BÃ©la PÃ©cz

List of Publications by Year
in descending order

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115	2,061	304602	276775
papers	citations	22	41
		h-index	g-index

117	117	117	2229
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	The real structure of Îµ-Ga₂O₃ and its relation to Îº-phase. CrystEngComm, 2017, 19, 1509-1516.	1.3	227
2	Amorphisation and surface morphology development at low-energy ion milling. Ultramicroscopy, 1998, 70, 161-171.	0.8	114
3	Control of the in-plane thermal conductivity of ultra-thin nanocrystalline diamond films through the grain and grain boundary properties. Acta Materialia, 2016, 103, 141-152.	3.8	97
4	Crystallization of amorphous-Si films by flash lamp annealing. Applied Surface Science, 2005, 242, 185-191.	3.1	77
5	Ti3SiC2 formed in annealed Al/Ti contacts to p-type SiC. Applied Surface Science, 2003, 206, 8-11.	3.1	60
6	In situ TEM study of Îºâ†'Î² and Îºâ†'Î³ phase transformations in Ga2O3. Acta Materialia, 2020, 183, 216-227.	3.8	60
7	Catalytic Probe of the Surface Statistics of Palladium Crystallites Deposited on Montmorillonite. Chemistry of Materials, 2002, 14, 2882-2888.	3.2	57
8	Nanoscale phenomena ruling deposition and intercalation of AlN at the graphene/SiC interface. Nanoscale, 2020, 12, 19470-19476.	2.8	54
9	Diamond-Graphene Composite Nanostructures. Nano Letters, 2020, 20, 3611-3619.	4.5	54
10	Early stages of growth of Î²-SiC on Si by MBE. Journal of Crystal Growth, 1995, 157, 392-399.	0.7	52
11	One-step green synthesis of gold nanoparticles by mesophilic filamentous fungi. Chemical Physics Letters, 2016, 645, 1-4.	1.2	52
12	Material proposal for 2D indium oxide. Applied Surface Science, 2021, 548, 149275.	3.1	50
13	Contact formation in SiC devices. Applied Surface Science, 2001, 184, 287-294.	3.1	49
14	Indium Nitride at the 2D Limit. Advanced Materials, 2021, 33, e2006660.	11.1	45
15	Tin dioxide solâ€“gel derived thin films deposited on porous silicon. Sensors and Actuators B: Chemical, 1997, 43, 114-120.	4.0	44
16	Thermal conductivity of ultrathin nano-crystalline diamond films determined by Raman thermography assisted by silicon nanowires. Applied Physics Letters, 2015, 106, .	1.5	40
17	TEM study of Ni and Ni2Si ohmic contacts to SiC. Diamond and Related Materials, 1997, 6, 1428-1431.	1.8	38
18	The mechanism for cubic SiC formation on off-oriented substrates. Journal of Crystal Growth, 1997, 178, 495-504.	0.7	38

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19	Optical and Structural Characteristics of Virtually Unstrained Bulk-Like GaN. Japanese Journal of Applied Physics, 2004, 43, 1264-1268.	0.8	37
20	Low-Dispersion, High-Voltage, Low-Leakage GaN HEMTs on Native GaN Substrates. IEEE Transactions on Electron Devices, 2018, 65, 2939-2947.	1.6	36
21	Ambient pressure CO2 hydrogenation over a cobalt/manganese-oxide nanostructured interface: A combined in situ and ex situ study. Journal of Catalysis, 2020, 386, 70-80.	3.1	34
22	Polarity dependent Alâ€“Ti contacts to 6Hâ€“SiC. Applied Surface Science, 2004, 233, 360-365.	3.1	24
23	Graphoepitaxy of Highâ€Quality GaN Layers on Graphene/6Hâ€“SiC. Advanced Materials Interfaces, 2015, 2, 1400230.	1.9	23
24	Nature of the Pt-Cobalt-Oxide surface interaction and its role in the CO2 Methanation. Applied Surface Science, 2022, 571, 151326.	3.1	23
25	Isolated SiC nanocrystals in SiO2. Applied Physics Letters, 2005, 86, 253109.	1.5	22
26	Post-selenization of stacked precursor layers for CIGS. Vacuum, 2013, 92, 44-51.	1.6	22
27	Structural and electrical properties of Ni films grown on Si(100) and SiO2 by d.c. bias sputtering. Thin Solid Films, 1993, 229, 107-112.	0.8	21
28	Transmission electron microscopy of nanocomposite CrBâ€“N thin films. Vacuum, 2007, 82, 209-213.	1.6	21
29	Low-temperature atomic layer deposition-grown Al2O3 gate dielectric for GaN/AlGaN/GaN MOS HEMTs: Impact of deposition conditions on interface state density. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	21
30	Phase formation due to high dose aluminum implantation into silicon carbide. Journal of Applied Physics, 2000, 87, 78-85.	1.1	20
31	Ion beam synthesis of graphite and diamond in silicon carbide. Applied Physics Letters, 2000, 76, 2847-2849.	1.5	19
32	Structural and electrical properties of Au and Ti/Au contacts to n-type GaN. Vacuum, 2008, 82, 794-798.	1.6	19
33	Simple method for the preparation of inp based samples for TEM investigation. Journal of Electron Microscopy Technique, 1991, 18, 325-328.	1.1	18
34	Structural Properties of Nickel Metal-Induced Laterally Crystallized Silicon Films and Their Improvement Using Excimer Laser Annealing. Japanese Journal of Applied Physics, 2003, 42, 2592-2599.	0.8	17
35	Ion-beam synthesis of epitaxial silicon carbide in nitrogen-implanted diamond. Applied Physics Letters, 2000, 77, 226-228.	1.5	15
36	Highly transparent ITO thin films on photosensitive glass: solâ€“gel synthesis, structure, morphology and optical properties. Applied Physics A: Materials Science and Processing, 2012, 107, 385-392.	1.1	15

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37	Conductive CaSi2 transparent in the near infra-red range. Journal of Alloys and Compounds, 2019, 770, 710-720.	2.8	15
38	Multiscale Investigation of the Structural, Electrical and Photoluminescence Properties of MoS2 Obtained by MoO3 Sulfurization. Nanomaterials, 2022, 12, 182.	1.9	15
39	Microstructure of GaN layers grown on Si(111) revealed by TEM. Vacuum, 2003, 71, 285-291.	1.6	14
40	Growth of highly curved Al1-xInxN nanocrystals. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, R76-R78.	0.8	14
41	Photoluminescence of samples produced by electroless wet chemical etching: Between silicon nanowires and porous structures. Physica Status Solidi (A) Applications and Materials Science, 2011, 208, 893-899.	0.8	14
42	Barrier Inhomogeneity of Ni Schottky Contacts to Bulk GaN. Physica Status Solidi (A) Applications and Materials Science, 2018, 215, 1700613.	0.8	14
43	Esaki Diode Behavior in Highly Uniform MoS₂/Silicon Carbide Heterojunctions. Advanced Materials Interfaces, 2022, 9, .	1.9	14
44	Structural study of MgO and Mg-doped ZnO thin films grown by atomic layer deposition. Materials Science in Semiconductor Processing, 2019, 93, 6-11.	1.9	13
45	A low temperature growth of Ca silicides on Si(100) and Si(111) substrates: Formation, structure, optical properties and energy band structure parameters. Journal of Alloys and Compounds, 2020, 813, 152101.	2.8	13
46	Crystallization of encapsulated very thin amorphous Ge layers. Thin Solid Films, 1993, 232, 68-72.	0.8	12
47	Comparative mass spectrometric study of AIII-BV compounds covered with a gold layer. Vacuum, 1986, 36, 547-549.	1.6	11
48	Migration of CrSi2 nanocrystals through nanopipes in the silicon cap. Applied Surface Science, 2010, 256, 7331-7334.	3.1	11
49	Characterization of Plasma-Induced Damage of Selectively Recessed GaN/InAlN/AlN/GaN Heterostructures Using SiCl4and SF6. Japanese Journal of Applied Physics, 2010, 49, 116506.	0.8	11
50	Structural and electrical properties of AlN thin films on GaN substrates grown by plasma enhanced-Atomic Layer Deposition. Materials Science in Semiconductor Processing, 2019, 97, 35-39.	1.9	11
51	Epitaxial aluminum carbide formation in 6Hâ€“SiC by high-dose Al+ implantation. Applied Physics Letters, 1999, 74, 2602-2604.	1.5	10
52	Inclusions in Si whiskers grown by Ni metal induced lateral crystallization. Journal of Applied Physics, 2017, 121, .	1.1	10
53	ZnSnN₂ in Real Space and kâ€Space: Lattice Constants, Dislocation Density, and Optical Band Gap. Advanced Optical Materials, 2021, 9, 2100015.	3.6	10
54	Diamond formation in cubic silicon carbide. Applied Physics Letters, 2003, 82, 46-48.	1.5	9

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55	Al and Ti/Al contacts on n-GaN. Vacuum, 2009, 84, 228-230.	1.6	9
56	TEM study of defects in AlxGa1â^'xN layers with different polarity. Journal of Crystal Growth, 2012, 338, 30-34.	0.7	9
57	Interfacial Ni active sites strike solid solutional counterpart in CO2 hydrogenation. Environmental Technology and Innovation, 2022, 27, 102747.	3.0	9
58	Fast Generation-Recombination Channels due to Epitaxial Defects in SiC Metal-Oxide-Semiconductor Devices. Materials Science Forum, 1998, 264-268, 1025-1028.	0.3	8
59	A Tool for Local Thickness Determination and Grain Boundary Characterization by CTEM and HRTEM Techniques. Microscopy and Microanalysis, 2015, 21, 422-435.	0.2	8
60	Reactive ion millingâ€"thinning of compound semiconductors. Vacuum, 1994, 45, 1-3.	1.6	7
61	Topology of twin junctions in epitaxial Î²-SiC. Diamond and Related Materials, 1997, 6, 1362-1364.	1.8	7
62	Ion beam synthesis of diamond-SiC-heterostructures. Diamond and Related Materials, 2003, 12, 1241-1245.	1.8	7
63	Electrical behaviour of lateral Al/n-GaN/Al structures. Applied Surface Science, 2010, 256, 5614-5617.	3.1	7
64	Thin TaC layer produced by ion mixing. Surface and Coatings Technology, 2012, 206, 3917-3922.	2.2	7
65	Effect of Added Surfactant on Poly(Ethylenimine)-Assisted Gold Nanoparticle Formation. Langmuir, 2019, 35, 14007-14016.	1.6	7
66	Controlling the morphology of poly(ethyleneimine)/gold nanoassemblies through the variation of pH and electrolyte additives. Journal of Molecular Liquids, 2021, 322, 114559.	2.3	7
67	Structural characteristics of single crystalline GaN films grown on (111) diamond with AlN buffer. Diamond and Related Materials, 2013, 34, 9-12.	1.8	6
68	Preparation of Gold Nanocomposites with Tunable Charge and Hydrophobicity via the Application of Polymer/Surfactant Complexation. ACS Omega, 2017, 2, 8709-8716.	1.6	6
69	Structural Characteristics of the Si Whiskers Grown by Ni-Metal-Induced-Lateral-Crystallization. Nanomaterials, 2021, 11, 1878.	1.9	6
70	Highly Homogeneous Current Transport in Ultra-Thin Aluminum Nitride (AlN) Epitaxial Films on Gallium Nitride (GaN) Deposited by Plasma Enhanced Atomic Layer Deposition. Nanomaterials, 2021, 11, 3316.	1.9	6
71	Interaction of thin gold films with GaP during heat treatment in a vacuum. Semiconductor Science and Technology, 1987, 2, 428-436.	1.0	5
72	The interaction of gold thin films with InP. Vacuum, 1990, 40, 189-191.	1.6	5

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73	Growth and ellipsometric studies of periodic and cantor aperiodic amorphous Ge/Si superlattices. Thin Solid Films, 1994, 240, 7-13.	0.8	5
74	Physical and Electrical Characterization of WN Schottky Contacts on 4H-SiC. Materials Science Forum, 1998, 264-268, 817-820.	0.3	5
75	Void-Free Epitaxial Growth of Cubic SiC Crystallites during CO Heat Treatment of Oxidized Silicon. Materials Science Forum, 2002, 389-393, 359-362.	0.3	5
76	Diamond formation by carbon implantation into cubic silicon carbide. Diamond and Related Materials, 2004, 13, 627-632.	1.8	5
77	Structure and Optical Properties of Ca Silicide Films and Si/Ca₃Si₄/Si(111) Heterostructures. Solid State Phenomena, 2014, 213, 71-79.	0.3	5
78	Novel Thermal Management of GaN Electronics: Diamond Substrates. , 2015, , .		5
79	Formation and thermoelectric properties of Si/CrSi2/Si(001) heterostructures with stressed chromium disilicide nanocrystallites. Electronic Materials Letters, 2015, 11, 424-428.	1.0	5
80	Non-doped and doped Mg stannide films on Si(111) substrates: Formation, optical, and electrical properties. Japanese Journal of Applied Physics, 2015, 54, 07JC06.	0.8	5
81	Temperature Dependent Vertical Conduction of GaN HEMT Structures on Silicon and Bulk GaN Substrates. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1800482.	0.8	5
82	Van der Waals and Graphene-Like Layers of Silicon Nitride and Aluminum Nitride. , 0, , .		5
83	TEM Investigation of Si Implanted Natural Diamond. Materials Science Forum, 2001, 353-356, 199-204.	0.3	4
84	Transmission electron microscope specimen preparation for exploring the buried interfaces in plan view. Journal of Microscopy, 2006, 224, 328-331.	0.8	4
85	Formation of a Graphene-Like SiN Layer on the Surface Si(111). Semiconductors, 2018, 52, 1511-1517.	0.2	4
86	The influence of ohmic metal composition on the characteristics of ohmic contacts. Vacuum, 1990, 40, 179-181.	1.6	3
87	Regrowth of a thin InP surface covering layer in the Au/InP system during annealing. Applied Physics Letters, 1992, 61, 105-107.	1.5	3
88	Surface Transformations and Growth of Nanocrystals on Au-covered GaAs Crystals. Nanopages, 2006, 1, 85-95.	0.2	3
89	Growth, structure, optical and electrical properties of Si/2D Mg₂Si/Si(111) double heterostructures and Schottky diodes on their base. Physica Status Solidi C: Current Topics in Solid State Physics, 2013, 10, 1720-1723.	0.8	3
90	Controlling the interface charge density in GaN-based metal-oxide-semiconductor heterostructures by plasma oxidation of metal layers. Journal of Applied Physics, 2015, 117, 214503.	1.1	3

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91	InGaN/(GaN)/AlGaN/GaN normally-off metal-oxide-semiconductor high-electron mobility transistors with etched access region. Japanese Journal of Applied Physics, 2019, 58, SCCD21.	0.8	3
92	Thermal behaviour of Au/AIIIBV samples controlled with mass spectrometer. Vacuum, 1990, 40, 185-187.	1.6	2
93	Characterization of GaAlN/GaN Superlattice Heterostructures. Materials Science Forum, 2001, 353-356, 803-806.	0.3	2
94	TEM investigation of defect structure in GaAlN/GaN heterostructures. Vacuum, 2003, 71, 159-163.	1.6	2
95	Transmission electron microscopy of wide band-gap semiconductor layers. Physica Status Solidi A, 2003, 195, 214-221.	1.7	2
96	X-TEM investigation of the Al-QC layer system developed at various Mn deposition rates. Vacuum, 1992, 43, 673-675.	1.6	1
97	Electrical and microstructure analysis of Ni/Ge/n-GaAs interface. Thin Solid Films, 1998, 323, 212-216.	0.8	1
98	Consequences of High-Dose, High Temperature Al⁺ Implantation in 6H-SiC. Materials Science Forum, 2000, 338-342, 881-884.	0.3	1
99	Structural Properties of Nickel-Metal-Induced Laterally Crystallized Silicon Films. Solid State Phenomena, 2003, 93, 213-218.	0.3	1
100	SiC Epitaxial Growth on Si(100) Substrates Using Carbon Tetrabromide. Materials Science Forum, 2010, 645-648, 139-142.	0.3	1
101	Influence of CrSi2 nanocrystals on the electrical properties of Au/Si - p/CrSi2ÂNCs/Si(111) - n mesa-diodes. Physics Procedia, 2011, 11, 35-38.	1.2	1
102	Influence of Doping and Co-Doping on the Behavior of Sputtered ZnO Thin Films. ECS Transactions, 2011, 35, 141-148.	0.3	1
103	Growth of crackâ€free GaN epitaxial thin films on composite Si(111)/polycrystalline diamond substrates by MOVPE. Physica Status Solidi C: Current Topics in Solid State Physics, 2012, 9, 650-653.	0.8	1
104	Bilayer Cr/Au contacts on n-GaN. Vacuum, 2012, 86, 769-772.	1.6	1
105	Structural Characterization of 3C-SiC Grown Using Methyltrichlorosilane. Materials Science Forum, 0, 740-742, 291-294.	0.3	1
106	Index matching at the nanoscale: light scattering by coreâ€“shell Si/SiO_xnanowires. Nanotechnology, 2016, 27, 435202.	1.3	1
107	Electrophysical Parameters of the Metal-Semiconductor Interface in MBE and VPE Grown GaAs Schottky Contacts. Materials Science Forum, 1991, 69, 99-100.	0.3	0
108	Ion mixing enhanced wafer bonding for siliconâ€onâ€insulator structures. Journal of Applied Physics, 1992, 72, 5602-5605.	1.1	0

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109	Electrical and structural characterisation of NiGe n-GaAs interface. Vacuum, 1998, 50, 395-398.	1.6	0
110	Structural Characterisation of GaN Layers on Sapphire Grown by MOCVD. Materials Science Forum, 1998, 264-268, 1255-1258.	0.3	0
111	Formation of Precipitates in 6H-SiC after Oxygen Implantation and Subsequent Annealing. Materials Science Forum, 2000, 338-342, 961-964.	0.3	0
112	High Dose Implantation in 6H-SiC. Materials Science Forum, 2001, 353-356, 579-582.	0.3	0
113	Microstructure of GaN Layers Grown onto (001) and (111) GaAs Substrates by Molecular Beam Epitaxy. Materials Science Forum, 2003, 433-436, 999-1002.	0.3	0
114	Si surface preparation and passivation by vapor phase of heavy water. , 2008, , .		0
115	The Influence of C₃H₈ and CBr₄ on Structural and Morphological Properties of 3C-SiC Layers. Materials Science Forum, 2012, 711, 22-26.	0.3	0