

Publikationen im Themenfeld Optische Technologien (seit 2012)

Originalarbeiten

Prof. Dr. Oliver Sandfuchs:

O. Sandfuchs, M. Kraus, R. Brunner, „Structured metal double-blazed dispersion grating for broadband spectral efficiency achromatization”, *J. Opt. Soc. Am. A*, submitted (2020)

D. Karthaus, M. Giehl, O. Sandfuchs, S. Sinzinger, „Modeling of light-emitting diode wavefronts for the optimization of transmission holograms”, *Appl. Opt.* 56, 5234-5241 (2017)

O. Sandfuchs, R. Brunner, “Efficiency-achromatized reflective dispersion grating by a double-blazed configuration: Theoretical conditions for optimal material selection”, Special issue on “Micro- and Nano-optics”, *Asian J. Phys.* 25, 897-906 (2016), invited paper

D. Thomae, O. Sandfuchs, R. Brunner, “Influence of oblique illumination on perfect Talbot imaging and nearly perfect self-imaging for gratings beyond five diffraction orders”, *J. Opt. Soc. Am. A* 32, 2365-2372 (2015)

D. Thomae, O. Sandfuchs, R. Brunner, “Quantitative analysis of imperfect frequency multiplying in fractional Talbot planes and its effect on high-frequency-grating lithography”, *J. Opt. Soc. Am. A* 31, 1436-1444 (2014)

D. Thomae, J. Maass, O. Sandfuchs, A. Gatto, R. Brunner, “Flexible mask illumination setup for serial multi-patterning in Talbot lithography”, *Appl. Opt.* 53, 1775-1781 (2014)

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Meyer, J.; Tappe, F. Photoluminescent Materials for Solid-State Lighting: State of the Art and Future Challenges. *Adv. Opt. Mater.* **2015**, 3 (4), 424–430.

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Meyer, J.; Thomas, C.; Tappe, F.; Ogbazghi, T.: "In Depth Analyses of LEDs by a Combination of X-ray Computed Tomography (CT) and Light Microscopy (LM) Correlated with Scanning Electron Microscopy (SEM)" *Journal of visualized experiments : JoVE [Online]* No. 112 (2016)

Ogbazghi, T., Thomas, Ch.: "Correlative Microscopy of Optical Materials"; *Imaging & Microscopy* 3/2014 (2014), 32-34

Elli, A.F., Thomas, Ch., Böker, Ch., Wiederspahn, M.: "Korrelative Licht- und Elektronenmikroskopie (CLEM) – Anwendungsmöglichkeiten in Bio- und Materialwissenschaften"; *Optik & Photonik* 7 (2012) no.1, 32-36

Prof. Dr. Helge-Otto Fabritius:

Wu, X., Rodríguez-Gallegos, F. L., Heep, M.-C., Schwind, B., Li, G., Fabritius, H.-O., von Freymann, G. and Förstner, J.: *Polarization Conversion Effect in Biological and Synthetic Photonic Diamond Structures*. *Adv. Optical Mat.*, 6(24): 1800635, 2018.

Fabritius, H.-O. and Moussian, B.: *The arthropod cuticle – A never-ending endeavor*. *Arthropod Struct. Dev.* 46: 2-3, 2017.

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Van Opdenbosch, D., Johannes, M., Wu, X., Fabritius, H. and Zollfrank, C.: *Fabrication of high-temperature resistant threedimensional photonic crystals with tunable photonic properties by biotemplating*. *Photonics Nanostruct.* 10:516-522, 2012.

Tagungsbeiträge

Prof. Dr. Oliver Sandfuchs:

D. Karthaus, M. Giehl, O. Sandfuchs, S. Sinzinger, „Optimization of computer-generated transmission holograms using different LED wavefront approximations“, *Proceedings of the 118. annual conference of the German Society of Applied Optics (DGaO)*, Jun 6-10, 2017, Dresden, Germany

D. Karthaus, O. Sandfuchs, S. Sinzinger, "Transmission holograms for white light illumination", *Proceedings of the 12th International Symposium on Automotive Lighting (ISAL)*, vol. 17, Sep. 25-27, 2017, Darmstadt, Germany

O. Sandfuchs, R. Brunner, "Reflective Double-blazed gratings for Broadband Spectral Efficiencies", *annual meeting of the European Optical Society (EOSAM)*, Sep. 26-30, 2016, Berlin, Germany, oral presentation

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O. Sandfuchs, R. Brunner, “Bionics and Biomimetic Optics – What applied optics can learn from nature”, Proceedings of the 117. annual conference of the German Society of Applied Optics (DGaO), May 17-20, 2016, Hannover, Germany, oral presentation

D. Karthaus, O. Sandfuchs, S. Sinzinger, “Design and Simulation of Computer-generated Volume Holograms for Automotive Headlamps”, Proceedings of the 117. Annual conference of the German Society of Applied Optics (DGaO), May 17-20, 2016, Hannover, Germany, oral presentation

M. Schöne, O. Sandfuchs, C. Neumann, “Diffractive Optics in Automotive Headlamps – New Design Concepts Including a Special Simulation Process”, Proceedings of the 117. annual conference of the German Society of Applied Optics (DGaO), May 17-21, 2016, Hannover, Germany, oral presentation

R. Brunner, O. Sandfuchs, “Aspects of Diffractive, Micro- and Nano-Structured Optics towards Commercial Exploitation”, 10. International Conference on Optics-photonics Design and Fabrication (ODF) in corporation with the Optical Society of Japan, Feb.29, 2016, Weingarten, Germany, invited oral pres.

D. Karthaus, N. Koren, O. Sandfuchs, S. Sinzinger, „Holograms in automotive headlamps with LED illumination“, Proceedings of the 11th International Symposium on Automotive Lighting (ISAL), vol. 16, Sep. 28-30, Darmstadt, Germany

M. Schöne, O. Sandfuchs, C. Neumann, „Diffractive Optics in Automotive Headlamps – Design and Simulation“, 11. International Symposium on Automotive Lighting (ISAL), Sep. 28-30, 2015, Darmstadt, Germany, poster presentation

D. Karthaus, O. Sandfuchs, S. Sinzinger, „Holograms in Automotive Headlamps – Chances and Challenges“, Proceedings of the 116. annual conference of the German Society of Applied Optics (DGaO), May 26-29, 2015, Brno, Czech Republic, poster presentation

M. Schöne, O. Sandfuchs, C. Neumann, „Diffractive Optics in Automotive Headlamps – Thermal effects and optical system design“, Proceedings of the 116. annual conference of the German Society of Applied Optics (DGaO), May 26-29, 2015, Brno, Czech Republic, poster presentation

D. Thomae, J. Maass, O. Sandfuchs, A. Gatto, R. Brunner, „Modifizierte Talbot-Lithografie zur Strukturierung effizienter spektroskopischer Blaze-Gitter“, Proceedings of the 114. annual conference of the German Society of Applied Optics (DGaO), May 21-25, 2013, Braunschweig, Germany, oral presentation

J. Maass, O. Puffky, D. Thomae, A. Gatto, O. Sandfuchs, R. Brunner, „Efficient production of arbitrary periodic structures by dynamic Talbot lithography“, Conference on High Aspect Ratio Micro and Nano System Technology (HARMNST) 21-24 April, 2013, Berlin, Deutschland, poster presentation

M. Burkhardt, R. Fechner, L. Erdmann, F. Frost, R. Steiner, O. Sandfuchs, A. Schindler, A. Gatto, S. Sinzinger, „Imaging gratings with modulated blaze realized by a combination of holography and reactive ion beam etching“, Proceedings of the 113. annual conference of the German Society of Applied Optics (DGaO), May 29-June 2, 2012, Eindhoven,

Netherlands, oral presentation

Prof. Dr. Jörg Meyer:

Meyer, J.; Hemmerich, M.; Saha, S.; Walther, F. *Analyse des Photodegradationsverhaltens von Polylactiden zur Evaluation der Anwendbarkeit in optischen Komponenten*; ANAKON 2019: Münster, 2019.

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Schmidt, N.; Meyer, J. *PLA for optical components in LED lighting*; 4th PLA World Congress: Munich, 2016.

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Willeke, B.; Meyer, J. *LASER-basierte Lichtquellen in der Automobilbeleuchtung – Evaluation neuer Konzepte für eine weiße Lichtquelle*; 115. DGaO-Jahrestagung: Karlsruhe, 2014.

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Buchkapitel und andere Veröffentlichungen

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