Leonidas E Ocola

List of Publications by Year
in descending order

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121 papers	4,127 citations	172443 29 h-index	118840 62 g-index
123 all docs	123 docs citations	123 times ranked	6130 citing authors

#	Article	IF	Citations
1	Nanoporous Dielectric Resistive Memories Using Sequential Infiltration Synthesis. ACS Nano, 2021, 15, 4155-4164.	14.6	12
2	Multifunctional UV and Gas Sensors Based on Vertically Nanostructured Zinc Oxide: Volume Versus Surface Effect. Sensors, 2019, 19, 2061.	3.8	28
3	Three-dimensional optical trapping and orientation of microparticles for coherent X-ray diffraction imaging. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 4018-4024.	7.1	18
4	Atomic layer deposition frequency-multiplied Fresnel zone plates for hard x-rays focusing. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, .	2.1	10
5	Fabrication of phonon-based metamaterial structures using focused ion beam patterning. Applied Physics Letters, 2018, 112, .	3.3	10
6	Silicon compatible Sn-based resistive switching memory. Nanoscale, 2018, 10, 9441-9449.	5.6	24
7	Mask-free fabrication and chemical vapor deposition synthesis of ultrathin zinc oxide microribbons on Si/SiO2 and 2D substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2018, 36, 05G506.	2.1	5
8	PMMA-Assisted Plasma Patterning of Graphene. Journal of Nanotechnology, 2018, 2018, 1-8.	3.4	2
9	Switchable geometric frustration in an artificial-spin-iceâ€“superconductor heterosystem. Nature Nanotechnology, 2018, 13, 560-565.	31.5	50
10	Directed Self-Assembly of Colloidal Particles onto Nematic Liquid Crystalline Defects Engineered by Chemically Patterned Surfaces. ACS Nano, 2017, 11, 6492-6501.	14.6	22
11	Sub-10-nm patterning via directed self-assembly of block copolymer films with a vapour-phase deposited topcoat. Nature Nanotechnology, 2017, 12, 575-581.	31.5	155
12	Quantitative Three-Dimensional Characterization of Block Copolymer Directed Self-Assembly on Combined Chemical and Topographical Prepatterned Templates. ACS Nano, 2017, 11, 1307-1319.	14.6	43
13	Infiltrated Zinc Oxide in Poly(methyl methacrylate): An Atomic Cycle Growth Study. Journal of Physical Chemistry C, 2017, 121, 1893-1903.	3.1	19
14	Fabrication of hard x-ray zone plates with high aspect ratio using metal-assisted chemical etching. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, 06G901.	1.2	37
15	Contrast enhancement of biological nanoporous materials with zinc oxide infiltration for electron and X-ray nanoscale microscopy. Scientific Reports, 2017, 7, 5879.	3.3	5
16	Controlled Selective CVD Growth of ZnO Nanowires Enabled by Maskâ€Free Fabrication Approach using Aqueous Fe Catalytic Inks. Advanced Materials Interfaces, 2017, 4, 1700950.	3.7	13
17	Photonic ring resonator filters for astronomical OH suppression. Optics Express, 2017, 25, 15868.	3.4	18
18	Novel Electrically Tunable Microwave Solenoid Inductor and Compact Phase Shifter Utilizing Permaloy and PZT Thin Films. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 3569-3577.	4.6	12

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19	What We Donâ€™t Know About EUV Exposure Mechanisms. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2017, 30, 113-120.	0.3	19
20	Bragg diffraction from sub-micron particles isolated by optical tweezers. AIP Conference Proceedings, 2016, , .	0.4	1
21	Bottom-up direct writing approach for controlled fabrication of WS₂/MoS₂ heterostructure systems. RSC Advances, 2016, 6, 66589-66594.	3.6	8
22	Large optical nonlinearity of ITO nanorods for sub-picosecond all-optical modulation of the full-visible spectrum. Nature Communications, 2016, 7, 12892.	12.8	88
23	Three Dimensional Assembly in Directed Self-assembly of Block Copolymers. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2016, 29, 653-657.	0.3	12
24	Rewritable artificial magnetic charge ice. Science, 2016, 352, 962-966.	12.6	122
25	Effect of Stereochemistry on Directed Self-Assembly of Poly(styrene-b-lactide) Films on Chemical Patterns. ACS Macro Letters, 2016, 5, 396-401.	4.8	22
26	Gigahertz Acoustic Vibrations of Elastically Anisotropic Indiumâ€"Tin-Oxide Nanorod Arrays. Nano Letters, 2016, 16, 5639-5646.	9.1	10
27	Scaling the Artificial Polariton Bandgap at Infrared Frequencies Using Indium Tin Oxide Nanorod Arrays. Advanced Optical Materials, 2016, 4, 2077-2084.	7.3	7
28	Post-directed-self-assembly membrane fabrication forin situanalysis of block copolymer structures. Nanotechnology, 2016, 27, 435303.	2.6	18
29	Energy deposition and charging in EUV lithography: Monte Carlo studies. , 2016, , .		1
30	Studying electron-PAG interactions using electron-induced fluorescence. Proceedings of SPIE, 2016, , .	0.8	3
31	Cross sections of EUV PAGs: influence of concentration, electron energy, and structure. , 2016, , .		3
32	Development characteristics of polymethyl methacrylate in alcohol/water mixtures: a lithography and Raman spectroscopy study. Nanotechnology, 2016, 27, 035302.	2.6	17
33	Photoluminescence of sequential infiltration synthesized ZnO nanostructures. Proceedings of SPIE, 2016, , .	0.8	3
34	Perpendicularly Aligned, Anion Conducting Nanochannels in Block Copolymer Electrolyte Films. Chemistry of Materials, 2016, 28, 1377-1389.	6.7	45
35	Cross sections of photoacid generators at low electron energies. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 06FH01.	1.2	11
36	Automated geometry assisted proximity effect correction for electron beam direct write nanolithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	1.2	8

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37	Multilayer on-chip stacked Fresnel zone plates: Hard x-ray fabrication and soft x-ray simulations. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, .	1.2	1
38	Polarization and distance dependent coupling in linear chains of gold nanoparticles. Applied Physics Letters, 2015, 106, .	3.3	15
39	Real-time detection of mercury ions in water using a reduced graphene oxide/DNA field-effect transistor with assistance of a passivation layer. Sensing and Bio-Sensing Research, 2015, 5, 97-104.	4.2	38
40	Studying secondary electron behavior in EUV resists using experimentation and modeling. , 2015, , .		13
41	Investigation of the optical response of photonic crystal nanocavities in ferroelectric oxide thin film. Journal of Optics (United Kingdom), 2015, 17, 105402.	2.2	3
42	Studying thickness loss in extreme ultraviolet resists due to electron beam exposure using experiment and modeling. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2015, 14, 043502.	0.9	7
43	Europium Effect on the Electron Transport in Graphene Ribbons. Journal of Physical Chemistry C, 2015, 119, 22486-22495.	3.1	6
44	High-resolution direct-write patterning using focused ion beams. MRS Bulletin, 2014, 39, 336-341.	3.5	30
45	Ultra-sharp plasmonic resonances from monopole optical nanoantenna phased arrays. Applied Physics Letters, 2014, 104, .	3.3	37
46	Highly tunable ultra-narrow-resonances with optical nano-antenna phased arrays in the infrared. , 2014, , .		0
47	Tunable Transmission Line With Nanopatterned Thin Films for Smart RF Applications. IEEE Transactions on Magnetics, 2014, 50, 1-4.	2.1	14
48	X-ray zone plates with 25 aspect ratio using a 2-Î¼m-thick ultrananocrystalline diamond mold. Microsystem Technologies, 2014, 20, 2045-2050.	2.0	5
49	Plasmonicâ€"Photonic Mode Coupling in Indium-Tin-Oxide Nanorod Arrays. ACS Photonics, 2014, 1, 163-172.	6.6	37
50	Electron Penetration Depths in EUV Photoresists. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2014, 27, 611-615.	0.3	13
51	The range and intensity of backscattered electrons for use in the creation of high fidelity electron beam lithography patterns. Nanotechnology, 2013, 24, 305302.	2.6	10
52	Advances in ion beam micromachining for complex 3D microfluidics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F401.	1.2	5
53	Variation of backscatter electron intensity. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06F202.	1.2	1
54	Metal-assisted etching of silicon molds for electroforming. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2013, 31, 06FF03.	1.2	5

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55	Highly sensitive room temperature carbon monoxide detection using SnO₂nanoparticle-decorated semiconducting single-walled carbon nanotubes. Nanotechnology, 2013, 24, 025503.	2.6	27
56	Coplanar Waveguides With Nanometer Thick Gold Films. IEEE Microwave and Wireless Components Letters, 2013, 23, 84-86.	3.2	1
57	Plasmonic Amplifiers: Engineering Giant Light Enhancements by Tuning Resonances in Multiscale Plasmonic Nanostructures. Small, 2013, 9, 1939-1946.	10.0	16
58	Photonic Crystal Waveguide Electro-Optic Modulator With a Wide Bandwidth. Journal of Lightwave Technology, 2013, 31, 1601-1607.	4.6	29
59	Direct Growth of Vertically-oriented Graphene for Field-Effect Transistor Biosensor. Scientific Reports, 2013, 3, 1696.	3.3	173
60	TCO Nanostructures as building blocks for nanophotonic devices in the infrared. , 2013, , .		1
61	Secondary Electrons in EUV Lithography. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 2013, 26, 625-634.	0.3	53
62	Characterization of Electron-Beam-Induced Silver Deposition from Liquid Phase. Materials Research Society Symposia Proceedings, 2012, 1371, 13.	0.1	2
63	100 keV electron backscattered range and coefficient for silicon. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 021604.	1.2	3
64	Nanopatterning of ultrananocrystalline diamond nanowires. Nanotechnology, 2012, 23, 075301.	2.6	33
65	Three-dimensional coherent X-ray surface scattering imaging near total external reflection. Nature Photonics, 2012, 6, 586-590.	31.4	78
66	Growth characterization of electron-beam-induced silver deposition from liquid precursor. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2012, 30, 06FF08.	1.2	22
67	Geometric Control of Rippling in Supported Polymer Nanolines. Nano Letters, 2012, 12, 1516-1521.	9.1	9
68	Electrodynamic coupling in regular arrays of gold nanocylinders. Journal Physics D: Applied Physics, 2012, 45, 045102.	2.8	13
69	Carbonâ€Carbon Contacts for Robust Nanoelectromechanical Switches. Advanced Materials, 2012, 24, 2463-2468.	21.0	35
70	Enhanced polymeric lithography resists via sequential infiltration synthesis. Journal of Materials Chemistry, 2011, 21, 11722.	6.7	73
71	Measurement of backscattered 100â€‰keV electrons on a solid substrate. Applied Physics Letters, 2011, 99, 192105.	3.3	3
72	Enhanced Block Copolymer Lithography Using Sequential Infiltration Synthesis. Journal of Physical Chemistry C, 2011, 115, 17725-17729.	3.1	168

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73	Ultrafast room temperature NH3 sensing with positively gated reduced graphene oxide field-effect transistors. Chemical Communications, 2011, 47, 7761.	4.1	85
74	Hexagonal photonic crystal waveguide based on barium titanate thin films. Proceedings of SPIE, 2011, , .	0.8	0
75	Toward Practical Gas Sensing with Highly Reduced Graphene Oxide: A New Signal Processing Method To Circumvent Run-to-Run and Device-to-Device Variations. ACS Nano, 2011, 5, 1154-1164.	14.6	353
76	Etch properties of resists modified by sequential infiltration synthesis. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 06FG01.	1.2	49
77	Increased pattern transfer fidelity of ZEP 520A during reactive ion etching through chemical modifications by additional dosing of the electron beam resist. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	1.2	8
78	Image noise in helium lithography. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 041005.	1.2	3
79	Electric-Field-Assisted Dip-Pen Nanolithography on Poly(4-vinylpyridine) (P4VP) Thin Films. ACS Applied Materials & Interfaces, 2010, 2, 2904-2909.	8.0	14
80	Three-dimensional microfluidic mixers using ion beam lithography and micromachining. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6I1-C6I6.	1.2	11
81	Nanofabrication of x-ray zone plates using ultrananocrystalline diamond molds and electroforming. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6P30-C6P35.	1.2	4
82	Large area direct-write focused ion-beam lithography with a dual-beam microscope. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, 304-309.	1.2	14
83	Photonic Crystal Waveguide Structures Based on Epitaxial Barium Titanate Thin Films. , 2010, , .		0
84	Ferroelectric Thin Film Microcavities and their Optical Resonant Properties. Materials Research Society Symposia Proceedings, 2009, 1182, 24.	0.1	1
85	Nanoscale geometry assisted proximity effect correction for electron beam direct write nanolithography. Journal of Vacuum Science & Technology B, 2009, 27, 2569.	1.3	12
86	Roomâ€Temperature Gas Sensing Based on Electron Transfer between Discrete Tin Oxide Nanocrystals and Multiwalled Carbon Nanotubes. Advanced Materials, 2009, 21, 2487-2491.	21.0	281
87	Gas Sensors: Room-Temperature Gas Sensing Based on Electron Transfer between Discrete Tin Oxide Nanocrystals and Multiwalled Carbon Nanotubes (Adv. Mater. 24/2009). Advanced Materials, 2009, 21, NA-NA.	21.0	0
88	Thin film ferroelectric photonic crystals and their application to thermo-optic switches. Optics Communications, 2009, 282, 3364-3367.	2.1	7
89	Reduced graphene oxide for room-temperature gas sensors. Nanotechnology, 2009, 20, 445502.	2.6	652
90	Gas detection using low-temperature reduced graphene oxide sheets. Applied Physics Letters, 2009, 94, .	3.3	346

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91	Focus section on Nanofabrication Technologies, Devices and Applications. Journal of Experimental Nanoscience, 2008, 3, 61-62.	2.4	0
92	Nanofabrication of super-high-aspect-ratio structures in hydrogen silsesquioxane from direct-write e-beam lithography and hot development. Journal of Vacuum Science & Technology B, 2008, 26, 2632-2635.	1.3	13
93	Design and fabrication of a multilayer micro-/nanofluidic device with an electrically driven nanovalve. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2008, 26, 752-756.	2.1	2
94	Fabrication of high-aspect-ratio hard x-ray zone plates with HSQ plating molds. Proceedings of SPIE, 2008, , .	0.8	4
95	Thermally Tunable Ferroelectric Thin Film Photonic Crystals. , 2008, , .		1
96	Growth and characterization of transparent Pb(Zi,Ti)O3 capacitor on glass substrate. Journal of Applied Physics, 2007, 102, .	2.5	38
97	Synthesis and superconducting properties of niobium nitride nanowires and nanoribbons. Applied Physics Letters, 2007, 91, .	3.3	30
98	Engineering Gas Sensors With Aerosol Nanocrystals. , 2007, , .		0
99	Effect of cold development on improvement in electron-beam nanopatterning resolution and line roughness. Journal of Vacuum Science & Technology B, 2006, 24, 3061.	1.3	94
100	Ferroelectric-specific peptides as building blocks for bioinorganic devices. , 2006, , .		0
101	Gas Sensors Based on Tin Oxide Nanoparticles Synthesized from a Mini-Arc Plasma Source. Journal of Nanomaterials, 2006, 2006, 1-7.	2.7	12
102	Integration of Biomolecules with Inorganic Ferroelectrics: A Novel Approach to Nanoscale Devices. Materials Research Society Symposia Proceedings, 2006, 950, 1.	0.1	0
103	Ferroelectric-Specific Peptides as Building Blocks for Bio-Inorganic Devices. Materials Research Society Symposia Proceedings, 2006, 944, 1.	0.1	1
104	Identification of peptides for the surface functionalization of perovskite ferroelectrics. Applied Physics Letters, 2006, 88, 083903.	3.3	19
105	From microchannels to nanochannels in a bilayer resist. , 2005, 5592, 421.		0
106	Direct-write e-beam patterning of stimuli-responsive hydrogel nanostructures. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2005, 23, 3124.	1.6	35
107	Tapered tilted linear zone plates for focusing hard x-rays. , 2004, , .		4
108	Resist Requirements and Limitations for Nanoscale Electron-Beam Patterning. Materials Research Society Symposia Proceedings, 2002, 739, 151.	0.1	8

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109	Resists for next generation lithography. Microelectronic Engineering, 2002, 61-62, 707-715.	2.4	51
110	Resist Requirements for Electron Projection and Direct Write Nanolithography. Materials Research Society Symposia Proceedings, 2001, 705, 111.	0.1	2
111	<title>Optimization of DUV chemically amplified resist platforms for SCALPEL e-beam exposure</title>. , 2000, , .		2
112	Alignment mark detection in CMOS materials with SCALPEL e-beam lithography. , 1999, , .		1
113	Development of a technique for rapid at-wavelength inspection of EUV mask blanks. , 1999, , .		3
114	Resist characteristics with direct-write electron beam and SCALPEL exposure system. , 1999, , .		2
115	New Developments in Resist Materials for the SCALPEL Technology. Journal of Photopolymer Science and Technology = [Fotoporima Konwakai Shi], 1998, 11, 541-545.	0.3	6
116	Latent image characterization of postexposure bake process in chemically amplified resists. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1997, 15, 2545.	1.6	7
117	Synchrotron radiation micro-Fourier transform infrared spectroscopy applied to photoresist imaging. Applied Physics Letters, 1997, 71, 847-849.	3.3	7
118	Scanning force microscopy measurements of latent image topography in chemically amplified resists. Applied Physics Letters, 1996, 68, 717-719.	3.3	24
119	Latent image formation: Nanoscale topography and calorimetric measurements in chemically amplified resists. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1996, 14, 3974.	1.6	19
120	Parametric modeling of photoelectron effects in x-ray lithography. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1993, 11, 2839.	1.6	37
121	Modelling Photoelectron Effects In X-Ray Lithography. Materials Research Society Symposia Proceedings, 1993, 306, 47.	0.1	4