Patrick J Mcnally

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8521057/publications.pdf

Version: 2024-02-01

119	1,292	535685	563245
papers	citations	17 h-index	28 g-index

123	123	123	1218
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Laser-powder bed fusion of silicon carbide reinforced 316L stainless steel using a sinusoidal laser scanning strategy. Journal of Materials Research and Technology, 2022, 18, 2672-2698.	2.6	12
2	Non-melt selective enhancement of crystalline structure in molybdenum thin films using femtosecond laser pulses. Journal Physics D: Applied Physics, 2022, 55, 115301.	1.3	4
3	Laser-powder bed fusion in-process dispersion of reinforcing ceramic nanoparticles onto powder beds via colloid nebulisation. Materials Chemistry and Physics, 2022, 287, 126245.	2.0	2
4	X-ray imaging of silicon die within fully packaged semiconductor devices. Powder Diffraction, 2021, 36, 78-84.	0.4	3
5	Femtosecond Laser Assisted Crystallization of Gold Thin Films. Nanomaterials, 2021, 11, 1186.	1.9	11
6	Evaluation via powder metallurgy of nano-reinforced iron powders developed for selective laser melting applications. Materials and Design, 2019, 182, 108046.	3.3	30
7	Highly enhanced UV responsive conductivity and blue emission in transparent CuBr films: implication for emitter and dosimeter applications. Journal of Materials Chemistry C, 2017, 5, 10270-10279.	2.7	8
8	Remote sensing of a low pressure plasma in the radio near field. Applied Physics Express, 2017, 10, 096101.	1.1	1
9	Quantitative Imaging of the Stress/Strain Fields and Generation of Macroscopic Cracks from Indents in Silicon. Crystals, 2017, 7, 347.	1.0	6
10	Nondestructive Monitoring of Die Warpage in Encapsulated Chip Packages. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2016, 6, 653-662.	1.4	6
11	Pulsed-Plasma Physical Vapor Deposition Approach Toward the Facile Synthesis of Multilayer and Monolayer Graphene for Anticoagulation Applications. ACS Applied Materials & Interfaces, 2016, 8, 4878-4886.	4.0	4
12	B-Spline X-Ray Diffraction Imaging techniques for die warpage and stress monitoring inside fully encapsulated packaged chips. , 2015, , .		2
13	The geometry of catastrophic fracture during high temperature processing of silicon. International Journal of Fracture, 2015, 195, 79-85.	1.1	5
14	(Invited) Synchrotron White-Beam X-Ray Topography Analysis of the Defect Structure of HVPE-GaN Substrates. ECS Transactions, 2015, 66, 93-106.	0.3	3
15	Synchrotron White-Beam X-Ray Topography Analysis of the Defect Structure of HVPE-GaN Substrates. ECS Journal of Solid State Science and Technology, 2015, 4, P324-P330.	0.9	23
16	Interaction of SF6and O2plasma with porous poly phenyl methyl silsesquioxane low-Î°films. Journal Physics D: Applied Physics, 2015, 48, 125201.	1.3	0
17	Local strain and defects in silicon wafers due to nanoindentation revealed by full-field X-ray microdiffraction imaging. Journal of Synchrotron Radiation, 2015, 22, 1083-1090.	1.0	7
18	Development of B-spline X-ray Diffraction Imaging techniques for die warpage and stress monitoring inside fully encapsulated packaged chips. , 2014, , .		5

#	Article	IF	Citations
19	Influence of substrate metal alloy type on the properties of hydroxyapatite coatings deposited using a novel ambient temperature deposition technique. Journal of Biomedical Materials Research - Part A, 2014, 102, 871-879.	2.1	11
20	Structural and optical properties of post-annealed atomic-layer-deposited HfO 2 thin films on GaAs. Thin Solid Films, 2014, 569, 104-112.	0.8	3
21	Influence of Oxygen Plasma on the Growth, Structure, Morphology, and Electro-Optical Properties of p-Type Transparent Conducting CuBr Thin Films. Journal of Physical Chemistry C, 2014, 118, 23226-23232.	1.5	4
22	Non-destructive laboratory-based X-ray diffraction mapping of warpage in Si die embedded in IC packages. Microelectronic Engineering, 2014, 117, 48-56.	1.1	15
23	Temperature dependent photoluminescence of nanocrystalline Î³-CuCl hybrid films. Thin Solid Films, 2014, 564, 104-109.	0.8	3
24	Laser machined macro and micro structures on glass for enhanced light trapping in solar cells. Applied Physics A: Materials Science and Processing, 2013, 110, 661-665.	1.1	6
25	Deposition of earth-abundant p-type CuBr films with high hole conductivity and realization of p-CuBr/n-Si heterojunction solar cell. Materials Letters, 2013, 111, 63-66.	1.3	20
26	Soft x-ray spectroscopic investigation of Zn doped CuCl produced by pulsed dc magnetron sputtering. Journal of Physics Condensed Matter, 2013, 25, 285501.	0.7	2
27	3D imaging of crystal defects. Nature, 2013, 496, 37-38.	13.7	4
28	Evaluation and comparison of hydroxyapatite coatings deposited using both thermal and non-thermal techniques. Surface and Coatings Technology, 2013, 226, 82-91.	2.2	18
29	Crack propagation and fracture in silicon wafers under thermal stress. Journal of Applied Crystallography, 2013, 46, 849-855.	1.9	29
30	Dellafossite CuAlO2 film growth and conversion to Cuâ€“Al2O3 metal ceramic composite via control of annealing atmospheres. CrystEngComm, 2013, 15, 6144.	1.3	12
31	X-ray diffraction imaging for predictive metrology of crack propagation in 450-mm diameter silicon wafers. Powder Diffraction, 2013, 28, 95-99.	0.4	8
32	Prediction of the propagation probability of individual cracks in brittle single crystal materials. Applied Physics Letters, 2012, 101, 041903.	1.5	15
33	Study of exciton-polariton modes in nanocrystalline thin films of CuCl using reflectance spectroscopy. Journal of Applied Physics, 2012, 112, 033505.	1.1	6
34	Structural investigation of MOVPE-grown GaAs on Ge by x-ray techniques. Semiconductor Science and Technology, 2012, 27, 115012.	1.0	12
35	A novel X-ray diffraction technique for analysis of die stress inside fully encapsulated packaged chips. , 2012, , .		5
36	Citrate-Capped Gold Nanoparticle Electrophoretic Heat Production in Response to a Time-Varying Radio-Frequency Electric Field. Journal of Physical Chemistry C, 2012, 116, 24380-24389.	1.5	60

#	Article	IF	Citations
37	Influence of mechanical defects on the crystal lattice of silicon. Crystal Research and Technology, 2012, 47, 253-260.	0.6	3
38	Low temperature growth technique for nanocrystalline cuprous oxide thin films using microwave plasma oxidation of copper. Materials Letters, 2012, 71, 160-163.	1.3	11
39	Comprehensive investigation of Geâ€“Si bonded interfaces using oxygen radical activation. Journal of Applied Physics, 2011, 109, .	1.1	16
40	Thermal slip sources at the extremity and bevel edge of silicon wafers. Journal of Applied Crystallography, 2011, 44, 489-494.	1.9	19
41	Three-dimensional X-ray diffraction imaging of process-induced dislocation loops in silicon. Journal of Applied Crystallography, 2011, 44, 526-531.	1.9	8
42	Characteristics of silicon nanocrystals for photovoltaic applications. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 604-607.	0.8	14
43	Realâ€time Xâ€ray diffraction imaging for semiconductor wafer metrology and high temperature in situ experiments. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 2499-2504.	0.8	13
44	CuBr blue light emitting electroluminescent thin film devices. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2919-2922.	0.8	7
45	Poly(vinylpyrrolidone)â€stabilized silver nanoparticles for strainedâ€silicon surface enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2011, 42, 2085-2088.	1.2	2
46	Combined use of three-dimensional X-ray diffraction imaging and micro-Raman spectroscopy for the non-destructive evaluation of plasma arc induced damage on silicon wafers. Microelectronic Engineering, 2011, 88, 64-71.	1.1	5
47	Multi-technique characterisation of MOVPE-grown GaAs on Si. Microelectronic Engineering, 2011, 88, 472-475.	1.1	3
48	Dislocation dynamics and slip band formation in silicon: In-situ study by X-ray diffraction imaging. Journal of Crystal Growth, 2011, 318, 1157-1163.	0.7	29
49	Growth of n-type Î³-CuCl with improved carrier concentration by pulsed DC sputtering: Structural, electronic and UV emission properties. Thin Solid Films, 2011, 519, 6064-6068.	0.8	10
50	Evaluation of conduction mechanism and electronic parameters for Au/organicâ€“inorganic CuCl hybrid film/ITO structures. Semiconductor Science and Technology, 2011, 26, 095021.	1.0	1
51	X-ray diffraction imaging of dislocation generation related to microcracks in Si wafers. Powder Diffraction, 2010, 25, 99-103.	0.4	9
52	Observation of nano-indent induced strain fields and dislocation generation in silicon wafers using micro-Raman spectroscopy and white beam X-ray topography. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 383-387.	0.6	18
53	Characterization of the carrot defect in 4H-SiC epitaxial layers. Journal of Crystal Growth, 2010, 312, 1828-1837.	0.7	45
54	Dislocation generation related to micro-cracks in Si wafers: High temperature in situ study with white beam X-ray topography. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 399-402.	0.6	14

#	Article	IF	Citations
55	Dislocation sources and slip band nucleation from indents on silicon wafers. Journal of Applied Crystallography, 2010, 43, 1036-1039.	1.9	13
56	Ultrathin chromium transparent metal contacts by pulsed dc magnetron sputtering. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 1586-1589.	0.8	9
57	Growth and Properties of SiC On-Axis Homoepitaxial Layers. Materials Science Forum, 2010, 645-648, 83-88.	0.3	10
58	Spatially Resolved Investigation of the Optical and Structural Properties of CuCl Thin Films on Si. , 2010, , .		0
59	Electroluminescence of Î³-CuBr thin films via vacuum evaporation depositon. Journal Physics D: Applied Physics, 2010, 43, 165101.	1.3	7
60	Hybrid organicâ€“inorganic spin-on-glass CuCl films for optoelectronic applications. Journal Physics D: Applied Physics, 2009, 42, 225307.	1.3	21
61	Dislocations and dislocation reduction in space grown GaSb. Crystal Research and Technology, 2009, 44, 1109-1114.	0.6	2
62	Optical properties of undoped and oxygen doped CuCl films on silicon substrates. Journal of Materials Science: Materials in Electronics, 2009, 20, 76-80.	1.1	9
63	Electrical properties of Î³-CuCl thin films. Journal of Materials Science: Materials in Electronics, 2009, 20, 144-148.	1.1	4
64	UV emission on a Si substrate: Optical and structural properties of Î³-CuCl on Si grown using liquid phase epitaxy techniques. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 923-926.	0.8	5
65	Structural, optical and electrical properties of Coâ€evaporated CuCl/KCl films. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, S114.	0.8	4
66	Synchrotron topography and X-ray diffraction study of GaInP layers grown on GaAs/Ge. Journal of Crystal Growth, 2009, 311, 4619-4627.	0.7	10
67	Temperature dependent optical properties of UV emitting Î³-CuCl thin films. Thin Solid Films, 2008, 516, 1439-1442.	0.8	7
68	Dislocations in GaAs p-i-n diodes grown by hydride vapour phase epitaxy. Journal of Materials Science: Materials in Electronics, 2008, 19, 149-154.	1.1	1
69	In-situ optical reflectance and synchrotron X-ray topography study of defects in epitaxial dilute GaAsN on GaAs. Journal of Materials Science: Materials in Electronics, 2008, 19, 137-142.	1.1	4
70	Dislocations at the interface between sapphire and GaN. Journal of Materials Science: Materials in Electronics, 2008, 19, 143-148.	1.1	1
71	Morphological, optical and electrical properties of Î³ CuCl deposited by vacuum evaporation. Journal of Materials Science: Materials in Electronics, 2008, 19, 99-101.	1.1	3
72	Electrical studies on sputtered CuCl thin films. Journal of Materials Science: Materials in Electronics, 2008, 19, 103-106.	1.1	4

#	Article	IF	Citations
73	Raman scattering studies of ultrashallow Sb implants in strained Si. Journal of Materials Science: Materials in Electronics, 2008, 19, 305-309.	1.1	1
74	White beam topography of 300Âmm Si wafers. Journal of Materials Science: Materials in Electronics, 2008, 19, 269-272.	1.1	12
75	Optical properties of CuCl films on silicon substrates. Physica Status Solidi (B): Basic Research, 2008, 245, 2808-2814.	0.7	7
76	Growth and characterisation of epitaxially ordered zinc aluminate domains on c-sapphire. Thin Solid Films, 2008, 516, 1725-1735.	0.8	5
77	Influence of target to substrate distance on the sputtered CuCl film properties. Thin Solid Films, 2008, 516, 5531-5535.	0.8	6
78	Structural and electrical characterisation of ion-implanted strained silicon. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2008, 154-155, 118-121.	1.7	3
79	Antimony for n-type metal oxide semiconductor ultrashallow junctions in strained Si: A superior dopant to arsenic?. Journal of Vacuum Science & Technology B, 2008, 26, 391.	1.3	18
80	Constraints on micro-Raman strain metrology for highly doped strained Si materials. Applied Physics Letters, 2008, 92, .	1.5	14
81	Femtosecond versus nanosecond laser micro-machining of InP: a nondestructive three-dimensional analysis of strain. Semiconductor Science and Technology, 2007, 22, 970-979.	1.0	4
82	Preparation and Temperature Cycling Reliability of Electroless Ni(P) Under Bump Metallization. IEEE Transactions on Components and Packaging Technologies, 2007, 30, 144-151.	1.4	1
83	An X-Ray Topographic Analysis of the Crystal Quality of Globally Available SiC Wafers. Materials Science Forum, 2007, 556-557, 227-230.	0.3	1
84	4H-SiC Epitaxial Layers Grown on On-Axis Si-Face Substrate. Materials Science Forum, 2007, 556-557, 53-56.	0.3	7
85	An Evaluation of an Automated Detection Algorithm to Count Defects Present in X-Ray Topographical Images of SiC Wafers. Materials Research Society Symposia Proceedings, 2007, 994, 1.	0.1	0
86	Evaluation of the chemical, electronic and optoelectronic properties of Î³-CuCl thin films and their fabrication on Si substrates. Journal Physics D: Applied Physics, 2007, 40, 3461-3467.	1.3	13
87	Characterisation of n-type Î³-CuCl on Si for UV optoelectronic applications. Journal of Materials Science: Materials in Electronics, 2007, 18, 57-60.	1.1	5
88	Towards the fabrication of a UV light source based on CuCl thin films. Journal of Materials Science: Materials in Electronics, 2007, 18, 21-23.	1.1	6
89	Self-organized ZnAl2O4 nanostructures grown on -sapphire. Superlattices and Microstructures, 2007, 42, 327-332.	1.4	3
90	Crystal Defects and Strain of Epitaxial InP Layers Laterally Overgrown on Si. Crystal Growth and Design, 2006, 6, 1096-1100.	1.4	10

#	Article	IF	Citations
91	Stoichiometry control of sputtered CuCl thin films: Influence on ultraviolet emission properties. Journal of Applied Physics, 2006, 100, 096108.	1.1	4
92	Encapsulation of the heteroepitaxial growth of wide band gap Î³-CuCl on silicon substrates. Journal of Crystal Growth, 2006, 287, 112-117.	0.7	18
93	Impact on structural, optical and electrical properties of CuCl by incorporation of Zn for n-type doping. Journal of Crystal Growth, 2006, 287, 139-144.	0.7	19
94	The evaluation of mechanical stresses developed in underlying silicon substrates due to electroless nickel under bump metallization using synchrotron X-ray topography. Microelectronics Journal, 2006, 37, 1372-1378.	1.1	4
95	Synchrotron X-ray topography study of defects in epitaxial GaAs on high-quality Ge. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 563, 62-65.	0.7	4
96	Non-Destructive Measurement of Deep Embedded Defects in Silicon using Photoacoustic Microscope (PAM). Materials Research Society Symposia Proceedings, 2006, 914, 1.	0.1	1
97	Growth of CuCl thin films by magnetron sputtering for ultraviolet optoelectronic applications. Journal of Applied Physics, 2006, 100, 033520.	1.1	37
98	Highly conductive Sb-doped layers in strained Si. Applied Physics Letters, 2006, 89, 182122.	1.5	17
99	Room-temperature ultraviolet luminescence from Î³-CuCl grown on near lattice-matched silicon. Journal of Applied Physics, 2005, 98, 113512.	1.1	31
100	Low Temperature Growth GaAs on Ge. Japanese Journal of Applied Physics, 2005, 44, 7777-7784.	0.8	28
101	Structural and optoelectronic properties of sputtered copper (I) chloride. , 2005, , .		0
102	Influence of H2 Preconditioning on the Nucleation and Growth of Self-Assembled Germanium Islands on Silicon (001). Materials Research Society Symposia Proceedings, 2004, 820, 358.	0.1	0
103	Structural and Compositional Evolution of Self-Assembled Germanium Islands on Silicon (001) During High Growth Rate LPCVD. Materials Research Society Symposia Proceedings, 2003, 775, 9251.	0.1	0
104	Modeling of harmonic contributions to non-symmetrical RF plasmas. Journal of Materials Processing Technology, 2001, 118, 343-349.	3.1	1
105	Non-alloyed Pd/Sn and Pd/Sn/Au Ohmic Contacts for GaAs MESFETs: Technology and Performance. Solid-State Electronics, 2000, 44, 655-661.	0.8	1
106	On the use of total reflection x-ray topography for the observation of misfit dislocation strain at the surface of a Si/Geâ€“Si heterostructure. Applied Physics Letters, 2000, 77, 1644-1646.	1.5	5
107	Thermally stable Pd/Sn and Pd/Sn/Au ohmic contacts to n-type GaAs. Thin Solid Films, 1998, 320, 253-259.	0.8	3
108	A comparative study of Pd/Sn/Au, Au/Ge/Au/Ni/Au, Au-Ge/Ni and Ni/Au-Ge/Ni ohmic contacts to n-GaAs. Microelectronic Engineering, 1998, 40, 35-42.	1.1	250

#	Article	IF	Citations
109	An evaluation of liquid phase epitaxial InGaAs/InAs heterostructures for infrared devices using synchrotron x-ray topography. Semiconductor Science and Technology, 1998, 13, 345-349.	1.0	5
110	<title>Correlation between crystal morphology and x-ray performance of a CdZnTe detector</title>. , 1997, , .		1
111	The importance of the Pd to Sn ratio and of annealing cycles on the performance of Pd/Sn ohmiccontacts to n-GaAs. Thin Solid Films, 1997, 292, 264-269.	0.8	7
112	Thermal stability of the non-alloyed Pd/Sn and Pd/Ge Ohmic contacts to n-GaAs. Thin Solid Films, 1997, 308-309, 607-610.	0.8	6
113	Comparison of pd/sn and pd/sn/au thin-film Systems for Device Metallization. Materials Research Society Symposia Proceedings, 1996, 427, 583.	0.1	3
114	Effects of Au overlayers on the electrical and morphological characteristics of Pd/Sn ohmic contacts to n-GaAs. Thin Solid Films, 1996, 290-291, 417-421.	0.8	5
115	Analysis of the impact of dislocation distribution on the breakdown voltage of GaAsâ€based power varactor diodes. Journal of Applied Physics, 1996, 79, 8294-8297.	1.1	5
116	Piezoelectrically-active defects and their impact on the performance of GaAs MESFETs. Journal of Materials Processing Technology, 1995, 55, 303-310.	3.1	1
117	Modelling the effects of piezoelectrically active defects and their impact on the threshold voltage of GaAs metal-semiconductor field effect transistors. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 248-252.	1.7	3
118	The use of generalised models to explain the behaviour of ohmic contacts to n-type GaAs. Solid-State Electronics, 1992, 35, 1705-1708.	0.8	5
119	Investigation of stress effects on the direct current characteristics of GaAs metalâ€semiconductor fieldâ€effect transistors through the use of externally applied loads. Applied Physics Letters, 1988, 52, 1800-1802.	1.5	6