Ausgewählte Publikationen SCoPE

2020

Highly efficient dual-fibre optical trapping with 3D printed diffractive Fresnel lenses *A. Asadollahbaik, S. Thiele, K. Weber, A. Kumar, J. Drozella, A. Herkommer, H. Giessen, and J. Fick* ACS Photonics **7**, 88 (2020)
Ultra-Efficient Silicon-on-Insulator Grating Couplers with Backside Metal Mirrors *N. Hoppe, W. S. Zaoui, L. Rathgeber, Y. Wang, R. H. Klenk, W. Vogel, M. Kaschel, S. L. Portalupi, J. Burghartz, M. Berroth* IEEE J. Select. Topics Quantum Electron., Vol. 26, No. 2, 2020, pp. 1-6, Art no. 8200206. DOI: 10.1109/JSTQE.2019.2935296

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3D printed stacked diffractive microlenses *S. Thiele, C. Pruss, A. Herkommer, und H. Giessen* Optics Express, 27(24), 35621-35630 (2019)
A 2x2 Pixel Array Camera based on a Backside Illuminated Ge-on-Si Photodetector A.C. Köllner, Z. Yu, M. Oehme, J. Anders, M. Kaschel, J. Schulze, J. N. Burghartz 2019 IEEE SENSORS, 1-4
A CMOS NMR needle for probing brain physiology with high spatial and temporal resolution *J. Handwerker, M. Perez-Rodas, M. Beyerlein, F. Vincent, A. Beck, N. Freytag, X. Yu, R. Pohmann, K. Scheffler, J. Anders* Nature methods 17 (1), 64-67 (2019)
A new SCAO control concept based on mechanical mirror modes for METIS *P. Neureuther, T. Bertram, O. Sawodny* Adaptive Optics for Extremely Large Telescopes (AO4ELT6) (2019)
Augmented Reality Using High Resolution Adaptive Headlights *C. Reinert-Weiss, D. Duhme, and N. Fruehauf* IEEE-Konferenz ICCE 2019, Las Vegas USA, 11.-13.01.2019 (2019)
CMOS integrated hyperpolarized NMR using NV centers in diamond *J. Anders, I. Schwartz, K. Lips, MB. Plenio, F. Jelezko* Quantum Technologies and Quantum Information Science V 11167, 111670K (2019)
Co-Fabrication of Silicon based TFTs and Micro-Electro-Mechanical Devices *N. Fruehauf, P. Schalberger, S. A. Nusayer, C. Jurgschat, and P. Mammel* IMID 2019 DIGEST 2019, 225 (2019)
Design of a freeform uniformity corrector lens for extended sources in elliptical reflectors *D. Rausch, & A. Herkommer* Journal of Physics: Photonics, 1(2), 024001 (2019)
Design of intra-cavity deformable mirrors for high-power lasers *K. Schmidt; S. Piehler; B. Dannecker; T. Dietrich; A. Raisch; T. Graf; M. Abdou Ahmed; O. Sawodny* tm - Technisches Messen (2019)
Deterministic fabrication of circular Bragg gratings coupled to single quantum emitters via the combination of in-situ optical lithography and electron-beam lithography *S. Kolatschek, S. Hepp, M. Sartison, M. Jetter, P.Michler, and S.L. Portalupi* J. Appl. Phys. 125, 045701 (2019)
Entwurf deformierbarer Spiegel für den Einsatz in Hochleistungslasern *K. Schmidt, S. Piehler, B. Dannecker, T. Dietrich, A. Raisch, T. Graf, M. Abdou Ahmed, and O. Sawodny* tm – Technisches Messen 86 (3), (2019) https://doi.org/10.1515/teme-2019-000

Gaussian Process Based Multi-Rate Observer for the Dynamic Positioning Error of a Measuring Machine *M. Ringkowski; O. Sawodny* European Control Conference (ECC) (2019)
Improved Optical 1xN On-Chip-Switches Based on Generalized Mach-Zehnder Interferometers *N. Hoppe, L. Kauke, L. Rathgeber, T. Föhn, W. Vogel, M. Berroth* International Conference on Numerical Simulation of Optoelectronic Devices (NUSOD), Ottawa, Canada, 2019, MP04, pp. 27-28. DOI: 10.1109/NUSOD.2019.8806903
InAs quantum dots grown on metamorphic buffers as non-classical light sources at telecom C-band: a review *S. L. Portalupi, M. Jetter, and P. Michler* Semicond. Sci. Technol. 34, 053001 (2019)
Interplay between electronic and structural transitions in vanadium dioxide revealed by ellipsometry *I. Voloshenko, B. Gompf, A. Berrier, G. Schnoering, F. Kuhl, A. Polity, M. Dressel* J. Vacuum Science and Technology B39, 061202 (2019)
Inversion of coupled parabolic PDEs with distributed acting inputs for feedforward controlling thermoelastic deformations *K. Schmidt; O. Sawodny* American Control Conference (ACC) (2019)
In-vitro monitoring conformational changes of polypeptide monolayers using infrared plasmonic nanoantennas *R. Semenyshyn, M. Hentschel, C. Stanglmair, T. Teutsch, C. Tarin, C. Pacholski, H. Giessen, and F. Neubrech* Nano Lett. **19**, 1 (2019)
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Semiconductor Quantum Dots for Integrated Quantum Photonics *S. Hepp, M. Jetter, S. L. Portalupi, and P. Michler* Adv. Quantum Technol. 1900020 (2019)
Single-photon light-emitting diodes based on preselected quantum dots using a deterministic lithography technique *M. Sartison, S. Seyfferle, S. Kolatschek, S. Hepp, M. Jetter, P. Michler, and S. L. Portalupi* Appl. Phys. Lett. 114, 222101 (2019)
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A transimpedance amplifier based on an {LTPS} process operated in alkali vapor for the measurement of an ionization current *J. Schmidt, P. Schalberger, H. Baur, R. Loew, T. Pfau, H. Kuebler, and N. Fruehauf* Proceedings Volume 10674, Quantum Technologies 2018; 106740D (2018)
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Deterministic integration and optical characterization of telecom O-band quantum dots embedded into wet-chemically etched Gaussian-shaped microlenses *M. Sartison, L. Engel, S. Kolatschek, F. Olbrich, C. Nawrath. S. Hepp, M. Jetter, P. Michler, and S.L. Portalupi* Appl. Phys. Lett. 113, 032103 (2018)
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A transimpedance amplifier based on a LTPS process operated in alkali vapor *J. Schmidt, P. Schalberger, H. Baur, R. Löw, T. Pfau, H. Kübler and N. Frühauf* 24th International Workshop on Active-Matrix Flatpanel Displays and Devices (AM-FPD)
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