

# Stefan Sinzinger

## List of Publications by Year in descending order

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155  
papers

1,402  
citations

394286

19  
h-index

477173

29  
g-index

157  
all docs

157  
docs citations

157  
times ranked

897  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fresnel ping-pong algorithm for two-plane computer-generated hologram display. Applied Optics, 1994, 33, 869.	2.1	99
2	Beam homogenizers based on chirped microlens arrays. Optics Express, 2007, 15, 6218.	1.7	86
3	Integrated micro-optical imaging system with a high interconnection capacity fabricated in planar optics. Applied Optics, 1997, 36, 4729.	2.1	63
4	Subaperture stitching for measurement of freeform wavefront. Applied Optics, 2015, 54, 10022.	2.1	47
5	Design and fabrication of polarization-holographic elements for laser beam shaping. Applied Optics, 2009, 48, 2669.	2.1	33
6	Rigorous analysis of shadowing effects in blazed transmission gratings. Optics Letters, 2006, 31, 3638.	1.7	30
7	Experimental investigations on characterization of freeform wavefront using Shack-Hartmann sensor. Optical Engineering, 2017, 56, 1.	0.5	30
8	Tunable hyperchromatic lens system for confocal hyperspectral sensing. Optics Express, 2013, 21, 27611.	1.7	29
9	Spectral characteristics of chromatic confocal imaging systems. Applied Optics, 2014, 53, 7634.	2.1	29
10	Planar-integrated optical vector-matrix multiplier. Applied Optics, 2000, 39, 5367.	2.1	28
11	An imaging spectrometer employing tunable hyperchromatic microlenses. Light: Science and Applications, 2016, 5, e16058-e16058.	7.7	25
12	Iterative optimization of phase-only diffractive optical elements based on a lenslet array. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2000, 17, 2157.	0.8	24
13	Practical realization of massively parallel fiber-free-space optical interconnects. Applied Optics, 2001, 40, 2902.	2.1	24
14	Chromatic confocal matrix sensor with actuated pinhole arrays. Applied Optics, 2015, 54, 4927.	2.1	24
15	Diffractive array optics tuned by rotation. Applied Optics, 2017, 56, A89.	2.1	22
16	Implementing the generalized phase-contrast method in a planar-integrated micro-optics platform. Optics Letters, 2002, 27, 945.	1.7	21
17	Graphic codes for computer holography. Applied Optics, 1995, 34, 3172.	2.1	20
18	Aberration analysis of optimized Alvarez-Lohmann lenses. Applied Optics, 2014, 53, 7498.	2.1	20

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19	Characterization of optical coatings using a multisource table-top scatterometer. <i>Applied Optics</i> , 2014, 53, A259.	0.9	20
20	Fast nonparaxial scalar focal field calculations. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2014, 31, 1206.	0.8	20
21	Multifocal multi-value phase zone plate for 3D focusing. <i>Applied Optics</i> , 2019, 58, 8943.	0.9	20
22	Wavefront-coding technique for inexpensive and robust retinal imaging. <i>Optics Letters</i> , 2014, 39, 3986.	1.7	19
23	Numerical solution of nonparaxial scalar diffraction integrals for focused fields. <i>Journal of the Optical Society of America A: Optics and Image Science, and Vision</i> , 2014, 31, 1832.	0.8	19
24	Microoptically integrated correlators for security applications. <i>Optics Communications</i> , 2002, 209, 69-74.	1.0	18
25	Hybrid hyperchromats for chromatic confocal sensor systems. <i>Advanced Optical Technologies</i> , 2012, 1, 187-194.	0.9	18
26	Integrated free-space optical interconnect fabricated in planar optics using chirped microlens arrays. <i>Optics Express</i> , 2006, 14, 10765.	1.7	17
27	High-efficiency detour-phase holograms. <i>Optics Letters</i> , 1997, 22, 928.	1.7	15
28	Spectrally multiplexed chromatic confocal multipoint sensing. <i>Optics Letters</i> , 2013, 38, 4694.	1.7	15
29	Compact planar-integrated optical correlator for spatially incoherent signals. <i>Applied Optics</i> , 2000, 39, 759.	2.1	14
30	Highly efficient refractive Gaussian-to-tophat beam shaper for compact terahertz imager. <i>Applied Optics</i> , 2010, 49, 1757.	2.1	14
31	Hybrid optical (freeform) components' functionalization of nonplanar optical surfaces by direct picosecond laser ablation. <i>Applied Optics</i> , 2011, 50, 3221.	2.1	14
32	Computer-aided manufacturing for freeform optical elements by ultraprecision micromilling. , 2011, , .		13
33	Mix-and-match lithography and cryogenic etching for NIL template fabrication. <i>Microelectronic Engineering</i> , 2020, 224, 111234.	1.1	13
34	Simultaneous color and luminance control of organic light-emitting diodes for mood-lighting applications. <i>Applied Physics Letters</i> , 2008, 92, 033305.	1.5	12
35	Weighted spline based integration for reconstruction of freeform wavefront. <i>Applied Optics</i> , 2018, 57, 1100.	0.9	12
36	Optimized free-form optical trapping systems. <i>Optics Letters</i> , 2012, 37, 274.	1.7	11

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37	Evaluation of quadratic phase hologram calculation algorithms in the Fourier regime. Applied Optics, 2020, 59, 1501.	0.9	11
38	MOEMS tunable microlens made of aluminum nitride membranes. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2013, 12, 023012.	1.0	10
39	Tip- and Laser-based 3D Nanofabrication in Extended Macroscopic Working Areas. Nanomanufacturing and Metrology, 2021, 4, 132-148.	1.5	10
40	Zoom systems with tuneable lenses and linear lens movements. Journal of the European Optical Society-Rapid Publications, 2019, 15, .	0.9	9
41	Development of a metrology technique suitable for <i>in situ</i> measurement and corrective manufacturing of freeform optics. Advanced Optical Technologies, 2019, 8, 203-215.	0.9	9
42	Highly Anisotropic Fluorine-Based Plasma Etching of Ultralow Expansion Glass. Advanced Engineering Materials, 2021, 23, 2001336.	1.6	9
43	Composite spiral multi-value zone plates. Applied Optics, 2020, 59, 4618.	0.9	9
44	Design of an opto-electronic VLSI/parallel fibre bus. Journal of Optics, 1999, 1, 367-370.	1.5	8
45	Modified phase contrast for recording of holographic optical elements. Optics Letters, 2007, 32, 2067.	1.7	8
46	Application of an interferometric phase contrast method to fabricate arbitrary diffractive optical elements. Applied Optics, 2008, 47, 2550.	2.1	8
47	Information extraction from digital holograms for particle flow analysis. Applied Optics, 2010, 49, 2446.	2.1	8
48	Two-step phase-shift interferometry with known but arbitrary reference waves: a graphical interpretation. Applied Optics, 2012, 51, 6831.	0.9	8
49	Parallelized chromatic confocal sensor systems. , 2013, , .		8
50	Aperture-coded confocal profilometry. Optics Letters, 2016, 41, 5523.	1.7	8
51	Three-dimensional limaçon: Properties and applications. Physical Review A, 2017, 95, .	1.0	8
52	Efficient detour-phase encoding of one-dimensional multilevel phase diffractive elements. Applied Optics, 1998, 37, 5454.	2.1	7
53	Optimizing the generalized phase contrast method for a planar optical device. Journal of Optics, 2003, 5, S211-S215.	1.5	7
54	Phase contrast imaging: a generalized perspective. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2009, 26, 1015.	0.8	7

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55	Ultraprecision machining techniques for the fabrication of freeform surfaces in highly integrated optical microsystems. , 2009, , .		7
56	Time-resolved combination of the Mueller–Stokes and Jones calculus for the optimization of a twisted-nematic spatial-light modulator. Applied Optics, 2015, 54, 4239.	2.1	7
57	Simple unimorph deformable mirrors fabricated from piezo buzzers. Journal of Micromechanics and Microengineering, 2016, 26, 055009.	1.5	7
58	Wavefront sensing by numerical evaluation of diffracted wavefields. Applied Optics, 2017, 56, A13.	2.1	7
59	Superdirectional light emission and emission reversal from microcavity arrays. Physical Review Research, 2019, 1, .	1.3	7
60	Efficient quantization of tunable helix phase plates. Optics Letters, 2016, 41, 4755.	1.7	7
61	Local Babinet effect. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1992, 9, 1154.	0.8	6
62	Analysis of the influence of the passive facet of blazed transmission gratings in the intermediate diffraction regime. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2008, 25, 1885.	0.8	6
63	Tunable compound eye cameras. , 2010, , .		6
64	Optical performance of coherent and incoherent imaging systems in the presence of ghost images. Applied Optics, 2012, 51, 7134.	0.9	6
65	Parabasal theory for plane-symmetric systems including freeform surfaces. Optical Engineering, 2013, 53, 031303.	0.5	6
66	Deep etched and released microstructures in Zerodur in a fluorine-based plasma. Microelectronic Engineering, 2018, 198, 78-84.	1.1	6
67	Integrated soft UV-nanoimprint lithography in a nanopositioning and nanomeasuring machine for accurate positioning of stamp to substrate. , 2019, , .		6
68	Tailoring Patterned Visible-Light Scattering by Silicon Photonic Crystals. ACS Applied Materials & Interfaces, 2021, 13, 60319-60326.	4.0	6
69	<title>Confocal imaging with diffractive optics and broadband light sources</title>. , 1997, 3002, 186.		5
70	Depth of focus analysis of optical systems using tunable aperture stops with a moderate level of absorption. Applied Optics, 2014, 53, 6508.	0.9	5
71	Fast and scalable algorithm for the simulation of multiple Mie scattering in optical systems. Applied Optics, 2016, 55, 3887.	2.1	5
72	Evaluation of microlens properties in the presence of high spherical aberration. Applied Optics, 1995, 34, 6431.	2.1	4

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73	Modeling of the polishing process for aspheric optics. , 2008, , .		4
74	Ultraprecision micromilling of freeform optical elements for planar microoptical systems integration. , 2008, , .		4
75	Design of a micro-opto-electro-mechanical-system-based near-infrared hyperspectral imager. Applied Optics, 2009, 48, 6583.	2.1	4
76	Single-step replication of a highly integrated PDMS optofluidic analysis system. Applied Optics, 2010, 49, 4326.	2.1	4
77	Perturbed Talbot patterns for the measurement of low particle concentrations in fluids. Applied Optics, 2012, 51, 1605.	0.9	4
78	Tunable cylindrical microlenses based on aluminum nitride membranes. , 2013, , .		4
79	Compact tunable hyperspectral imaging system. , 2014, , .		4
80	Modeling of light-emitting diode wavefronts for the optimization of transmission holograms. Applied Optics, 2017, 56, 5234.	2.1	4
81	A microoptical sidestream cuvette based on fast passive gas exchange for capnography. Sensors and Actuators A: Physical, 2018, 276, 68-75.	2.0	4
82	Nano-imprinted subwavelength gratings as polarizing beamsplitters. Journal of the European Optical Society-Rapid Publications, 2021, 17, .	0.9	4
83	Fabrication and characterization of deformed microdisk cavities in silicon dioxide with high Q-factor. Applied Optics, 2020, 59, 7893.	0.9	4
84	Manufacturing of nanostructures with high aspect ratios using soft UV-nanoimprint lithography with bi- and trilayer resist systems. Micro and Nano Engineering, 2022, 14, 100106.	1.4	4
85	Highly integrated optical microsystem for particle concentration measurement. , 2010, , .		3
86	Fresnel transform as a projection onto a Nijboerâ€™Zernike basis set. Optics Letters, 2015, 40, 3472.	1.7	3
87	Scotoma Simulation in Healthy Subjects. Optometry and Vision Science, 2018, 95, 1120-1128.	0.6	3
88	Rotationally tunable multi-focal diffractive moiré lenses. Applied Optics, 2021, 60, 5145.	0.9	3
89	Microoptical correlators for security applications. , 2000, , .		3
90	Non-Null Technique for Measurement of Freeform Wavefront using Stitching Approach. , 2015, , .		3

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91	Multi-sheet excitation and imaging of flow driven samples in an LSM with a modified multi-focal diffractive lens. , 2021, , .		3
92	Novel approaches to the design of halftone masks for analog lithography. Applied Optics, 2008, 47, 4767.	2.1	2
93	Digital holography and phase retrieval: a theoretical investigation. Proceedings of SPIE, 2011, , .	0.8	2
94	Imaging Systems with Aspherically Tunable Micro-optical Elements. , 2013, , .		2
95	A theoretical comparison of Fresnel based digital holography and phase retrieval from the transport of intensity equation. Proceedings of SPIE, 2013, , .	0.8	2
96	Integriertes Design und Fertigung optischer Bauelemente. Optik & Photonik, 2013, 8, 48-51.	0.3	2
97	Development of metrology for freeform optics in reflection mode. , 2017, , .		2
98	Development and Implementation of a Rotating Nanoimprint Lithography Tool for Orthogonal Imprinting on Edges of Curved Surfaces. Nanomanufacturing and Metrology, 2021, 4, 175-180.	1.5	2
99	Planar Microoptical Systems for Correlation and Security Applications. , 2006, , 339-366.		1
100	Fly's eye condenser based on chirped microlens arrays. , 2007, 6663, 71.		1
101	Synthetic design and integrated fabrication of multifunctional hybrid beam shapers. , 2011, , .		1
102	Integrated optofluidic system for monitoring particle mass concentrations based on planar emitterâ€“receiver units. Applied Optics, 2012, 51, 7800.	0.9	1
103	Efficient and precise simulation of multiple Mie scattering events using GPGPUs. Proceedings of SPIE, 2013, , .	0.8	1
104	Fluctuations in the intensity read out of CCD/CMOS arrays in digital holographic setups: an experimental investigation. Proceedings of SPIE, 2014, , .	0.8	1
105	Integrated microsystems for optical sensing and imaging applications. Proceedings of SPIE, 2016, , .	0.8	1
106	Husimi functions for coupled optical resonators. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2021, 38, 573.	0.8	1
107	Lau Effect Using LED Array for Lithography. Nanomanufacturing and Metrology, 2021, 4, 165-174.	1.5	1
108	Ray-tracing analysis of planar optical systems. , 2000, , .		1

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109	Free-form optical trapping systems. , 2011, , .		1
110	Parallelized chromatic confocal systems enable efficient spectral information coding. SPIE Newsroom, 0, , .	0.1	1
111	<title>Light efficient parallel interconnect using integrated planar free-space optics and vertical-cavity surface-emitting laser diodes</title>. , 1998, , .		1
112	Optimization of holograms for application in automotive headlamps with LED illumination. , 2016, , .		1
113	High power laser beam shaping for welding applications by means of diffractive elements. , 2018, , .		1
114	Design method for zoom systems based on tunable lenses. Optical Engineering, 2022, 61, .	0.5	1
115	Sensing applications of diffractive optics with broadband illumination. , 1998, , .		0
116	<title>Systems engineering for planar-integrated free-space optics</title>. , 2001, 4455, 256.		0
117	Performance of the generalized phase contrast method implemented in planar-integrated micro-optics. , 2003, , .		0
118	Integrierte optoelektronische Crossbar-Architekturen in planar-integrierter Freiraumoptik (Integrated Optoelectronic Crossbar Architectures in Planar Integrated Free-Space Optics). IT - Information Technology, 2003, 45, 87-91.	0.6	0
119	Design considerations for integrated microoptical systems combining refractive and diffractive optical components. , 2005, , .		0
120	Diffractive and Defractive Micro-optics. , 2008, , 65-99.		0
121	Simulation and analysis of the polishing process for aspheres. Proceedings of SPIE, 2009, , .	0.8	0
122	Integrated freespace optical fluorescence detector for micro fluidic applications. Proceedings of SPIE, 2010, , .	0.8	0
123	Optical freeform surfaces in integrated optical microsystems. , 2012, , .		0
124	Compact Optical systems for Micromanipulation. Laser Technik Journal, 2012, 9, 20-23.	0.4	0
125	Tunable confocal hyperspectral imaging system. , 2013, , .		0
126	Tunable anamorphic imaging system based on fluidic cylindrical lenses. , 2014, , .		0



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127	Imprinted DOE on varifocal membrane lens. , 2014, , .		0
128	Thermographischer Detektor basierend auf einem neuartigen Mikro-Spiegel Sensor. TM Technisches Messen, 2014, 81, 219-227.	0.3	0
129	Compact hyperchromatic imaging systems based on tunable optical microsystems. , 2014, , .		0
130	Having fun with Lohmann optics. , 2015, , .		0
131	2D stepping drive for hyperspectral systems. Journal of Micromechanics and Microengineering, 2015, 25, 074002.	1.5	0
132	2D stepping microdrive for hyperspectral imaging. , 2015, , .		0
133	Effects of illumination on image reconstruction via Fourier ptychography. Advanced Optical Technologies, 2017, 6, 467-474.	0.9	0
134	Current research topics pioneered by Adolf Lohmann: introduction. Applied Optics, 2017, 56, IO1.	2.1	0
135	Control of Projection Uniformity and Fidelity in Spatial Light Modulator-Based Holography. , 2019, , .		0
136	Opto-Mechatronic System for Control and Characterization of the Coherence Properties of Light Sources. , 2019, , .		0
137	Comparison of Deep Etched Borosilicate Glasses in a Fluorine Based Plasma. , 2019, , .		0
138	Approximate Diffraction Model for Optical Free Form Surfaces. , 2010, , .		0
139	A Generalized Approach to Describe the Interference Contrast and the Phase Contrast Method. Advances in Imaging and Electron Physics, 2010, 164, 303-327.	0.1	0
140	Freeform Surfaces in Optical (Micro-)systems: From Parabasal Theory to Applications. , 2013, , .		0
141	Three-dimensional laser ablation for functionalization of non-planar optical surfaces. , 2013, , .		0
142	Iterative Phase Retrieval and the Important Role Played by Initial Conditions. , 2014, , 123-128.		0
143	Method and apparatus for detecting the surface shape of reflective freeform optics. , 2014, , .		0
144	Axial Decorrelation of Paraxial Wavefields: Theory and Experiment. , 2014, , 213-216.		0

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145	Illumination concepts for integrated optical sensors. , 2016, , .		0
146	Development of an In-situ Metrology Technique for Freeform Optics. , 2018, , .		0
147	Intrinsic surface feature based subaperture stitching of freeform wavefront. , 2019, , .		0
148	Micro- and nanofabrication technologies using the nanopositioning and nanomeasuring machines. , 2019, , .		0
149	Deformed microcavities with very high Q-factors and directional farfield emission. EPJ Web of Conferences, 2020, 238, 01006.	0.1	0
150	Resonant microoptics for enhanced computational imaging and sensing solutions. , 2020, , .		0
151	Resonant diffraction gratings with polarization-dependent efficiencies. EPJ Web of Conferences, 2020, 238, 05002.	0.1	0
152	Spatial Light Modulator-Based Maskless Holographic Lithography on Nonplanar Surfaces. , 2020, , .		0
153	Generation of coaxial arrays of petal-like modes using composite spiral multi-value zone plates. , 2020, , .		0
154	Tunable multi-focal Diffractive lens. , 2021, , .		0
155	Diffractive optical coupling elements for microresonators. , 2021, , .		0