Dagmar Gregusova

List of Publications by Year
in descending order

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134 papers	1,622 citations	304602 22 h-index	360920 35 g-index

135 all docs	135 docs citations	135 times ranked	1378 citing authors

#	Article	IF	Citations
1	Investigation of trapping effects in AlGaN/GaN/Si field-effect transistors by frequency dependent capacitance and conductance analysis. Applied Physics Letters, 2008, 93, 124103.	1.5	95
2	Improved transport properties of Al2O3âˆ•AlGaNâˆ•GaN metal-oxide-semiconductor heterostructure field-effect transistor. Applied Physics Letters, 2007, 90, 123513.	1.5	75
3	Characterization of AlGaN/GaN metal-oxide-semiconductor field-effect transistors by frequency dependent conductance analysis. Applied Physics Letters, 2009, 94, 223512.	1.5	70
4	AlGaN/GaN metalâ€“oxideâ€“semiconductor heterostructure field-effect transistors with 4 nm thick Al2O3 gate oxide. Semiconductor Science and Technology, 2007, 22, 947-951.	1.0	63
5	Controlling surface/interface states in GaN-based transistors: Surface model, insulated gate, and surface passivation. Journal of Applied Physics, 2021, 129, .	1.1	58
6	Transport properties of AlGaN/GaN metalâ€“oxideâ€“semiconductor heterostructure field-effect transistors with Al2O3 of different thickness. Solid-State Electronics, 2008, 52, 973-979.	0.8	52
7	Trap states in AlGaN/GaN metal-oxide-semiconductor structures with Al2O3 prepared by atomic layer deposition. Journal of Applied Physics, 2010, 107, .	1.1	51
8	Bulk and interface trapping in the gate dielectric of GaN based metal-oxide-semiconductor high-electron-mobility transistors. Applied Physics Letters, 2013, 102, .	1.5	51
9	Investigation of trap effects in AlGaNâˆ•GaN field-effect transistors by temperature dependent threshold voltage analysis. Applied Physics Letters, 2008, 92, .	1.5	45
10	Impact of GaN cap on charges in Al2O3/(GaN/)AlGaN/GaN metal-oxide-semiconductor heterostructures analyzed by means of capacitance measurements and simulations. Journal of Applied Physics, 2014, 116, .	1.1	43
11	Trapping effects in Al2O3/AlGaN/GaN metal-oxide-semiconductor heterostructure field-effect transistor investigated by temperature dependent conductance measurements. Applied Physics Letters, 2010, 96, .	1.5	39
12	Conformal AZ5214-E resist deposition on patterned (1â€‰0â€‰0) InP substrates. Journal of Micromechanics and Microengineering, 2006, 16, 191-197.	1.5	38
13	Direct electro-optical pumping for hybrid CdSe nanocrystal/III-nitride based nano-light-emitting diodes. Applied Physics Letters, 2016, 108, 061107.	1.5	38
14	Hot-Electron-Related Degradation in InAlN/GaN High-Electron-Mobility Transistors. IEEE Transactions on Electron Devices, 2014, 61, 2793-2801.	1.6	37
15	RF Performance of InAlN/GaN HFETs and MOSHFETs With <formula formulatype="inline"><tex Notation="TeX"> $f_{T} imes L_{G}$</tex></formula> up to 21 <formula formulatype="inline"><tex Notation="TeX">$hbox{GHz}cdot muhbox{m}$</tex> </formula>. IEEE Electron Device Letters, 2010, 31, 180-182.	2.2	34
16	Schottky-barrier normally off GaN/InAlN/AlN/GaN HEMT with selectively etched access region. IEEE Electron Device Letters, 2013, 34, 432-434.	2.2	33
17	Adjustment of threshold voltage in AlN/AlGaN/GaN high-electron mobility transistors by plasma oxidation and Al2O3 atomic layer deposition overgrowth. Applied Physics Letters, 2014, 104, .	1.5	31
18	Electrical properties of InAlN/GaN high electron mobility transistor with Al2O3, ZrO2, and GdScO3 gate dielectrics. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, .	0.6	30

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19	Investigation of â€˜surface donorsâ€™ in Al2O3/AlGaN/GaN metal-oxide-semiconductor heterostructures: Correlation of electrical, structural, and chemical properties. Applied Surface Science, 2017, 426, 656-661.	3.1	27
20	Influence of passivation induced stress on the performance of AlGaN/GaN HEMTs. Physica Status Solidi C: Current Topics in Solid State Physics, 2005, 2, 2619-2622.	0.8	24
21	High-temperature performance of AlGaN/GaN HFETs and MOSHFETs. Microelectronics Reliability, 2008, 48, 1669-1672.	0.9	23
22	Selfâ€aligned normallyâ€off metalâ€“oxideâ€“semiconductor n⁺⁺GaN/InAlN/GaN high electron mobility transistors. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 1086-1090.	0.8	23
23	Formation of GaAs three-dimensional objects using AlAs â€œfacet-formingâ€•sacrificial layer and H3PO4, H2O2, H2O based solution. Journal of Applied Physics, 2003, 94, 4643-4648.	1.1	22
24	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
25	The effect of passivation on the performance of AlGaN/GaN heterostructure field-effect transistors. Semiconductor Science and Technology, 2006, 21, 1592-1596.	1.0	20
26	InAlN/GaN/Si heterostructures and field-effect transistors with lattice matched and tensely or compressively strained InAlN. Applied Physics Letters, 2010, 97, 173505.	1.5	19
27	Electrical properties of molecular beam epitaxial GaAs layers grown at low temperature. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1994, 28, 147-150.	1.7	18
28	Aluminum oxide as passivation and gate insulator in GaAs-based field-effect transistors prepared in situ by metal-organic vapor deposition. Applied Physics Letters, 2012, 100, 142113.	1.5	18
29	Influence of oxygen-plasma treatment on AlGaN/GaN metal-oxide-semiconductor heterostructure field-effect transistors with HfO₂by atomic layer deposition: leakage current and density of states reduction. Semiconductor Science and Technology, 2017, 32, 045018.	1.0	18
30	Influence of processing and annealing steps on electrical properties of InAlN/GaN high electron mobility transistor with Al2O3 gate insulation and passivation. Solid-State Electronics, 2012, 67, 74-78.	0.8	17
31	Large-scale high-resolution scanning Hall probe microscope used for MgB2filament characterization. Superconductor Science and Technology, 2005, 18, 417-421.	1.8	16
32	Conditioning nano-LEDs in arrays by laser-micro-annealing: The key to their performance improvement. Applied Physics Letters, 2021, 118, .	1.5	16
33	Fabrication of a vector Hall sensor for magnetic microscopy. Applied Physics Letters, 2003, 82, 3704-3706.	1.5	15
34	Optimization and performance of Al2O3/GaN metalâ€“oxideâ€“semiconductor structures. Microelectronics Reliability, 2007, 47, 790-793.	0.9	15
35	Magnetic elements for switching magnetization magnetic force microscopy tips. Journal of Magnetism and Magnetic Materials, 2010, 322, 2715-2721.	1.0	15
36	Effect of porous silicon substrate on structural, mechanical and optical properties of MOCVD and ALD ruthenium oxide nanolayers. Applied Surface Science, 2019, 471, 686-693.	3.1	15

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37	SiO2â^•AlGaNâ^•GaN MOSHFET with 0.7â€…[micro sign]m gate-length and fmaxâ^•fT of 40â^•24â€…GHz. Electronics Letters, 2005, 41, 667.	0.5	14
38	AFM nanooxidation process â€“ Technology perspective for mesoscopic structures. Surface Science, 2007, 601, 2717-2723.	0.8	14
39	Monolithic Integration of Ultrafast Photodetector and MESFET in the GaN Material System. IEEE Photonics Technology Letters, 2011, 23, 1189-1191.	1.3	14
40	Non-uniform distribution of induced strain in a gate-recessed AlGaN/GaN structure evaluated by micro-PL measurements. Semiconductor Science and Technology, 2012, 27, 105008.	1.0	14
41	Trapped charge effects in AlGaN/GaN metal-oxide-semiconductor structures with Al₂O₃and ZrO₂gate insulator. Semiconductor Science and Technology, 2014, 29, 045003.	1.0	14
42	Fabrication of GaAs symmetric pyramidal mesas prepared by wet-chemical etching using AlAs interlayer. Journal of Applied Physics, 2002, 91, 878-880.	1.1	13
43	Technology of integrated self-aligned E/D-mode n⁺⁺GaN/InAlN/AlN/GaN MOS HEMTs for mixed-signal electronics. Semiconductor Science and Technology, 2016, 31, 065011.	1.0	12
44	Wet chemical MESA etching of InGaP and GaAs with solutions based on HCl, CH3COOH, and H2O2. Physica Status Solidi A, 1995, 151, 113-118.	1.7	11
45	Comparative study on unpassivated and passivated AlGaN/GaN HFETs and MOSHFETs. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 1876-1881.	0.8	11
46	Characterization of AlGaN/GaN MOSHFETs with Al2O3 as gate oxide. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 2720-2723.	0.8	11
47	Performance of AlGaN/GaN metal-insulator-semiconductor heterostructure field-effect transistors with AlN gate insulator prepared by reactive magnetron sputtering. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2011, 29, 01A809.	0.6	11
48	Characterization of interface states in AlGaN/GaN metal-oxide-semiconductor heterostructure field-effect transistors with HfO2 gate dielectric grown by atomic layer deposition. Applied Surface Science, 2018, 461, 255-259.	3.1	11
49	Characterization of AlGaN/GaN MISHFETs on a Si substrate by static and high-frequency measurements. Semiconductor Science and Technology, 2009, 24, 075014.	1.0	10
50	Switching Magnetization Magnetic Force Microscopy â€” An Alternative to Conventional Lift-Mode MFM. Journal of Electrical Engineering, 2011, 62, 37-43.	0.4	10
51	Ni/Auâ€“Al2O3 gate stack prepared by low-temperature ALD and lift-off for MOS HEMTs. Microelectronic Engineering, 2013, 112, 204-207.	1.1	10
52	InGaAs/GaAs metal-oxide-semiconductor heterostructure field-effect transistors with oxygen-plasma oxide and Al₂O₃ double-layer insulator. Applied Physics Letters, 2014, 105, 183504.	1.5	10
53	Properties of InGaAs/GaAs metal-oxide-semiconductor heterostructure field-effect transistors modified by surface treatment. Applied Surface Science, 2017, 395, 140-144.	3.1	10
54	Annealing, temperature, and bias-induced threshold voltage instabilities in integrated E/D-mode InAlN/GaN MOS HEMTs. Applied Physics Letters, 2017, 111, .	1.5	10

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55	Domain magnetic granularity effects on patterned epitaxial<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi mathvariant="normal">Y</mml:mi><mml:msub><mml:mi mathvariant="normal">Ba</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Cu</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">O</mml:mi><mml:mrow><mml:mn>7</mml:mn><mml:mo>â^’</mml:mo><mml:mi>x</mml:mi></mml:mrow></	1.1	8
56	Defect states characterization of non-annealed and annealed ZrO2/InAlN/GaN structures by capacitance measurements. Applied Physics Letters, 2013, 102, .	1.5	8
57	Impact of thermal annealing on nonequilibrium carrier dynamics in single-crystal, freestanding GaAs mesostructures. Semiconductor Science and Technology, 2014, 29, 045022.	1.0	8
58	Current conduction mechanism and electrical break-down in InN grown on GaN. Applied Physics Letters, 2017, 110, .	1.5	8
59	New approach to local anodic oxidation of semiconductor heterostructures. Ultramicroscopy, 2008, 108, 1086-1089.	0.8	7
60	Local anodic oxidation by AFM tip developed for novel semiconductor nanodevices. Ultramicroscopy, 2008, 108, 1021-1024.	0.8	7
61	Novel Magnetic Tips Developed for the Switching Magnetization Magnetic Force Microscopy. Journal of Nanoscience and Nanotechnology, 2010, 10, 4477-4481.	0.9	7
62	Characterization of Monolithic InAlN/GaN NAND Logic Cell Supported by Circuit and Device Simulations. IEEE Transactions on Electron Devices, 2018, 65, 2666-2669.	1.6	7
63	InN: Breaking the limits of solid-state electronics. AIP Advances, 2021, 11, .	0.6	7
64	Scanning vector Hall probe microscope. Review of Scientific Instruments, 2003, 74, 5105-5110.	0.6	6
65	Technology and properties of a vector hall sensor. Microelectronics Journal, 2006, 37, 1543-1546.	1.1	6
66	Optimization of the ohmic contact processing in InAlN//GaN high electron mobility transistors for lower temperature of annealing. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 108-111.	0.8	6
67	Resistive switching in nonplanar HfO2-based structures with variable series resistance. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 01A108.	0.6	6
68	Polarizationâ€Engineered n⁺GaN/InGaN/AlGaN/GaN Normallyâ€Off MOS HEMTs. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1700407.	0.8	6
69	High resolution physical analysis of ohmic contact formation at GaN-HEMT devices. Microelectronics Reliability, 2017, 76-77, 338-343.	0.9	6
70	Investigation of the GaAs-pyramids overgrowth using MOCVD. Journal of Crystal Growth, 2003, 248, 417-420.	0.7	5
71	Impact of surface treatment under the gate on the current collapse of unpassivated AlGaN/GaN heterostructure field-effect transistors. Semiconductor Science and Technology, 2006, 21, 67-71.	1.0	5
72	Oxidized Al Film as an Insulation Layer in AlGaN/GaN Metalâ€“Oxideâ€“Semiconductor Heterostructure Field Effect Transistors. Japanese Journal of Applied Physics, 2010, 49, 046504.	0.8	5

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73	ZrO2/InAlN/GaN Metalâ€“Oxideâ€“Semiconductor Heterostructure Field-Effect Transistors with InAlN Barrier of Different Compositions. Japanese Journal of Applied Physics, 2013, 52, 08JN07.	0.8	5
74	Highâ€temperature stable Irâ€Al/nâ€GaAs Schottky diodes. Applied Physics Letters, 1994, 64, 1818-1820.	1.5	4
75	Enhancement of effective carrier velocity in AlGaN/GaN MOSHFETs with Al2O3 gate oxide. Physica Status Solidi C: Current Topics in Solid State Physics, 2008, 5, 1935-1937.	0.8	4
76	On-tip sub-micrometer Hall probes for magnetic microscopy prepared by AFM lithography. Ultramicroscopy, 2009, 109, 1080-1084.	0.8	4
77	Reduction of skin effect losses in double-level-T-gate structure. Applied Physics Letters, 2014, 105, 232102.	1.5	4
78	Impact of oxide/barrier charge on threshold voltage instabilities in AlGaN/GaN metal-oxide-semiconductor heterostructures. Materials Science in Semiconductor Processing, 2019, 91, 356-361.	1.9	4
79	Local increase in compressive strain (GaN) in gate recessed AlGaN/GaN MISHFET structures induced by an amorphous AlN dielectric layer. Semiconductor Science and Technology, 2021, 36, 095040.	1.0	4
80	Properties of WN x /GaAs Schottky contacts prepared by ion implantation of nitrogen. Journal of Materials Science: Materials in Electronics, 1992, 3, 157-161.	1.1	3
81	Scanning vector Hall probe microscopy. Journal of Magnetism and Magnetic Materials, 2004, 272-276, 2141-2143.	1.0	3
82	Impact of growth conditions on the spatial non-uniformities of composition in InGaP epitaxial layers. Physica Status Solidi C: Current Topics in Solid State Physics, 2007, 4, 1419-1422.	0.8	3
83	Novel Hall sensors developed for magnetic field imaging systems. Journal of Magnetism and Magnetic Materials, 2007, 316, 232-235.	1.0	3
84	GaAs-based metal-oxide-semiconductor field-effect transistor with aluminum oxide gate insulator preparedin situby MOCVD. Semiconductor Science and Technology, 2012, 27, 115002.	1.0	3
85	III-As heterostructure field-effect transistors with recessed ex-situ gate oxide by O2 plasma-oxidized GaAs cap. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2015, 33, 01A111.	0.6	3
86	Device and circuit models of InAlN/GaN D- and dual-gate E-mode HEMTs for design and characterisation of monolithic NAND logic cell. , 2018, , .		3
87	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
88	Investigation of interfaces and threshold voltage instabilities in normally-off MOS-gated InGaN/AlGaN/GaN HEMTs. Applied Surface Science, 2020, 528, 146824.	3.1	3
89	Characterisation of InGaAs/InP microscopic Hall probe arrays with a 2DEG active layer. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 1998, 51, 188-191.	1.7	2
90	Post-deposition annealing and thermal stability of integrated self-aligned E/D-mode n⁺⁺GaN/InAlN/AlN/GaN MOS HEMTs. , 2016, , .		2

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91	Determination of Secondary-Ions Yield in SIMS Depth Profiling of Si, Mg, and C Ions Implanted Gan Epitaxial Layers. , 2018, , .		2
92	Characterization of WNx metallization prepared by ion implantation of nitrogen. Thin Solid Films, 1994, 249, 250-253.	0.8	1
93	Deposition of AZ5214-E Layers on Non-planar Substrates with a "Draping" Technique. , 2006, , .		1
94	Switching of magnetic domains in Permalloy microstructures using two-dimensional electron gas. Applied Physics Letters, 2006, 89, 182513.	1.5	1
95	Early stage degradation of InAlN/GaN HEMTs during electrical stress. , 2012, , .		1
96	Simulation Analysis of InAlN/GaN Monolithic NAND Logic Cell. , 2018, , .		1
97	Technology and application of in-situ AlOx layers on III-V semiconductors. Applied Surface Science, 2018, 461, 33-38.	3.1	1
98	Device and Circuit Models of Monolithic InAlN/GaN NAND and NOR Logic Cells Comprising D- and E-Mode HEMTs. Journal of Circuits, Systems and Computers, 2019, 28, 1940009.	1.0	1
99	The effect of oxygen in WN x films on thermal stability of WN x /GaAs interfaces. Journal of Materials Science: Materials in Electronics, 1993, 4, 197-199.	1.1	0
100	Characterisation of 2DEG Hall probes in high magnetic field at 4.2 K. , 0, , .		0
101	MOVPE growth of 1220 nm (In,Ga)(As,P)/InP LED structures. , 0, , .		0
102	Smooth GaN recess wet photoelectrochemical etching. , 0, , .		0
103	2D electron transport through potential barrier prepared by LAO on shallow GaAs/AlxGa1-xAs/InGaP heterostructure. , 2006, , .		0
104	Formation of sharp-apex pyramids for active tips used in scanning probe microscopy. , 2006, , .		0
105	Rapid thermal annealing and performance of Al2O3/GaN metal-oxide-semiconductor structures. , 2006, , .		0
106	Preparation and properties of AlGaN/GaN MOSHFETs with MOCVD Al2O3 as gate oxide. , 2006, , .		0
107	InAlN/GaN MOSHEMT with Al<inf>2</inf>O<inf>3</inf> insulating film. , 2008, , .		0
108	Influence of annealing on electrical properties of AlGaN/GaN HFETs and MOSHFETs using A1<inf>2</inf>O<inf>3</inf>. , 2008, , .		0

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109	Sub-micrometer Hall probes prepared by tip-inducted local anodic oxidation. , 2008, , .		0
110	50-nm Local Anodic Oxidation Technology of Semiconductor Heterostructures. Journal of Nanoscience and Nanotechnology, 2010, 10, 4448-4453.	0.9	0
111	GaAs/AlAs/InGaP heterostructure: a versatile material basis for cantilever designs. Journal of Micromechanics and Microengineering, 2010, 20, 097001.	1.5	0
112	Preparation and properties of AlGaN/GaN MOS-HFETs with atomic layer deposited Al<inf>2</inf>O<inf>3</inf> as gate oxide. , 2010, , .		0
113	Current instabilities and other reliability aspects in AlGaN/GaN MOS-HFETs with atomic layer deposited Al<inf>2</inf>O<inf>3</inf> as gate oxide. , 2012, , .		0
114	Nucleation and annihilation of magnetic vortices in Pacman-like nanodots observed by micro-Hall probes. , 2012, , .		0
115	Detection elements for on-cantilever laboratory. , 2012, , .		0
116	Towards future III-nitride based THz OEICs in the UV range. , 2012, , .		0
117	Devices with Te-doped InGaP layers. , 2012, , .		0
118	The influence of an AlO<inf>x</inf> film in-situ deposited on the GaAs-based HFETs properties. , 2012, , .		0
119	Gate leakage reduction of AlGaN/GaN MOS-HFETs with HfO<inf>2</inf> prepared by ALD. , 2014, , .		0
120	Vortex Dynamics in Ferromagnetic Nanoelements Observed by Micro-Hall Probes. Acta Physica Polonica A, 2014, 126, 390-391.	0.2	0
121	Novel double-level-T-gate technology. , 2014, , .		0
122	Degradation of AlGaN/GaN high-electron mobility transistors in the current-controlled off-state breakdown. Journal of Applied Physics, 2014, 115, 164504.	1.1	0
123	Threshold voltage instabilities in AlGaN/GaN MOS-HEMTs with ALD-grown Al<inf>2</inf>O<inf>3</inf> gate dielectrics: Relation to distribution of oxide/semiconductor interface state density. , 2016, , .		0
124	Trap analysis of GaN-based heterostructures using current transients mesurements. , 2016, , .		0
125	Temperature-dependent of sub-threshold slope of AlGaN/GaN MOSHFETs with HfO<inf>2</inf> gate oxide prepared by ALD. , 2016, , .		0
126	Effect of HCl pretreatment on the oxide/semiconductor interface state density in AlGaN/GaN MOS-HEMT structures with MOCVD grown A1₂O₃ gate dielectric. , 2016, , .		0

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127	DC and pulsed IV characterisation of AlGaN/GaN MOS-HEMT structures with Al<inf>2</inf>O<inf>3</inf> gate dielectric prepared by various techniques. , 2016, , .		0
128	Optimization of UV-assisted wet oxidation of GaAs. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2017, 35, .	0.6	0
129	Performance analysis of monolithically integrated depletion-/enhancement-mode InAlN/GaN heterostructure HEMT transistors. , 2017, , .		0
130	Technology and performance of E/D-mode InAlN/GaN HEMTs for mixed-signal electronics. , 2018, , .		0
131	GaAs Nanomembranes in the High Electron Mobility Transistor Technology. Materials, 2021, 14, 3461.	1.3	0
132	Testing Superconducting Tapes by a 2DEG Hall Probe Array. , 1998, , 277-280.		0
133	Preparation of Microscopic Hall Probes and Arrays. , 1998, , 273-276.		0
134	Invited: Polarization engineering in GaN-based normally-off transistors. , 2021, , .		0