

## PUBLICATIONS

## A. BOOK(S)

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- 1 | **K. Keskinbora**, *Prototyping Micro-and Nano-Optics with Focused Ion Beam Lithography*, SPIE Press – Spotlights, 2019

## B. JOURNAL PAPERS

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- 16 | J. Gräfe, P. Gruszecki, M. Zelent, M. Decker, **K. Keskinbora**, ..., G. Schütz, *Direct observation of spin-wave focusing by a Fresnel lens*, Physical Review B 102 (2), 024420
- 15 | G. Dogan, U. T. Sanli, ..., **K. Keskinbora\***, *In situ X-ray Diffraction and Spectro-Microscopic Study of ALD Protected Copper Films*, ACS Appl. Mater. Interfaces 2020, 12, 29
- 14 | L. Loetgering, M. Baluktsian, **K. Keskinbora**, ..., S. Witte, *Generation and characterization of focused helical X-ray beams*, Science Advances, eaax8836, 6 (7), 2020
- 13 | L. Loetgering, M. Rose, **K. Keskinbora**, M. Baluktsian, ..., T. Wilhein, *Correction of axial position uncertainty and systematic detector errors in ptychographic diffraction imaging*, Opt. Eng. 57 (8), 084106, 2018
- 12 | **K. Keskinbora\***, U.T. Sanli, M. Baluktsian, C.Grévent, G. Schütz, *High-throughput Synthesis of High Resolution Modified Fresnel Zone Plate arrays via Ion Beam Lithography*, Beilstein Journal of Nanotechnology 9 (1), 2049-2056, 2018
- 11 | U. T. Sanli, H. Ceylan\*, I. Bykova, M. Weigand, M. Sitti, G. Schütz, **K. Keskinbora\***, *3D Nano-printed Kinoform X-ray Optics*, Adv. Mater. 1802503, 2018
- 10 | U. T. Sanli\*, C. J. M. Baluktsian, C. Grevent, K. H., Y. Wang, V. Srot, G. Richter, I. Bykova, M. Weigand, G. Schütz, **K. Keskinbora\*** *3D Nanofabrication of High-resolution Multilayer Fresnel Zone Plates* Adv. Science, 1800346, 2018
- 9 | P. Vayalamkuzhi, S. Bhattacharya, U. Eigenthaler, **K. Keskinbora**, C.T. Samlan, M. Hirscher, J.P. Spatz, N.K. Viswanathan, *Direct patterning of vortex generators on a fiber tip using a focused ion beam* Opt. Express, 41, 10, 2133, 2016
- 8 | **K. Keskinbora**, C. Grévent, M. Hirscher, M. Weigand, G. Schütz, *Single-step 3D nanofabrication of kinoform optics via gray-scale focused ion beam lithography for efficient X-ray focusing* Adv. Opt. Mater., 3, 792-800, 2015
- 7 | **K. Keskinbora**, A.-L. Robisch, M. Mayer, U. T. Sanli, C. Grévent, C. Wolter, M. Weigand, A. Szeghalmi, M. Knez, T. Salditt, G. Schütz, *Multilayer Fresnel zone plates for high energy radiation resolve 21 nm features at 1.2 keV* Opt. Express, 22 (15), 18440-18453, 2014
- 6 | **K. Keskinbora**, C. Grévent, U. Eigenthaler, M. Weigand, G. Schütz, *Rapid prototyping of Fresnel zone plates via direct Ga<sup>+</sup> ion beam lithography for high resolution X-Ray imaging*, ACS Nano, 7 (11), 9788-9797, 2013
- 5 | **K. Keskinbora**, C. Grévent, M. Bechtel, M. Weigand, E. Goering, A. Nadzeyka, L. Peto, S. Rehbein, G. Schneider, R. Follath, J. Vila-Comamala, H. Yan, G. Schütz, *Ion beam lithography for Fresnel zone plates in X-ray microscopy* Opt. Express 21 (10), 11747-11756, 2013
- 4 | M. Mayer, **K. Keskinbora**, C. Grévent, A. Szeghalmi, M. Knez, M. Weigand, A. Snigirev, I. Snigireva, G. Schutz, *Efficient focusing of 8 keV X-rays with multilayer Fresnel zone*

- plates fabricated by atomic layer deposition and focused ion beam milling* J. Synchrotron Radiat. 20 (3), 433-440, 2013
- 3 | A Nadzeyka, L. Peto, S. Bauerdick, M. Mayer, **K. Keskinbora**, C. Grévent, M. Weigand, M. Hirscher, G. Schütz, *Ion beam lithography for direct patterning of high accuracy large area X-ray elements in gold on membranes* Microelectron. Eng., 98, 198-201, 2012
  - 2 | **K. Keskinbora**, T. S. Suzuki, I. O. Ozer, Y. Sakka, E. Suvaci, *Hybrid processing and anisotropic sintering shrinkage in textured ZnO ceramics* Sci. Technol. Adv. Mater. 11 (6), 065006, 2011
  - 1 | N. Saha, **K. Keskinbora**, E. Suvaci, B. Basu, *Sintering, microstructure, mechanical, and antimicrobial properties of HAp-ZnO biocomposites* J. Biomed. Mater. Res., Part B 95 (2), 430-440, 2010

### C. PROCEEDINGS

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- 11 | I. Bykova, **K. Keskinbora**, U. Sanli, J. Gräfe, M. Bechtel, G. Yu, ... Weigand, M. *Soft X-ray Ptychography for Imaging of Magnetic Domains and Skyrmions in Sub-100 nm Scales*. Microscopy & Microanalysis, 24(S2), 36-37.
- 10 | U. Sanli, H. Ceylan, C. Jiao, M. Baluksian, Grevent, K. C., Hahn, ... **K. Keskinbora\*** *New Concepts for 3D Optics in X-ray Microscopy*. Microscopy & Microanalysis, 24(S2), 292-293.
- 9 | J. Gräfe, M. Decker, **K. Keskinbora**, M. Noske, P. Gawronski, H. Stoll, C. H Back, E. J. Goering, G. Schütz, *X-Ray Microscopy of Spin Wave Focusing using a Fresnel Zone Plate* arXiv preprint arXiv:1707.03664, 2017
- 8 | M. Baluksian, **K. Keskinbora**, Y.T. Sanli, *Micromachining of Si<sub>3</sub>N<sub>4</sub> by Ga<sup>+</sup>-Ion Implantation and Dry Etching*, Microscopy & Microanalysis 22, (S3), 170-171, 2016
- 7 | **K. Keskinbora\***, U.T. Sanli, C. Grévent, G. Schütz, *Fabrication and x-ray testing of true kinoform lenses with high efficiencies*, Proc. SPIE, 95920H-95920H-6, 2015
- 6 | U.T. Sanli, **K. Keskinbora\***, K. Gregorczyk, J. Leister, N. Teeny, C. Grévent, M. Knez, G. Schütz, *High-Resolution High-Efficiency Multilayer Fresnel Zone Plates For Soft and Hard X-Rays*, Proc. SPIE, 95920F-95920F-8, 2015
- 5 | **K. Keskinbora**, U.T. Sanli, C. Grévent, M. Hirscher, G. Schütz, *Focused Ion Beam Micromachining Enables Novel Optics for X-ray Microscopy*, Microscopy & Microanalysis 21 (S3), 1983-1984, 2015
- 4 | U.T. Sanli, **K. Keskinbora**, C. Grévent, A. Szeghalmi, M. Knez, G. Schütz, *Multilayer Fresnel Zone Plates for X-ray Microscopy*, Microscopy & Microanalysis 21 (S3), 1987-1988, 2015
- 3 | U. T. Sanli, **K. Keskinbora**, C. Grévent, G. Schütz, *Overview of the multilayer-Fresnel Zone Plate and the kinoform lens development at MPI for Intelligent Systems*, Proc. of SPIE, 95100U-95100U-9, 2015
- 2 | A Vijayakumar, U. Eigenthaler, **K. Keskinbora**, G. M Sridharan, V. Pramitha, M. Hirscher, J. P. Spatz, S. Bhattacharya, *Optimizing the fabrication of diffractive optical elements using a focused ion beam system*, Proc. SPIE 9130, 91300X-1, 2014
- 1 | **K. Keskinbora**, A.-L. Robisch, M. Mayer, C. Grévent, A. V. Szeghalmi, M. Knez, M. Weigand, I. Snigireva, A. Snigirev, T. Salditt, G. Schütz, *Recent advances in use of atomic*

*layer deposition and focused ion beams for fabrication of Fresnel Zone Plates for hard X-rays*, Proc. SPIE, 885119-885119-5, 2013

#### D. PATENTS

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- 3 | **K. Keskinbora**, U. T. Sanli, H. Ceylan, G. Schütz, M. Sitti, *Method for Printing X-Ray Optics and Printed X-Ray Optics*, EP18161035.3, PCT Application, 2018
- 2 | U. T. Sanli, **K. Keskinbora** and G. Schütz, *High Resolution Full Material Fresnel Zone Plate Array and Process for its Fabrication*, EU Patent, EPO 3282294, March 2020
- 1 | G. Schütz, C. Grévent, **K. Keskinbora**, M. Hirscher, *Method of producing a Fresnel Zone Plate for applications in high energy radiation*, US Patent, US9859028B2, 2018

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