John Marius Rodenburg

List of Publications by Year
in descending order

91	7,783	109321 35	66911 78
papers	citations	h-index	g-index

92	92	92	2735
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An improved ptychographical phase retrieval algorithm for diffractive imaging. Ultramicroscopy, 2009, 109, 1256-1262.	1.9	1,118
2	A phase retrieval algorithm for shifting illumination. Applied Physics Letters, 2004, 85, 4795-4797.	3.3	734
3	Hard-X-Ray Lensless Imaging of Extended Objects. Physical Review Letters, 2007, 98, 034801.	7.8	726
4	Movable Aperture Lensless Transmission Microscopy: A Novel Phase Retrieval Algorithm. Physical Review Letters, 2004, 93, 023903.	7.8	652
5	Ptychography and Related Diffractive Imaging Methods. Advances in Imaging and Electron Physics, 2008, 150, 87-184.	0.2	349
6	Ptychographic transmission microscopy in three dimensions using a multi-slice approach. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2012, 29, 1606.	1.5	286
7	Ptychographic electron microscopy using high-angle dark-field scattering for sub-nanometre resolution imaging. Nature Communications, 2012, 3, 730.	12.8	251
8	Translation position determination in ptychographic coherent diffraction imaging. Optics Express, 2013, 21, 13592.	3.4	242
9	An annealing algorithm to correct positioning errors in ptychography. Ultramicroscopy, 2012, 120, 64-72.	1.9	234
10	The theory of super-resolution electron microscopy via Wigner-distribution deconvolution. Philosophical Transactions of the Royal Society: Physical and Engineering Sciences, 1992, 339, 521-553.	1.0	208
11	Transmission microscopy without lenses for objects of unlimited size. Ultramicroscopy, 2007, 107, 227-231.	1.9	199
12	Superresolution imaging via ptychography. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2011, 28, 604.	1.5	194
13	Resolution beyond the 'information limit' in transmission electron microscopy. Nature, 1995, 374, 630-632.	27.8	193
14	Information multiplexing in ptychography. Ultramicroscopy, 2014, 138, 13-21.	1.9	169
15	Optical ptychography: a practical implementation with useful resolution. Optics Letters, 2010, 35, 2585.	3.3	154
16	Soft X-ray spectromicroscopy using ptychography with randomly phased illumination. Nature Communications, 2013, 4, 1669.	12.8	144
17	Experimental tests on double-resolution coherent imaging via STEM. Ultramicroscopy, 1993, 48, 304-314.	1.9	119
18	Sampling in x-ray ptychography. Physical Review A, 2013, 87, .	2.5	119

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19	Ptychographic microscope for three-dimensional imaging. Optics Express, 2014, 22, 12513.	3.4	97
20	Phase retrieval based on wave-front relay and modulation. Physical Review B, 2010, 82, .	3.2	91
21	Noise models for low counting rate coherent diffraction imaging. Optics Express, 2012, 20, 25914.	3.4	89
22	Error tolerance of an iterative phase retrieval algorithm for moveable illumination microscopy. Ultramicroscopy, 2005, 103, 153-164.	1.9	88
23	Wave-front phase retrieval in transmission electron microscopy via ptychography. Physical Review B, 2010, 82, .	3.2	86
24	Reciprocal-space up-sampling from real-space oversampling in x-ray ptychography. Physical Review A, 2014, 89, .	2.5	77
25	Beyond the conventional information limit: the relevant coherence function. Ultramicroscopy, 1994, 54, 61-74.	1.9	75
26	Sub-Ã¥ngstrÃ¶m transmission microscopy: A fourier transform algorithm for microdiffraction plane intensity information. Ultramicroscopy, 1989, 31, 303-307.	1.9	60
27	Extended ptychography in the transmission electron microscope: Possibilities and limitations. Ultramicroscopy, 2011, 111, 1117-1123.	1.9	58
28	Two-dimensional demonstration of Wigner phase-retrieval microscopy in the STEM configuration. Ultramicroscopy, 1992, 45, 371-380.	1.9	56
29	Ptychography. Springer Handbooks, 2019, , 819-904.	0.6	56
30	Ptychographic inversion via Wigner distribution deconvolution: Noise suppression and probe design. Ultramicroscopy, 2014, 147, 106-113.	1.9	48
31	Evolutionary determination of experimental parameters for ptychographical imaging. Journal of Applied Physics, 2011, 109, .	2.5	43
32	Breaking ambiguities in mixed state ptychography. Optics Express, 2016, 24, 9038.	3.4	43
33	Manufacturing of YbAG coatings and crystallisation of the pure and Li2O-doped Yb2O3â€“Al2O3 system by a modified solâ€“gel method. Materials Chemistry and Physics, 2003, 77, 802-807.	4.0	40
34	Synthesis of Nanosize Powders and Thin Films of Yb-Doped YAG by Solâˆ’Gel Methods. Chemistry of Materials, 2003, 15, 3474-3480.	6.7	40
35	Separation of three-dimensional scattering effects in tilt-series Fourier ptychography. Ultramicroscopy, 2015, 158, 1-7.	1.9	37
36	Electron Ptychography. I. Experimental Demonstration Beyond the Conventional Resolution Limits. Acta Crystallographica Section A: Foundations and Advances, 1998, 54, 49-60.	0.3	36

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37	Optical demonstration of a new principle of far-field microscopy. Journal Physics D: Applied Physics, 1992, 25, 147-154.	2.8	35
38	Dual wavelength optical metrology using ptychography. Journal of Optics (United Kingdom), 2013, 15, 035702.	2.2	34
39	Investigation of intermixing in TiAlN/VN nanoscale multilayer coatings by energy-filtered TEM. Surface and Coatings Technology, 2002, 151-152, 209-213.	4.8	33
40	Plasmaâ€“surface interaction at sharp edges and corners during ion-assisted physical vapor deposition. Part I: Edge-related effects and their influence on coating morphology and composition. Journal of Applied Physics, 2003, 94, 2829-2836.	2.5	31
41	A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. Europhysics Letters, 2008, 82, 30006.	2.0	28
42	The phase problem, microdiffraction and wavelength-limited resolution â€” a discussion. Ultramicroscopy, 1989, 27, 413-422.	1.9	27
43	Simultaneous reconstruction of object and aperture functions from multiple far-field intensity measurements. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 1993, 10, 231.	1.5	27
44	Error analysis of crystalline ptychography in the STEM mode. Ultramicroscopy, 1993, 52, 85-99.	1.9	26
45	Analysis and interpretation of the Seidel aberration coefficients in digital holography. Applied Optics, 2011, 50, H220.	2.1	26
46	Properties of electron microdiffraction patterns from amorphous materials. Ultramicroscopy, 1988, 25, 329-343.	1.9	25
47	Quantitative phase contrast optimised cancerous cell differentiation via ptychography. Optics Express, 2012, 20, 9911.	3.4	25
48	Electron Ptychography. II. Theory of Three-Dimensional Propagation Effects. Acta Crystallographica Section A: Foundations and Advances, 1998, 54, 61-73.	0.3	22
49	Influence of thick crystal effects on ptychographic image reconstruction with moveable illumination. Ultramicroscopy, 2009, 109, 1263-1275.	1.9	21
50	Probe position recovery for ptychographical imaging. Journal of Physics: Conference Series, 2010, 241, 012004.	0.4	17
51	Multiple mode x-ray ptychography using a lens and a fixed diffuser optic. Journal of Optics (United) Tj ETQq1 1 0.784314 rgBT /Overlo	2.2	17
52	Pixel size adjustment in coherent diffractive imaging within the Rayleighâ€“Sommerfeld regime. Applied Optics, 2015, 54, 1936.	1.8	16
53	Coherence requirement in digital holography. Applied Optics, 2013, 52, A326.	1.8	15
54	The recording of microdiffraction patterns in scanning transmission electron microscopy. Journal of Physics E: Scientific Instruments, 1985, 18, 949-953.	0.7	14

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55	Efficient large field of view electron phase imaging using near-field electron ptychography with a diffuser. Ultramicroscopy, 2021, 231, 113257.	1.9	13
56	Coherent X-Ray Imaging of Collagen Fibril Distributions within Intact Tendons. Biophysical Journal, 2014, 106, 459-466.	0.5	12
57	Electron microscopy studies of hard coatings deposited on sharp edges by combined cathodic arc/unbalanced magnetron PVD. Surface and Coatings Technology, 2002, 151-152, 349-354.	4.8	11
58	Plasmaâ€“surface interaction at sharp edges and corners during ion-assisted physical vapor deposition. Part II: Enhancement of the edge-related effects at sharp corners. Journal of Applied Physics, 2003, 94, 2837-2844.	2.5	10
59	A method for measuring the effective source coherence in a field emission transmission electron microscope. Applied Surface Science, 1997, 111, 174-179.	6.1	8
60	Diffraction-limited superresolution ptychography in the Rayleighâ€“Sommerfeld regime. Journal of the Optical Society of America A: Optics and Image Science, and Vision, 2019, 36, A12.	1.5	8
61	Crystal orientation effects on sputtering and depth resolution in GDOES. Surface and Interface Analysis, 2001, 31, 206-211.	1.8	7
62	The role of helium ion microscopy in the characterisation of complex three-dimensional nanostructures. Ultramicroscopy, 2010, 110, 1178-1184.	1.9	6
63	Edge Related Effects During Ion Assisted PVD on Sharp Edges and Implications for Coating of Cutting Tools. Surface Engineering, 2003, 19, 310-314.	2.2	5
64	Internal structure of TiAlN/VN coating deposited on sharp edges by ion-assisted physical vapor deposition. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2004, 22, 1195-1199.	2.1	5
65	A comprehensive Monte Carlo calculation of dopant contrast in secondary-electron imaging. Europhysics Letters, 2008, 82, 49901.	2.0	5
66	A new method of high resolution, quantitative phase scanning microscopy. , 2010, , .		4
67	Coherent x-ray diffraction imaging of paint pigment particles by scanning a phase plate modulator. New Journal of Physics, 2011, 13, 103022.	2.9	4
68	Image feature delocalization in defocused probe electron ptychography. Ultramicroscopy, 2018, 187, 71-83.	1.9	4
69	A record-breaking microscope. Nature, 2018, 559, 334-335.	27.8	4
70	Microscopy in solid state science. Microscopy Research and Technique, 1993, 24, 299-315.	2.2	3
71	Deconvolving lens transfer functions in electron holograms. Ultramicroscopy, 1993, 52, 248-252.	1.9	3
72	A simple model of holography and some enhanced resolution methods in electron microscopy. Ultramicroscopy, 2001, 87, 105-121.	1.9	3

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73	High resolution transmission imaging without lenses. Journal of Physics: Conference Series, 2010, 241, 012003.	0.4	3
74	Possibility of high-resolution ptychographic iterative imaging with low energy electrons: dynamical calculations. Microscopy (Oxford, England), 2015, 64, 105-110.	1.5	3
75	Ptychography: a novel phase retrieval technique, advantages and its application. , 2011, , .		2
76	Ptychography: early history and 3D scattering effects. , 2012, , .		2
77	MEASUREMENT OF AN ATOMIC POSITION COHERENCE LENGTH IN a-Ge. Journal De Physique Colloque, 1985, 46, C9-63-C9-68.	0.2	1
78	Dynamical and geometric effects in ptychographic diffractive imaging. Journal of Physics: Conference Series, 2008, 126, 012035.	0.4	1
79	Noise limit on practical electron ptychography. Journal of Physics: Conference Series, 2010, 241, 012065.	0.4	1
80	Resolution improvement in coherent diffractive imaging (ptychography). , 2010, , .		1
81	Wavefront Modulation Coherent Diffractive Imaging. , 2011, , .		1
82	Electron Ptychography: Applications Of The Electron Wave Phase. Microscopy and Microanalysis, 2012, 18, 502-503.	0.4	1
83	An X-ray ptycho-tomography model of `Seeing order in ``amorphous'' materials'. Ultramicroscopy, 2019, 203, 88-94.	1.9	1
84	Multiwavelength Ptychography. , 2014, , 689-694.		1
85	A new look at the resolution limit. Micron and Microscopica Acta, 1992, 23, 213-214.	0.2	0
86	STEM probe characteristics at large defoci for use in ptychographical imaging. Journal of Physics: Conference Series, 2008, 126, 012092.	0.4	0
87	An optical demonstration of ptychographical imaging for focussed-probe illumination. Journal of Physics: Conference Series, 2008, 126, 012093.	0.4	0
88	Solving for the phase of STEM probes in real space. Journal of Physics: Conference Series, 2010, 241, 012064.	0.4	0
89	Ptychography: a powerful phase retrieval technique for biomedical imaging. , 2011, , .		0
90	Ptychography applied to optical metrology. Proceedings of SPIE, 2012, , .	0.8	0

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91	Atomic resolution transmission imaging at 30keV via electron ptychography. Microscopy and Microanalysis, 2012, 18, 1024-1025.	0.4	0