Soto-Crespo, JM, Vouzas, P, Grelu, P, Lecaplain, C, Hammani, K, Rica, S, Picozzi, A, Tlidi, M, Panajotov, K, Mussot, A, Bendahmane, A, Szriftgiser, P, Genty, G, Dudley, J, Kudlinski, A, Demircan, A, Morgner, U, Amiranashvili, S, Bree, C, Steinmeyer, G, Masoller, C, Broderick, NGR, Runge, AFJ, Erkintalo, M, Residori, S, Bortolozzo, U, Arecchi, FT, Wabnitz, S, Tiofack, CG, Coulibaly, S & Taki, M 2016, 'Roadmap on optical rogue waves and extreme events', *Journal of Optics*, vol. 18, no. 6, 063001. <https://doi.org/10.1088/2040-8978/18/6/063001>
- Razavi, A, Valkama, M & Lohan, ES 2016, 'Robust statistical approaches for RSS-based floor detection in indoor localization', *Sensors*, vol. 16, no. 6, 793. <https://doi.org/10.3390/s16060793>
- Izdebskaya, Y, Krolkowski, W, Smyth, NF & Assanto, G 2016, 'Vortex stabilization by means of spatial solitons in nonlocal media', *Journal of Optics*, vol. 18, no. 5, 054006. <https://doi.org/10.1088/2040-8978/18/5/054006>
- Dutta, R, Turunen, J, Genty, G & Friberg, AT 2016, 'Temporal coherence characterization of supercontinuum pulse trains using Michelson's interferometer', *Applied Optics*, vol. 55, no. 12, pp. B72-B77. <https://doi.org/10.1364/AO.55.000B72>
- Contreras, V, Lönnqvist, J & Toivonen, J 2016, 'Detection of single microparticles in airflows by edge-filter enhanced self-mixing interferometry', *Optics Express*, vol. 24, no. 8, pp. 8886-8894. <https://doi.org/10.1364/OE.24.008886>
- Viljanen, J, Sun, Z & Alwahabi, ZT 2016, 'Microwave assisted laser-induced breakdown spectroscopy at ambient conditions', *Spectrochimica Acta Part B: Atomic Spectroscopy*, vol. 118, pp. 29-36. <https://doi.org/10.1016/j.sab.2016.02.002>
- Putaja, A, Eich, FG, Baldsiefen, T & Räsänen, E 2016, 'Validity of power functionals for a homogeneous electron gas in reduced-density-matrix-functional theory', *Physical Review A*, vol. 93, no. 3, 032503. <https://doi.org/10.1103/PhysRevA.93.032503>
- Sahin, E, Katkovnik, V & Gotchev, A 2016, 'Super-resolution in a defocused plenoptic camera: a wave-optics-based approach', *Optics Letters*, vol. 41, no. 5, pp. 998-1001. <https://doi.org/10.1364/OL.41.000998>
- Korpijärvi, V-M, Viheriälä, J, Koskinen, M, Aho, AT & Guina, M 2016, 'High-power temperature-stable GaInNAs distributed Bragg reflector laser emitting at 1180 nm', *Optics Letters*, vol. 41, no. 4, pp. 657-660. <https://doi.org/10.1364/OL.41.000657>
- Van, DP, Rimal, BP, Andreev, S, Tirronen, T & Maier, M 2016, 'Machine-to-machine communications over FiWi enhanced LTE networks: A power-saving framework and end-to-end performance', *Journal of Lightwave Technology*, vol. 34, no. 4, pp. 1062-1071. <https://doi.org/10.1109/JLT.2015.2510358>
- Bregovic, R, Kovács, P & Gotchev, A 2016, 'Optimization of light field display-camera configuration based on display properties in spectral domain', *Optics Express*, vol. 24, no. 3, pp. 3067-3088. <https://doi.org/10.1364/OE.24.003067>
- Massera, J, Gaussiran, M, Gluchowski, P, Lastusaari, M, Petit, L, Hölsä, J & Hupa, L 2016, 'Effect of the glass melting condition on the processing of phosphate-based glass-ceramics with persistent luminescence properties', *Optical Materials*, vol. 52, pp. 56-61. <https://doi.org/10.1016/j.optmat.2015.12.006>

Pavelescu, E-M, Polojärvi, V, Schramm, A, Tukiainen, A, Aho, A, Zhang, W, Puustinen, J, Salmi, J & Guina, M 2016, 'Effects of insertion of strain-engineering Ga(In)NAs layers on optical properties of InAs/GaAs quantum dots for high-efficiency solar cells', *Optical Materials*, vol. 52, pp. 177-180. <https://doi.org/10.1016/j.optmat.2015.12.035>

Ryczkowski, P, Barbier, M, Friberg, AT, Dudley, JM & Genty, G 2016, 'Ghost imaging in the time domain', *Nature Photonics*, no. 10, pp. 167-170. <https://doi.org/10.1038/nphoton.2015.274>

Järvinen, ST & Toivonen, J 2016, 'Analysis of single mass-regulated particles in precisely controlled trap using laser-induced breakdown spectroscopy', *Optics Express*, vol. 24, no. 2, pp. 1314-1323. <https://doi.org/10.1364/OE.24.001314>

Stoykova, E, Berberova, N, Nazarova, D & Gotchev, A 2016, Intensity-based pointwise processing in dynamic laser speckle analysis. in *2015 11th Conference on Lasers and Electro-Optics Pacific Rim, CLEO-PR 2015*. vol. 2, IEEE, pp. 1-2, Conference on Lasers and Electro-Optics Pacific Rim, 1/01/00. <https://doi.org/10.1109/CLEOPR.2015.7376008>

Pajukoski, H, Näkki, J, Thieme, S, Tuominen, J, Nowotny, S & Vuoristo, P 2016, 'High performance corrosion resistant coatings by novel coaxial cold- and hot-wire laser cladding methods', *Journal of Laser Applications*, vol. 28, no. 1, 012011. <https://doi.org/10.2351/1.4936988>

Sakho, EHM, Oluwafemi, OS, Perumbilavil, S, Philip, R, Kala, MS, Thomas, S & Kalarikkal, N 2016, 'Rapid and facile synthesis of graphene oxide quantum dots with good linear and nonlinear optical properties', *Journal of Materials Science: Materials in Electronics*, vol. 27, no. 10, pp. 10926-10933. <https://doi.org/10.1007/s10854-016-5204-z>

Wang, D, Wang, Z, Yue, Y, Yu, J, Tan, C, Li, D, Qiu, R & Maple, C 2015, 'Determination of beam incidence conditions based on the analysis of laser interference patterns', *Optik*, vol. 126, no. 21, pp. 2902-2907. <https://doi.org/10.1016/j.ijleo.2015.07.039>

Alberucci, A, Jisha, CP & Assanto, G 2015, 'Nonlinear negative refraction in reorientational soft matter', *Physical Review A*, vol. 92, no. 3, 033835. <https://doi.org/10.1103/PhysRevA.92.033835>

Aalto, A, Genty, G, Laurila, T & Toivonen, J 2015, 'Incoherent broadband cavity enhanced absorption spectroscopy using supercontinuum and superluminescent diode sources', *Optics Express*, vol. 23, no. 19, pp. 25225-25234. <https://doi.org/10.1364/OE.23.025225>

Stoykova, E, Nazarova, D, Berberova, N & Gotchev, A 2015, 'Performance of intensity-based non-normalized pointwise algorithms in dynamic speckle analysis', *Optics Express*, vol. 23, no. 19, pp. 25128-25142. <https://doi.org/10.1364/OE.23.025128>

Frankberg, EJ, George, L, Efimov, A, Honkanen, M, Pessi, J & Levänen, E 2015, 'Measuring synthesis yield in graphene oxide synthesis by modified hummers method', *Fullerenes Nanotubes and Carbon Nanostructures*, vol. 23, no. 9, pp. 755-759. <https://doi.org/10.1080/1536383X.2014.993754>

Korobko, DA, Okhotnikov, OG, Stoliarov, DA, Sysoliatin, AA & Zolotovskii, IO 2015, 'Highly Nonlinear Dispersion Increasing Fiber for Femtosecond Pulse Generation', *Journal of Lightwave Technology*, vol. 33, no. 17, 7134708, pp. 3643-3648. <https://doi.org/10.1109/JLT.2015.2448941>

Mäkelä, J, Tuominen, M, Yasir, M, Polojärvi, V, Aho, A, Tukiainen, A, Kuzmin, M, Punkkinen, MPJ, Laukkanen, P, Kokko, K & Guina, M 2015, 'Effects of thinning and heating for TiO₂/AlInP junctions', *Journal of Electron Spectroscopy and Related Phenomena*, vol. 205, pp. 6-9. <https://doi.org/10.1016/j.elspec.2015.08.004>

Giannoulis, G, Korpijärvi, V-M, Iliadis, N, Mäkelä, J, Viheriälä, J, Apostolopoulos, D, Guina, M & Avramopoulos, H 2015, 'Bringing High-Performance GaInNAsSb/GaAs SOAs to True Data Applications', *IEEE Photonics Technology Letters*, vol. 27, no. 16, 7113825, pp. 1691-1694. <https://doi.org/10.1109/LPT.2015.2436697>

Levin, M, Rojas, E, Vanhala, E, Vippola, M, Liguori, B, Kling, KI, Koponen, IK, Mølhøve, K, Tuomi, T, Gregurec, D, Moya, S & Jensen, KA 2015, 'Influence of relative humidity and physical load during storage on dustiness of inorganic nanomaterials: implications for testing and risk assessment', *Journal of Nanoparticle Research*, vol. 17, no. 8, 337. <https://doi.org/10.1007/s11051-015-3139-6>

Baron, A, Faggiani, R, Zang, X, Lalouat, L, Schulz, SA, Vynck, K, O'Regan, B, Cluzel, B, De Fornel, F, Krauss, TF & Lalanne, P 2015, Localization of light at vanishingly small disorder-levels with heavy photons. in *2015 Conference on Lasers and Electro-Optics, CLEO 2015*. vol. 2015-August, 7183319, Optical Society of America OSA, Conference on Lasers and Electro-Optics, CLEO 2015, San Jose, United States, 10/05/15. https://doi.org/10.1364/CLEO_QELS.2015.FW1C.4

Sanginés, R, Contreras, V, Sobral, H & Robledo-Martinez, A 2015, 'Optimal emission enhancement in orthogonal double-pulse laser-induced breakdown spectroscopy', *Spectrochimica Acta Part B: Atomic Spectroscopy*, vol. 110, 4935, pp. 139-145. <https://doi.org/10.1016/j.sab.2015.06.012>

Tiihonen, J, Kylänpää, I & Rantala, TT 2015, 'Adiabatic and nonadiabatic static polarizabilities of H and H₂', *Physical Review A*, vol. 91, no. 6, 062503. <https://doi.org/10.1103/PhysRevA.91.062503>

Momeni, D, Gholizade, H, Raza, M & Myrzakulov, R 2015, 'Tolman-Oppenheimer-Volkoff equations in nonlocal f(R) gravity', *International Journal of Modern Physics A*, vol. 30, no. 16, 1550093. <https://doi.org/10.1142/S0217751X15500931>

Toenger, S, Godin, T, Billet, C, Dias, F, Erkiñtalo, M, Genty, G & Dudley, JM 2015, Dynamics of rogue wave and soliton emergence in spontaneous modulation instability. in *CLEO: QELS - Fundamental Science, CLEO_QELS 2015*. Optical Society of America (OSA), Quantum Electronics and Laser Science Conference, United States, 1/01/00. https://doi.org/10.1364/CLEO_QELS.2015.FW4D.2

Vignion-Dewalle, AS, Betrouni, N, Tylcz, JB, Vermandel, M, Mortier, L & Mordon, S 2015, 'Comparison of three light doses in the photodynamic treatment of actinic keratosis using mathematical modeling', *JOURNAL OF BIOMEDICAL OPTICS*, vol. 20, no. 5, 058001. <https://doi.org/10.1117/1.JBO.20.5.058001>

Koivisto, AJ, Aromaa, M, Koponen, IK, Fransman, W, Jensen, KA, Mäkelä, JM & Hämeri, KJ 2015, 'Workplace performance of a loose-fitting powered air purifying respirator during nanoparticle synthesis', *Journal of Nanoparticle Research*, vol. 17, no. 4. <https://doi.org/10.1007/s11051-015-2990-9>

Liu, X, Fan, Y & Tentzeris, MM 2015, 'An integrated "sense-and-communicate" broad-/narrow-band optically controlled reconfigurable antenna for cognitive radio systems', *Microwave and Optical Technology Letters*, vol. 57, no. 4, pp. 1016-1023. <https://doi.org/10.1002/mop.29004>

Korobko, DA, Okhotnikov, OG, Stoliarov, DA, Sysolyatin, AA & Zolotovskii, IO 2015, 'Broadband infrared continuum generation in dispersion shifted tapered fiber', *Journal of the Optical Society of America B*, vol. 32, no. 4, pp. 692-700. <https://doi.org/10.1364/JOSAB.32.000692>

Giannoulis, G, Korpijärvi, VM, Iliadis, N, Mäkelä, J, Viheriälä, J, Apostolopoulos, D, Guina, M & Avramopoulos, H 2015, Dilute nitride SOAs for high-speed data processing in variable temperature conditions. in *Optical Fiber Communication Conference, OFC 2015*. OSA - The Optical Society, Optical Fiber Communication Conference, United States, 1/01/00.

Aleksandrov, V, Gluth, A, Petrov, V, Buchvarov, I, Steinmeyer, G, Paajaste, J, Suomalainen, S, Härkönen, A, Guina, M, Mateos, X, Díaz, F & Griebner, U 2015, 'Mode-locked Tm:Ho:KLu(WO₄)₂ laser at 2060 nm using InGaSb-based SESAMs', *Optics Express*, vol. 23, no. 4, pp. 4614-4619. <https://doi.org/10.1364/OE.23.004614>

Miyamoto, I, Okamoto, Y, Hansen, A, Vihinen, J, Amberla, T & Kangastupa, J 2015, 'High speed, high strength microwelding of Si/glass using ps-laser pulses', *Optics Express*, vol. 23, no. 3, pp. 3427-3439. <https://doi.org/10.1364/OE.23.003427>

Gluth, A, Wang, Y, Petrov, V, Paajaste, J, Suomalainen, S, Härkönen, A, Guina, M, Steinmeyer, G, Mateos, X, Veronesi, S, Tonelli, M, Li, J, Pan, Y, Guo, J & Griebner, U 2015, 'GaSb-based SESAM mode-locked Tm: YAG ceramic laser at 2 μm ', *Optics Express*, vol. 23, no. 2, pp. 1361-1369. <https://doi.org/10.1364/OE.23.001361>

Ling, K, Yoo, M, Su, W, Kim, K, Cook, B, Tentzeris, MM & Lim, S 2015, 'Microfluidic tunable inkjet-printed metamaterial absorber on paper', *Optics Express*, vol. 23, no. 1, pp. 110-120. <https://doi.org/10.1364/OE.23.000110>

Morozov, YA, Morozov, MY, Kozlovsky, VI & Okhotnikov, OG 2015, 'Compact intracavity singly-resonant optical parametric oscillator pumped by GaSb-based vertical external cavity surface-emitting laser: Concept and the main operational characteristics', *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 21, no. 1. <https://doi.org/10.1109/JSTQE.2014.2385310>

Zolotovskii, IO, Korobko, DA & Okhotnikov, OG 2015, 'Frequency modulation of semiconductor disk laser pulses', *Quantum Electronics*, vol. 45, no. 7, pp. 628-634. <https://doi.org/10.1070/QE2015v045n07ABEH015670>

Zolotovskii, IO, Korobko, DA, Okhotnikov, OG, Stolyarov, DA & Sysolyatin, AA 2015, 'Generation of a broad IR spectrum and N-soliton compression in a longitudinally inhomogeneous dispersion-shifted fibre', *Quantum Electronics*, vol. 45, no. 9, pp. 844-852. <https://doi.org/10.1070/QE2015v045n09ABEH015690>

Zolotovskii, IO, Korobko, DA, Gumenyuk, RV & Okhotnikov, OG 2015, 'Generation of bound states of pulses in a soliton laser with complex relaxation of a saturable absorber', *Quantum Electronics*, vol. 45, no. 1, pp. 26-34. <https://doi.org/10.1070/QE2015v045n01ABEH015558>

Fitsios, D, Giannoulis, G, Korpijärvi, VM, Viheriälä, J, Laakso, A, Iliadis, N, Dris, S, Spyropoulou, M, Avramopoulos, H, Kanellos, GT, Pleros, N & Guina, M 2015, 'High-gain 1.3 μm GalnNAs semiconductor optical amplifier with enhanced temperature stability for all-optical signal processing at 10 Gb/s', *Applied Optics*, vol. 54, no. 1, pp. 46-52. <https://doi.org/10.1364/AO.54.000046>

Leroy, HA, Vermandel, M, Tétard, MC, Lejeune, JP, Mordon, S & Reyns, N 2015, Interstitial photodynamic therapy and glioblastoma: Light fractionation study on a preclinical model: Preliminary results. in *Optical Techniques in Neurosurgery, Neurophotonics, and Optogenetics II*. vol. 9305, 93050D, SPIE, Optical Techniques in Neurosurgery, Neurophotonics, and Optogenetics II, San Francisco, United States, 7/02/15. <https://doi.org/10.1117/12.2079347>

Assanto, G & Smyth, NF 2015, 'Light-Induced Waveguides in Nematic Liquid Crystals', *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 22, no. 2, 7128341. <https://doi.org/10.1109/JSTQE.2015.2446762>

Izdebskaya, Y, Assanto, G & Krolikowski, W 2015, 'Observation of stable-vector vortex solitons', *Optics Letters*, vol. 40, no. 17, pp. 4182-4185. <https://doi.org/10.1364/OL.40.004182>

Alberucci, A, Piccardi, A, Kravets, N, Buchnev, O & Assanto, G 2015, 'Soliton enhancement of spontaneous symmetry breaking', *Optica*, vol. 2, no. 9, pp. 783-789. <https://doi.org/10.1364/OPTICA.2.000783>

Orsila, L, Sand, J, Närhi, M, Genty, G & Steinmeyer, G 2015, 'Supercontinuum generation as a signal amplifier', *Optica*, vol. 2, no. 8, pp. 757-764. <https://doi.org/10.1364/OPTICA.2.000757>

Zang, X & Lalanne, P 2015, 'Theoretical treatment of the interaction between two-level atoms and periodic waveguides', *Optics Letters*, vol. 40, no. 16, pp. 3869-3872. <https://doi.org/10.1364/OL.40.003869>

Dutta, R, Friberg, AT, Genty, G & Turunen, J 2015, 'Two-time coherence of pulse trains and the integrated degree of temporal coherence', *Journal of the Optical Society of America A: Optics Image Science and Vision*, vol. 32, no. 9, pp. 1631-1637. <https://doi.org/10.1364/JOSAA.32.001631>

Nazir, R, Bourquard, F, Balčiūnas, E, Smoleń, S, Gray, D, Tkachenko, NV, Farsari, M & Gryko, DT 2015, 'π-Expanded α,β-unsaturated ketones: Synthesis, optical properties, and two-photon-induced polymerization', *ChemPhysChem*, vol. 16, no. 3, pp. 682–690. <https://doi.org/10.1002/cphc.201402646>

Rantamäki, A, Heikkinen, J, Gumenyuk, R, Lyytikäinen, J, Saarinen, EJ, Leinonen, T, Melkumov, M, Dianov, EM & Okhotnikov, OG 2014, Mode-locked 1.33 μm semiconductor disk laser with a bismuth-doped fiber amplifier. in *ISLC 2014, IEEE 24th International Semiconductor Laser Conference, 7-10 September, 2014, Mallorca, Spain.*, 6987481, IEEE International Semiconductor Laser Conference, The Institute of Electrical and Electronics Engineers, Inc., pp. 123-124, IEEE International Semiconductor Laser Conference, 1/01/14. <https://doi.org/10.1109/ISLC.2014.194>

Tiihonen, J 2014, *Vedyn Stark-ilmion ja polarisoituvuuksien mallintaminen polkuintegraali-Monte Carlo-menetelmällä*. Tampere University of Technology.

Ye, C, Petit, L, Koponen, JJ, Hu, IN & Galvanauskas, A 2014, 'Short-Term and Long-Term Stability in Ytterbium-Doped High-Power Fiber Lasers and Amplifiers', *IEEE Journal of Selected Topics in Quantum Electronics*, vol. 20, no. 5, 6762841. <https://doi.org/10.1109/JSTQE.2014.2310657>

Piccardi, A, Alberucci, A, Kravets, N, Buchnev, O, Kaczmarek, M & Assanto, G 2014, Bistable optical propagation in nematic liquid crystals. in *Nonlinear Photonics, NP 2014*. Optical Society of America OSA.

Ouskova, E, Pshenychnyi, A, Sánchez-Ferrer, A, Lysenko, D, Vapaavuori, J & Kaivola, M 2014, 'Enhanced nonlinearity by H-bonded polymer-dye complex in liquid crystal for holographic gratings', *Journal of the Optical Society of America B*, vol. 31, no. 7, pp. 1456-1464. <https://doi.org/10.1364/JOSAB.31.001456>

Heikkinen, J, Gumenyuk, R, Rantamäki, A, Leinonen, T, Melkumov, M, Dianov, EM & Okhotnikov, OG 2014, 'A 1.33 μm picosecond pulse generator based on semiconductor disk mode-locked laser and bismuth fiber amplifier', *Optics Express*, vol. 22, no. 10, pp. 11446-11455. <https://doi.org/10.1364/OE.22.011446>

Bourhis, K, Boetti, NG, Koponen, J, Milanese, D & Petit, L 2014, 'Influence of the P2O5/Al2O3 co-doping on the local environment of erbium ions and on the 1.5 μm quantum efficiency of Er3+-borosilicate glasses', *Optical Materials*, vol. 36, no. 5, pp. 926-931. <https://doi.org/10.1016/j.optmat.2013.12.035>

Gumenyuk, R, Korobko, DA, Zolotovskiy, IO & Okhotnikov, OG 2014, 'Role of cavity dispersion on soliton grouping in a fiber lasers', *Optics Express*, vol. 22, no. 2, pp. 1896-1905. <https://doi.org/10.1364/OE.22.001896>

Stumpel, JE, Wouters, C, Herzer, N, Ziegler, J, Broer, DJ, Bastiaansen, CWM & Schenning, APHJ 2014, 'An Optical Sensor for Volatile Amines Based on an Inkjet-Printed, Hydrogen-Bonded, Cholesteric Liquid Crystalline Film', *Advanced Optical Materials*, vol. 2, no. 5, pp. 459-464. <https://doi.org/10.1002/adom.201300516>

Aihara, Y, Kinoshita, M, Wang, J, Mamiya, JI, Priimagi, A & Shishido, A 2013, 'Polymer stabilization enhances the orientational optical nonlinearity of oligothiophene-doped nematic liquid crystals', *Advanced Optical Materials*, vol. 1, no. 11, pp. 787-791. <https://doi.org/10.1002/adom.201300326>

Yi, X, Cho, C, Cooper, J, Wang, Y, Tentzeris, MM & Leon, RT 2013, 'Passive wireless antenna sensor for strain and crack sensing - Electromagnetic modeling, simulation, and testing', *Smart Materials and Structures*, vol. 22, no. 8, 085009. <https://doi.org/10.1088/0964-1726/22/8/085009>

Marrucci, L, Smyth, NF & Assanto, G 2013, 'Optical vortices in antiguides', *Optics Letters*, vol. 38, no. 10, pp. 1618-1620. <https://doi.org/10.1364/OL.38.001618>

Colace, L, Santoni, F & Assanto, G 2013, 'A near-infrared optoelectronic approach to detection of road conditions', *Optics and Lasers in Engineering*, vol. 51, no. 5, pp. 633-636. <https://doi.org/10.1016/j.optlaseng.2013.01.003>

Makitalo, J, Suuriniemi, S & Kauranen, M 2013, 'Boundary element method for surface nonlinear optics of nanoparticles: Erratum', *Optics Express*, vol. 21, no. 8, pp. 10205-10206. <https://doi.org/10.1364/OE.21.010205>

Assanto, G & Smyth, NF 2013, 'Comment on "solitons in highly nonlocal nematic liquid crystals: Variational approach"', *Physical Review A*, vol. 87, no. 4, 047801. <https://doi.org/10.1103/PhysRevA.87.047801>

Ma, L, Wang, J & Wang, G 2013, 'Dipole polarizabilities of PdN (N = 2-25) clusters', *European Physical Journal D*, vol. 67, no. 1, 6. <https://doi.org/10.1140/epjd/e2012-30550-1>

Trikshev, AI, Kurkov, AS, Tsvetkov, VB, Filatova, SA, Kertulla, J, Filippov, V, Chamorovskiy, YK & Okhotnikov, OG 2013, 160W single-frequency laser based on active tapered double-clad fiber amplifier. in *Optics InfoBase Conference Papers. The European Conference on Lasers and Electro-Optics, CLEO_Europe 2013, Munich, Germany, 12/05/13.*

Şahin, E & Onural, L 2013, 'Calculation of the scalar diffraction field from curved surfaces by decomposing the three-dimensional field into a sum of Gaussian beams', *Journal of the Optical Society of America A: Optics Image Science and Vision*, vol. 30, no. 3, pp. 527-536.

Izdebskaya, YV, Desyatnikov, AS, Assanto, G & Kivshar, YS 2013, 'Deflection of nematicons through interaction with dielectric particles', *Journal of the Optical Society of America B*, vol. 30, no. 6, pp. 1432-1437. <https://doi.org/10.1364/JOSAB.30.001432>

Sorvajarvi, T, Rossi, J & Toivonen, J 2013, Detection of KC1 and KOH using collinear photofragmentation and atomic absorption spectroscopy. in *The European Conference on Lasers and Electro-Optics, CLEO_Europe 2013. The European Conference on Lasers and Electro-Optics, CLEO_Europe 2013, Munich, Germany, 12/05/13.*

Cakmakyapan, S, Serebryannikov, AE, Caglayan, H & Ozbay, E 2012, 'Spoof-plasmon relevant one-way collimation and multiplexing at beaming from a slit in metallic grating', *Optics Express*, vol. 20, no. 24, pp. 26636-26648. <https://doi.org/10.1364/OE.20.026636>

Izdebskaya, YV, Rebling, J, Desyatnikov, AS, Assanto, G & Kivshar, YS 2012, 'All-optical switching of a signal by a pair of interacting nematicons', *Optics Express*, vol. 20, no. 22, pp. 24701-24707. <https://doi.org/10.1364/OE.20.024701>

Assanto, G, Smyth, NF & Xia, W 2012, 'Refraction of nonlinear light beams in nematic liquid crystals', *Journal of Nonlinear Optical Physics and Materials*, vol. 21, no. 3, 1250033. <https://doi.org/10.1142/S0218863512500336>

Şahin, E & Onural, L 2012, 'Scalar diffraction field calculation from curved surfaces via Gaussian beam decomposition', *Journal of the Optical Society of America A: Optics Image Science and Vision*, vol. 29, no. 7, pp. 1459-1469. <https://doi.org/10.1364/JOSAA.29.001459>

Li, Z, Alici, KB, Caglayan, H, Kafesaki, M, Soukoulis, CM & Ozbay, E 2012, 'Composite chiral metamaterials with negative refractive index and high values of the figure of merit', *Optics Express*, vol. 20, no. 6, pp. 6146-6156. <https://doi.org/10.1364/OE.20.006146>

Cuyon, L, Lesage, JC, Betrouni, N & Mordon, S 2012, 'Development of a new illumination procedure for photodynamic therapy of the abdominal cavity', *JOURNAL OF BIOMEDICAL OPTICS*, vol. 17, no. 3, 038001. <https://doi.org/10.1117/1.JBO.17.3.038001>

Slablab, A, Le Xuan, L, Zielinski, M, De Wilde, Y, Jacques, V, Chauvat, D & Roch, JF 2012, 'Second-harmonic generation from coupled plasmon modes in a single dimer of gold nanospheres', *Optics Express*, vol. 20, no. 1, pp. 220-227. <https://doi.org/10.1364/OE.20.000220>

- Busacca, AC, Stivala, S, Curcio, L & Assanto, G 2012, 'Parametric conversion in micrometer and submicrometer structured ferroelectric crystals by surface poling', *International Journal of Optics*, vol. 2012, 606892. <https://doi.org/10.1155/2012/606892>
- Iliopoulos, K, Czaplicki, R, Ouazzani, HE, Balandier, J-Y, Chas, M, Goeb, S, Sallé, M, Gindre, D & Sahraoui, B 2012, 'Third order nonlinear optical response of TTF-based molecular corners', *Nonlinear Optics, Quantum Optics*, vol. 43, no. 1-4, pp. 205-212.
- Stivala, S, Buccheri, F, Curcio, L, Oliveri, RL, Busacca, AC & Assanto, G 2011, 'Features of randomized electric-field assisted domain inversion in lithium tantalate', *Optics Express*, vol. 19, no. 25, pp. 25780-25785.
- Zhong, WP, Belić, MR & Assanto, G 2011, 'Localized nonlinear wavepackets with radial-azimuthal modulated nonlinearity and an external potential', *Physica Scripta*, vol. 84, no. 5, 055001. <https://doi.org/10.1088/0031-8949/84/05/055001>
- Koponen, JJ, Petit, L, Kokki, T, Aallos, V, Paul, J & Ihalainen, H 2011, 'Progress in direct nanoparticle deposition for the development of the next generation fiber lasers', *Optical Engineering*, vol. 50, no. 11, 111605. <https://doi.org/10.1117/1.3613944>
- Izdebskaya, YV, Desyatnikov, AS, Assanto, G & Kivshar, YS 2011, 'Dipole azimuthons and vortex charge flipping in nematic liquid crystals', *Optics Express*, vol. 19, no. 22, pp. 21457-21466. <https://doi.org/10.1364/OE.19.021457>
- Zhong, WP, Belić, M, Assanto, G, Malomed, BA & Huang, T 2011, 'Light bullets in the spatiotemporal nonlinear Schrödinger equation with a variable negative diffraction coefficient', *Physical Review A*, vol. 84, no. 4, 043801. <https://doi.org/10.1103/PhysRevA.84.043801>
- Assanto, G, Smyth, NF & Xia, W 2011, 'Modulation analysis of nonlinear beam refraction at an interface in liquid crystals', *Physical Review A*, vol. 84, no. 3, 033818. <https://doi.org/10.1103/PhysRevA.84.033818>
- Shimamura, A, Priimagi, A, Mamiya, JI, Kinoshita, M, Ikeda, T & Shishido, A 2011, 'Photoinduced bending upon pulsed irradiation in azobenzene-containing crosslinked liquid-crystalline polymers', *Journal of Nonlinear Optical Physics and Materials*, vol. 20, no. 4, pp. 405-413. <https://doi.org/10.1142/S0218863511006200>
- Alasaarela, T, Zheng, D, Huang, L, Priimagi, A, Bai, B, Tervonen, A, Honkanen, S, Kuittinen, M & Turunen, J 2011, 'Single-layer one-dimensional nonpolarizing guided-mode resonance filters under normal incidence', *Optics Letters*, vol. 36, no. 13, pp. 2411-2413. <https://doi.org/10.1364/OL.36.002411>
- Asquini, R, Gilardi, G, D'Alessandro, A & Assanto, G 2011, 'Integrated Bragg reflectors in low-index media: Enabling strategies for wavelength tunability in electro-optic liquid crystals', *Optical Engineering*, vol. 50, no. 7, 071108. <https://doi.org/10.1117/1.3559210>
- Zhong, WP, Belić, M, Assanto, G & Huang, T 2011, 'Three-dimensional spatiotemporal vector solitary waves', *JOURNAL OF PHYSICS B: ATOMIC MOLECULAR AND OPTICAL PHYSICS*, vol. 44, no. 9, 095403. <https://doi.org/10.1088/0953-4075/44/9/095403>
- Zhong, WP, Belić, MR, Assanto, G, Malomed, BA & Huang, T 2011, 'Self-trapping of scalar and vector dipole solitary waves in Kerr media', *Physical Review A*, vol. 83, no. 4, 043833. <https://doi.org/10.1103/PhysRevA.83.043833>
- Sorianello, V, Colace, L, Assanto, G & Nardone, M 2011, 'Micro-Raman characterization of Germanium thin films evaporated on various substrates', *Microelectronic Engineering*, vol. 88, no. 4, pp. 492-495. <https://doi.org/10.1016/j.mee.2010.10.028>
- Colace, L, Sorianello, V, Romagnoli, M, Socci, L & Assanto, G 2011, 'Optical power monitors in Ge monolithically integrated on SOI chips', *Microelectronic Engineering*, vol. 88, no. 4, pp. 514-517. <https://doi.org/10.1016/j.mee.2010.10.033>

Sorianello, V, Colace, L, Assanto, G, Notargiacomo, A, Armani, N, Rossi, F & Ferrari, C 2011, 'Thermal evaporation of Ge on Si for near infrared detectors: Material and device characterization', *Microelectronic Engineering*, vol. 88, no. 4, pp. 526-529. <https://doi.org/10.1016/j.mee.2010.09.024>

Alberucci, A & Assanto, G 2011, 'On beam propagation in anisotropic media: One-dimensional analysis', *Optics Letters*, vol. 36, no. 3, pp. 334-336. <https://doi.org/10.1364/OL.36.000334>

Izdebskaya, YV, Desyatnikov, AS, Assanto, G & Kivshar, YS 2011, 'Multimode nematic waveguides', *Optics Letters*, vol. 36, no. 2, pp. 184-186.

Sapaev, UK, Kulagin, IA, Usmanov, T & Assanto, G 2011, 'Nonlinear pulse compression by the second-harmonic generation in quasiphase and group-velocity matched samples', *JOURNAL OF RUSSIAN LASER RESEARCH*, vol. 32, no. 1, pp. 41-46. <https://doi.org/10.1007/s10946-011-9187-1>

Piccardi, A, Alberucci, A, Assanto, G & Tabiryan, N 2011, Dark solitons in nematic liquid crystals. in *Optics InfoBase Conference Papers. Nonlinear Optics: Materials, Fundamentals and Applications, NLO 2011*, Kauai, HI, United States, 17/07/11. <https://doi.org/10.1364/NLO.2011.NWE4>

Cakmakyapan, S, Caglayan, H, Serebryannikov, A & Ozbay, E 2011, Directional selectivity through the subwavelength slit in metallic gratings. in *2011 Conference on Lasers and Electro-Optics: Laser Science to Photonic Applications, CLEO 2011.*, 5951099, 2011 Conference on Lasers and Electro-Optics, CLEO 2011, Baltimore, MD, United States, 1/05/11.

Cakmakyapan, S, Caglayan, H, Serebryannikov, A & Ozbay, E 2011, Directional selectivity through the subwavelength slit in metallic gratings. in *CLEO: Applications and Technology. CLEO: Applications and Technology, CLEO_AT 2011*, Baltimore, MD, United States, 1/05/11. https://doi.org/10.1364/CLEO_AT.2011.JTuI67

Cakmakyapan, S, Caglayan, H, Serebryannikov, A & Ozbay, E 2011, Directional selectivity through the subwavelength slit in metallic gratings. in *CLEO: Science and Innovations 2011. CLEO: Science and Innovations, CLEO_SI 2011*, Baltimore, MD, United States, 1/05/11. https://doi.org/10.1364/CLEO_AT.2011.JTuI67

Cakmakyapan, S, Caglayan, H, Serebryannikov, A & Ozbay, E 2011, Directional selectivity through the subwavelength slit in metallic gratings. in *Quantum Electronics and Laser Science Conference, QELS 2011. Quantum Electronics and Laser Science Conference, QELS 2011*, Baltimore, MD, United States, 1/05/11. https://doi.org/10.1364/CLEO_AT.2011.JTuI67

Izdebskaya, YV, Desyatnikov, AS, Assanto, G & Kivshar, YS 2011, Multimode waveguides in nematic liquid crystals. in *Conference on Lasers and Electro-Optics/Pacific Rim, CLEOPR 2011.* pp. 1912-1913, Conference on Lasers and Electro-Optics/Pacific Rim, CLEOPR 2011, Sydney, Australia, 28/08/11.

Veselov, A, Efimov, A, Chamorovskiy, A, Okhotnikov, O, Kosolapov, A, Levchenko, A, Lemmetyinen, H & Tkachenko, N 2011, Self-assembled monolayers (SAMs) of porphyrin deposited inside solid-core photonic crystal fibre (SCPCF). in *Access Networks and In-house Communications, ANIC 2011. Access Networks and In-house Communications, ANIC 2011*, Toronto, Canada, 12/06/11.

Izdebskaya, YV, Desyatnikov, AS, Assanto, G & Kivshar, Y 2011, Spatial solitons carrying phase singularities in nematic liquid crystals. in *Conference on Lasers and Electro-Optics/Pacific Rim, CLEOPR 2011.* pp. 444-445, Conference on Lasers and Electro-Optics/Pacific Rim, CLEOPR 2011, Sydney, Australia, 28/08/11.

Piccardi, A, Alberucci, A, Assanto, G & Kaczmarek, M 2011, Spatial solitons in a self-focusing medium with tunable nonlinearity. in *Optics InfoBase Conference Papers. Nonlinear Optics: Materials, Fundamentals and Applications, NLO 2011*, Kauai, HI, United States, 17/07/11. <https://doi.org/10.1364/NLO.2011.NWE7>

Caglayan, H & Engheta, N 2011, Theory of near-IR metatronic nanocircuits using transparent conducting oxides (TCO). in *Frontiers in Optics 2011. Optical Society of America, Frontiers in Optics, FIO 2011*, San Jose, CA, United States, 16/10/11. <https://doi.org/10.1364/FIO.2011.FTuG2>

Peccianti, M, Pasquazi, A, Assanto, G & Morandotti, R 2011, Third harmonic generation enhancement in nematic liquid crystals via nonlocal solitons propagation. in *CLEO: Science and Innovations, CLEO_SI 2011*. CLEO: Science and Innovations, CLEO_SI 2011, Baltimore, MD, United States, 1/05/11.

Dantelle, G, Slablab, A, Rondin, L, Lainé, F, Carrel, F, Bergonzo, P, Perruchas, S, Gacoin, T, Treussart, F & Roch, JF 2010, 'Efficient production of NV colour centres in nanodiamonds using high-energy electron irradiation', *Journal of Luminescence*, vol. 130, no. 9, pp. 1655-1658. <https://doi.org/10.1016/j.jlumin.2009.12.003>

Cakmakyapan, S, Serebryannikov, AE, Caglayan, H & Ozbay, E 2010, 'One-way transmission through the subwavelength slit in nonsymmetric metallic gratings', *Optics Letters*, vol. 35, no. 15, pp. 2597-2599. <https://doi.org/10.1364/OL.35.002597>

Li, Z, Caglayan, H, Colak, E, Zhou, J, Soukoulis, CM & Ozbay, E 2010, 'Coupling effect between two adjacent chiral structure layers', *Optics Express*, vol. 18, no. 6, pp. 5375-5383. <https://doi.org/10.1364/OE.18.005375>

Stepien, M, Saarinen, JJ, Teisala, H, Tuominen, M, Aromaa, M, Kuusipalo, J, Mäkelä, J & Toivakka, M 2010, Controlled wettability of paperboard by nanoparticles using liquid flame spray process. in *International Conference on Nanotechnology for the Forest Products Industry 2010*. pp. 1390-1392, International Conference on Nanotechnology for the Forest Products Industry 2010, Otaniemi, Espoo, Finland, 27/09/10.

Piccardi, A, Alberucci, A, Bortolozzo, U, Residori, S & Assanto, G 2010, Nematicon routing in liquid crystal light valve. in *Optics InfoBase Conference Papers. Nonlinear Photonics, NP 2010*, Karlsruhe, Germany, 21/06/10.

Piccardi, A, Alberucci, A & Assanto, G 2010, Soliton self-deflection via power-dependent walk-off. in *Optics InfoBase Conference Papers. Nonlinear Photonics, NP 2010*, Karlsruhe, Germany, 21/06/10. <https://doi.org/10.1364/NP.2010.NMD1>

Colak, E, Caglayan, H, Cakmak, AO, Villa, AD, Capolino, F & Ozbay, E 2009, 'Frequency dependent steering with backward leaky waves via photonic crystal interface layer', *Optics Express*, vol. 17, no. 12, pp. 9879-9890. <https://doi.org/10.1364/OE.17.009879>

Wnuk, P, Xuan, LL, Slablab, A, Tard, C, Perruchas, S, Gacoin, T, Roch, J-F, Chauvat, D & Radzewicz, C 2009, 'Coherent nonlinear emission from a single KTP nanoparticle with broadband femtosecond pulses', *Optics Express*, vol. 17, no. 6, pp. 4652-4658. <https://doi.org/10.1364/OE.17.004652>

Caglayan, H, Bulu, I, Loncar, M & Ozbay, E 2009, 'Experimental observation of subwavelength localization using metamaterial-based cavities', *Optics Letters*, vol. 34, no. 1, pp. 88-90. <https://doi.org/10.1364/OL.34.000088>

Assanto, G, Peccianti, M, Alberucci, A & Piccardi, A 2009, Routing light with nematicons: Light localization and steering in liquid crystals. in *Optics InfoBase Conference Papers. Optical Society of America*, pp. 2281-2282, International Quantum Electronics Conference, IQEC 2009, Baltimore, MD, United States, 31/05/09. <https://doi.org/10.1364/IQEC.2009.ITuG1>

Le Xuan, L, Slablab, A, Zhou, C, Chauvat, D, De Wilde, Y, Perruchas, S, Tard, C, Gacoin, T, Villeval, P & Roch, JF 2009, Single KTiOPO4 nanocrystals for nonlinear probing of local optical fields and interaction with a metallic nanostructure. in *Optics InfoBase Conference Papers. Optical Society of America, European Quantum Electronics Conference, EQEC 2009*, Munich, Germany, 14/06/09.

Caglayan, H, Bulu, I, Loncar, M & Ozbay, E 2008, 'Cavity formation in split ring resonators', *Photonics and Nanostructures - Fundamentals and Applications*, vol. 6, no. 3-4, pp. 200-204. <https://doi.org/10.1016/j.photonics.2008.09.001>

Caglayan, H & Ozbay, E 2008, 'Surface wave splitter based on metallic gratings with sub-wavelength aperture', *Optics Express*, vol. 16, no. 23, pp. 19091-19096. <https://doi.org/10.1364/OE.16.019091>

Caglayan, H, Bulu, I, Loncar, M & Ozbay, E 2008, 'Experimental observation of cavity formation in composite metamaterials', *Optics Express*, vol. 16, no. 15, pp. 11132-11140. <https://doi.org/10.1364/OE.16.011132>

Caglayan, H, Bulu, I, Loncar, M & Ozbay, E 2008, Observation of defect formation in metamaterials. in *Plasmonics and Metamaterials 2008*, MMC7, Optical Society of America, Plasmonics and Metamaterials, META_PLAS 2008, Rochester, NY, United States, 19/10/08. https://doi.org/10.1364/META_PLAS.2008.MMC7

Bulu, I, Caglayan, H, Aydin, K & Ozbay, E 2007, 'Study of the field emitted by a source placed inside a two-dimensional left-handed metamaterial', *Optics Letters*, vol. 32, no. 7, pp. 850-852. <https://doi.org/10.1364/OL.32.000850>

Bulu, I, Caglayan, H & Ozbay, E 2006, 'Designing materials with desired electromagnetic properties', *Microwave and Optical Technology Letters*, vol. 48, no. 12, pp. 2611-2615. <https://doi.org/10.1002/mop.21988>

Caglayan, H, Bulu, I & Ozbay, E 2006, 'Plasmonic structures with extraordinary transmission and highly directional beaming properties', *Microwave and Optical Technology Letters*, vol. 48, no. 12, pp. 2491-2496. <https://doi.org/10.1002/mop.22015>

Bulu, I, Caglayan, H & Ozbay, E 2006, 'Experimental demonstration of subwavelength focusing of electromagnetic waves by labyrinth-based two-dimensional metamaterials', *Optics Letters*, vol. 31, no. 6, pp. 814-816. <https://doi.org/10.1364/OL.31.000814>

Nilsson, J, Sahu, JK, Jeong, Y, Filippov, VN, Soh, DBS, Codemard, CA, Dupriez, P, Kim, J, Richardson, DJ, Malinowski, A, Piper, AN, Price, JHV, Furusawa, K, Clarkson, WA & Payne, DN 2006, High power fiber lasers. in *Optics InfoBase Conference Papers*. Optical Society of America, Optical Fiber Communication Conference, OFC 2006, Anaheim, CA, United States, 5/03/06.

Bulu, I, Caglayan, H & Ozbay, E 2005, 'Experimental demonstration of labyrinth-based left-handed metamaterials', *Optics Express*, vol. 13, no. 25, pp. 10238-10247. <https://doi.org/10.1364/OPEX.13.010238>

Bulu, I, Caglayan, H & Ozbay, E 2005, 'Beaming of light and enhanced transmission via surface modes of photonic crystals', *Optics Letters*, vol. 30, no. 22, pp. 3078-3080. <https://doi.org/10.1364/OL.30.003078>

Caglayan, H, Bulu, I & Ozbay, E 2005, 'Highly directional enhanced radiation from sources embedded inside three-dimensional photonic crystals', *Optics Express*, vol. 13, no. 19, pp. 7645-7652. <https://doi.org/10.1364/OPEX.13.007645>

Ozbay, E, Bulu, I, Aydin, K, Caglayan, H, Alici, KB & Guven, K 2005, 'Highly directive radiation and negative refraction using photonic crystals', *Laser Physics*, vol. 15, no. 2, pp. 217-224.

Peccianti, M, Alberucci, A, Assanto, G, De Luca, A, Coschignano, G & Umeton, C 2005, Walking anisotropic spatial solitons and their steering in nematic liquid crystals. in *Nonlinear Guided Waves and Their Applications, NLGW 2005*. Optical Society of America OSA, Nonlinear Guided Waves and Their Applications, NLGW 2005, Dresden, Germany, 6/09/05. <https://doi.org/10.1364/NLGW.2005.FA1>

Caglayan, H, Bulu, I & Ozbay, E 2005, 'Extraordinary grating-coupled microwave transmission through a subwavelength annular aperture', *Optics Express*, vol. 13, no. 5, pp. 1666-1671. <https://doi.org/10.1364/OPEX.13.001666>

Ozbay, E, Bulu, I, Aydin, K, Caglayan, H & Guven, K 2004, 'Physics and applications of photonic crystals', *Photonics and Nanostructures - Fundamentals and Applications*, vol. 2, no. 2, pp. 87-95. <https://doi.org/10.1016/j.photonics.2004.08.001>

Kantola, JH, Vaara, J, Rantala, TT & Jokisaari, J 1997, ¹²⁹Xe adsorbed in AlPO₄-11 molecular sieve: Molecular dynamics simulation of adsorbate dynamics and NMR chemical shift', *Journal of Chemical Physics*, vol. 107, no. 16, pp. 6470-6478. <https://doi.org/10.1063/1.475135>

Hyvönen, M, Ala-Korpela, M, Vaara, J, Rantala, TT & Jokisaari, J 1997, 'Inequivalence of single CH_a and CH_b methylene bonds in the interior of a diunsaturated lipid bilayer from a molecular dynamics simulation', *Chemical Physics Letters*, vol. 268, no. 1-2, pp. 55-60. [https://doi.org/10.1016/S0009-2614\(97\)00171-1](https://doi.org/10.1016/S0009-2614(97)00171-1)

Valkealahti, S & Manninen, M 1997, 'Diffusion processes and growth on aluminum cluster surfaces', *Zeitschrift für Physik D Atoms, Molecules and Clusters*, vol. 40, no. 1-4, pp. 496-502. <https://doi.org/10.1007/s004600050262>

Valkealahti, S & Manninen, M 1993, 'Structural transitions and melting of copper clusters', *Zeitschrift für Physik D Atoms, Molecules and Clusters*, vol. 26, no. 1, pp. 255-257. <https://doi.org/10.1007/BF01429161>

Rantala, TT, Jelski, DA, Bowser, JR, Xia, X & George, TF 1993, 'Analysis of the magic numbers observed for metallocarbohedrane clusters', *Zeitschrift für Physik D Atoms, Molecules and Clusters*, vol. 26, no. 1 Supplement, pp. 255-257. <https://doi.org/10.1007/BF01425682>

Valkealahti, S, Manninen, M & Hammarén, E 1992, 'Simulation of cluster impact fusion', *Zeitschrift für Physik D Atoms, Molecules and Clusters*, vol. 22, no. 2, pp. 547-551. <https://doi.org/10.1007/BF01426097>

Lounila, J & Rantala, TT 1991, 'Effects of repulsion and dispersion forces in liquid crystals: Alignment and deformation of H₂ solute', *Physical Review A*, vol. 44, no. 10, pp. 6641-6651. <https://doi.org/10.1103/PhysRevA.44.6641>

Jelski, DA, Swift, BL, Rantala, TT, Xia, X & George, TF 1991, 'Structure of the Si₄₅ cluster', *Journal of Chemical Physics*, vol. 95, no. 11, pp. 8552-8560. <https://doi.org/10.1063/1.461813>

Rantala, TT, Stockman, MI, Jelski, DA & George, TF 1990, 'Linear and nonlinear optical properties of small silicon clusters', *Journal of Chemical Physics*, vol. 93, no. 10, pp. 7427-7438. <https://doi.org/10.1063/1.459417>

Valkealahti, S & Nieminen, RM 1987, 'Molecular dynamics investigation of the premelting effects of lennard-jones (111) surfaces', *Physica Scripta*, vol. 36, no. 4, pp. 646-650. <https://doi.org/10.1088/0031-8949/36/4/007>

Rantala, TT, Wästberg, B & Rosén, A 1986, 'Potential energy curves for diatomic molecules calculated with numerical basis functions', *Chemical Physics*, vol. 109, no. 2-3, pp. 261-268. [https://doi.org/10.1016/0301-0104\(86\)87056-2](https://doi.org/10.1016/0301-0104(86)87056-2)

Rosén, A & Rantala, TT 1986, 'Analysis of the reactivity of small cobalt clusters', *Zeitschrift für Physik D Atoms, Molecules and Clusters*, vol. 3, no. 2, pp. 205-209. <https://doi.org/10.1007/BF01384808>

Rantala, TT, Rosén, A & Helsing, B 1986, 'A finite cluster approach to the electron-hole pair damping of the adsorbate vibration: CO adsorbed on Cu(100)', *Journal of Electron Spectroscopy and Related Phenomena*, vol. 39, no. C, pp. 173-181. [https://doi.org/10.1016/0368-2048\(86\)85045-9](https://doi.org/10.1016/0368-2048(86)85045-9)

Väyrynen, J, Rantala, TT, Minni, E & Suoninen, E 1983, 'Anomalous Auger-electron spectra of metallic calcium', *Journal of Electron Spectroscopy and Related Phenomena*, vol. 31, no. 3, pp. 293-305. [https://doi.org/10.1016/0368-2048\(83\)85077-4](https://doi.org/10.1016/0368-2048(83)85077-4)

Rantala, T, Väyrynen, J, Kumpula, R & Aksela, S 1979, 'Direct measurement of the kinetic energy shift between the molecular and atomic M_{4,5}N_{4,5} Auger spectra of iodine', *Chemical Physics Letters*, vol. 66, no. 2, pp. 384-386. [https://doi.org/10.1016/0009-2614\(79\)85040-X](https://doi.org/10.1016/0009-2614(79)85040-X)