Xin-Ping Qu

List of Publications by Year
in descending order

134 papers	2,170 citations	257357 24 h-index	276775 41 g-index
134 all docs	134 docs citations	134 times ranked	2032 citing authors

#	Article	IF	Citations
1	Barrier height inhomogeneities of epitaxial CoSi2 Schottky contacts on n-Si (100) and (111). Solid-State Electronics, 2000, 44, 663-671.	0.8	225
2	Growth Kinetics and Crystallization Behavior of TiO[sub 2] Films Prepared by Plasma Enhanced Atomic Layer Deposition. Journal of the Electrochemical Society, 2008, 155, H688.	1.3	111
3	Improved barrier properties of ultrathin Ru film with TaN interlayer for copper metallization. Applied Physics Letters, 2006, 88, 151912.	1.5	95
4	Superior thermal stability of Ta/TaN bi-layer structure for copper metallization. Applied Surface Science, 2006, 253, 1666-1672.	3.1	81
5	The effect of postannealing on the electrical properties of well-aligned n-ZnO nanorods/p-Si heterojunction. Journal of Applied Physics, 2009, 105, 114504.	1.1	65
6	Electrical characteristics of CoSi2/n-Si(100) Schottky barrier contacts formed by solid state reaction. Solid-State Electronics, 2000, 44, 1807-1818.	0.8	63
7	The Effect of Glycine and Benzotriazole on Corrosion and Polishing Properties of Cobalt in Acid Slurry. Journal of the Electrochemical Society, 2012, 159, C383-C387.	1.3	62
8	The effect of pre-annealing of sputtered ZnO seed layers onÂgrowth of ZnO nanorods through a hydrothermal method. Applied Physics A: Materials Science and Processing, 2009, 94, 775-780.	1.1	59
9	The Effect of H2O2 and 2-MT on the Chemical Mechanical Polishing of Cobalt Adhesion Layer in Acid Slurry. Electrochemical and Solid-State Letters, 2012, 15, H97.	2.2	57
10	ALD-grown seed layers for electrochemical copper deposition integrated with different diffusion barrier systems. Microelectronic Engineering, 2011, 88, 684-689.	1.1	50
11	Ru thin film grown on TaN by plasma enhanced atomic layer deposition. Thin Solid Films, 2009, 517, 4689-4693.	0.8	49
12	The properties of Ru on Ta-based barriers. Thin Solid Films, 2006, 504, 231-234.	0.8	44
13	The effects of deposition temperature and ambient onÂtheÂphysicalÂand electrical performance ofÂDC-sputteredÂn-ZnO/p-Si heterojunction. Applied Physics A: Materials Science and Processing, 2010, 98, 357-365.	1.1	41
14	Implementing TiO2 as gate dielectric for Ge-channel complementary metal-oxide-semiconductor devices by using HfO2/GeO2 interlayer. Applied Physics Letters, 2010, 97, .	1.5	41
15	Schottky barrier characteristics of ternary silicide Co1â^'xNixSi2 on n-Si(100) contacts formed by solid phase reaction of multilayer. Solid-State Electronics, 2004, 48, 1205-1209.	0.8	39
16	Influence of seeding promoters on the properties of CVD grown monolayer molybdenum disulfide. Nano Research, 2019, 12, 823-827.	5.8	39
17	Inhibition effect of glycine on molybdenum corrosion during CMP in alkaline H2O2 based abrasive free slurry. Applied Surface Science, 2018, 427, 148-155.	3.1	36
18	Ni/Si solid phase reaction studied by temperature-dependent current-voltage technique. Journal of Applied Physics, 2003, 93, 866-870.	1.1	35

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19	Characterization of 1, 2, 4-Triazole as Corrosion Inhibitor for Chemical Mechanical Polishing of Cobalt in H₂O₂Based Acid Slurry. ECS Journal of Solid State Science and Technology, 2019, 8, P3075-P3084.	0.9	35
20	Direct Copper Plating on Ultra-Thin Sputtered Cobalt Film in an Alkaline Bath. Journal of the Electrochemical Society, 2013, 160, D3075-D3080.	1.3	33
21	Voltage dependence of effective barrier height reduction in inhomogeneous Schottky diodes. Solid-State Electronics, 2005, 49, 606-611.	0.8	32
22	A nanoimprint lithography for fabricating SU-8 gratings for near-infrared to deep-UV application. Microelectronic Engineering, 2008, 85, 914-917.	1.1	28
23	Silicon nanowire sensor for gas detection fabricated by nanoimprint on SU8/SiO2/PMMA trilayer. Microelectronic Engineering, 2009, 86, 1238-1242.	1.1	27
24	Nickel silicidation on n and p-type junctions at 300Â°C. Applied Physics Letters, 2004, 85, 410-412.	1.5	25
25	Ultrathin GeOxNy interlayer formed by in situâ€ˆNH3 plasma pretreatment for passivation of germanium metal-oxide-semiconductor devices. Applied Physics Letters, 2010, 97, .	1.5	25
26	Silicon nanowires by combined nanoimprint and angle deposition for gas sensing applications. Microelectronic Engineering, 2011, 88, 2100-2104.	1.1	25
27	Cu adhesion on tantalum and ruthenium surface: Density functional theory study. Journal of Applied Physics, 2010, 107, 103534.	1.1	23
28	Annealing effect on the metal gate effective work function modulation for the Al/TiN/SiO2/p-Si structure. Microelectronic Engineering, 2011, 88, 573-577.	1.1	23
29	Sputtered Ruâ€“Ti, Ruâ€“N and Ruâ€“Tiâ€“N films as Cu diffusion barrier. Microelectronic Engineering, 2011, 88, 635-640.	1.1	23
30	Improved Removal Selectivity of Ruthenium and Copper by Glycine in Potassium Periodate (KIO₄)-Based Slurry. Journal of the Electrochemical Society, 2012, 159, C525-C529.	1.3	22
31	Fabrication of micro/nano fluidic channels by nanoimprint lithography and bonding using SU-8. Microelectronic Engineering, 2009, 86, 1379-1381.	1.1	21
32	22nm silicon nanowire gas sensor fabricated by trilayer nanoimprint and wet etching. Microelectronic Engineering, 2010, 87, 927-930.	1.1	21
33	Investigation on inhibition of ruthenium corrosion by glycine in alkaline sodium hypochlorite based solution. Applied Surface Science, 2020, 506, 144976.	3.1	20
34	Effective Electrical Passivation of Ge(100) for HfO2 Gate Dielectric Layers Using O2 Plasma. Electrochemical and Solid-State Letters, 2011, 14, G20.	2.2	19
35	Thermal stability, phase and interface uniformity of Ni-silicide formed by Niâ€“Si solid-state reaction. Thin Solid Films, 2004, 462-463, 146-150.	0.8	18
36	Diffusion barrier properties of TaNx films prepared by plasma enhanced atomic layer deposition from PDMAT with N2 or NH3 plasma. Microelectronic Engineering, 2008, 85, 2059-2063.	1.1	18

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37	A BEEM study of Schottky barrier height distributions of ultrathin CoSi2/n-Si(100) formed by solid phase epitaxy. Semiconductor Science and Technology, 2000, 15, 349-356.	1.0	17
38	Study of CoTa alloy as barrier layer for Cu/low-kinterconnects. Journal Physics D: Applied Physics, 2017, 50, 405306.	1.3	16
39	Chemical Mechanical Polishing of Mo Using H₂O₂as Oxidizer in Colloidal Silica Based Slurries. ECS Journal of Solid State Science and Technology, 2017, 6, P470-P476.	0.9	16
40	Effects of preannealing on the diffusion barrier properties for ultrathin Wâ€“Siâ€“N thin film. Thin Solid Films, 2004, 462-463, 67-71.	0.8	15
41	Atomic layer deposition of platinum thin films on anodic aluminium oxide templates as surface-enhanced Raman scattering substrates. Vacuum, 2013, 89, 257-260.	1.6	15
42	TiO2/HfO2 Bi-Layer Gate Stacks Grown by Atomic Layer Deposition for Germanium-Based Metal-Oxide-Semiconductor Devices Using GeOxNy Passivation Layer. Electrochemical and Solid-State Letters, 2011, 14, G27.	2.2	14
43	Epitaxial growth of CoSi2 film by Co/a-Si/Ti/Si(100) multilayer solid state reaction. Journal of Applied Physics, 2001, 89, 2641-2648.	1.1	13
44	Patterned ZnO nanorods network transistor fabricated by low-temperature hydrothermal process. Microelectronic Engineering, 2010, 87, 1483-1486.	1.1	13
45	Growth of pinhole-free ytterbium silicide film by solid-state reaction on Si(001) with a thin amorphous Si interlayer. Journal of Applied Physics, 2007, 102, 033508.	1.1	12
46	Surface plasmon enhanced transmission through planar gold quasicrystals fabricated by focused ion beam technique. Microelectronic Engineering, 2009, 86, 1131-1133.	1.1	12
47	Study of direct Cu electrodeposition on ultra-thin Mo for copper interconnect. Microelectronic Engineering, 2016, 164, 7-13.	1.1	12
48	Effect of thickness scaling on the permeability and thermal stability of Ta(N) diffusion barrier. Applied Surface Science, 2019, 498, 143887.	3.1	12
49	Study of ultrathin vanadium nitride as diffusion barrier for copper interconnect. Microelectronic Engineering, 2006, 83, 236-240.	1.1	11
50	Growth of high-density Ru- and RuO2-composite nanodots on atomic-layer-deposited Al2O3 film. Applied Surface Science, 2007, 253, 4045-4050.	3.1	11
51	Magnetic and meniscus-effect control of catalytic rolled-up micromotors. Microelectronic Engineering, 2011, 88, 1792-1794.	1.1	11
52	Ballistic electron emission microscopy studies of the temperature dependence of Schottky barrier height distribution in CoSi2/n-Si(100) diodes formed by solid phase reaction. Solid-State Electronics, 2000, 44, 2217-2223.	0.8	10
53	Influences of embossing technology on Pb(Zr0.3,Ti0.7)O3 ferroelectric thin film. Microelectronic Engineering, 2010, 87, 869-871.	1.1	10
54	Oxidation suppression in ytterbium silicidation by Tiâ•TiN bicapping layer. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2007, 25, 285-289.	0.9	9

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55	Yttrium silicide formation and its contact properties on Si(100). Microelectronic Engineering, 2008, 85, 131-135.	1.1	9
56	In situ and ex situ investigation on the annealing performance of the ZnO film grown by ion beam deposition. Journal of Materials Science: Materials in Electronics, 2010, 21, 88-95.	1.1	9
57	Effective Schottky Barrier Height Modulation by an Ultrathin Passivation Layer of GeOxNy for Alâˆ•n-Ge(100) Contact. Electrochemical and Solid-State Letters, 2011, 14, H487.	2.2	9
58	Study of a single layer ultrathin CoMo film as a direct plateable adhesion/barrier layer for next generation interconnect. , 2014, , .		9
59	Nanophotonic crystals with chiral elements by a hot embossing process in SU-8. Microelectronic Engineering, 2008, 85, 866-869.	1.1	8
60	Pt interlayer effects on Ni germanosilicide formation and contact properties. Applied Surface Science, 2009, 256, 305-310.	3.1	8
61	Surface plasmon polariton coupling induced transmission of subwavelength metallic grating with waveguide layer. Microelectronic Engineering, 2010, 87, 1297-1299.	1.1	8
62	The effect of sputtered W-based carbide diffusion barriers on the thermal stability and void formation in copper thin films. Microelectronic Engineering, 2010, 87, 2535-2539.	1.1	8
63	Annealing induced hysteresis suppression for TiN/HfO₂/GeON/p-Ge capacitor. Semiconductor Science and Technology, 2011, 26, 125003.	1.0	8
64	The influence of ZnO seed layers on n-ZnO nanostructure/p-GaN LEDs. Applied Physics A: Materials Science and Processing, 2012, 109, 489-495.	1.1	8
65	Cu CMP process development and characterization of Cu dishing with 1.8 Î¼m Cu pad and 3.6 Î¼m pitch in Cu/SiO₂ hybrid bonding. Japanese Journal of Applied Physics, 2019, 58, SHHC01.	0.8	8
66	Cu contact on NiSi substrate with a Ta/TaN barrier stack. Microelectronic Engineering, 2008, 85, 2028-2031.	1.1	7
67	Duplication of nanoimprint templates by a novel SU-8/SiO2/PMMA trilayer technique. Journal of Vacuum Science & Technology B, 2009, 27, 19-22.	1.3	7
68	Metallic and dielectric photonic crystals with chiral elements by combined nanoimprint and reversal lithography in SU-8. Microelectronic Engineering, 2009, 86, 619-621.	1.1	7
69	Schottky barrier height lowering induced by CoSi2 nanostructure. Applied Physics A: Materials Science and Processing, 2010, 99, 93-98.	1.1	7
70	The Inhibition of Enhanced Cu Oxidation on Rutheniumâˆ•Diffusion Barrier Layers for Cu Interconnects by Carbon Alloying into Ru. Journal of the Electrochemical Society, 2011, 158, H1228.	1.3	7
71	Effect of Co_xMo_yas Single Barrier Layer on Properties of Directly Electroplated Copper Films. Journal of the Electrochemical Society, 2016, 163, D794-D800.	1.3	7
72	Investigation of the anomalous hump phenomenon in amorphous InGaZnO thin-film transistors. Solid-State Electronics, 2020, 170, 107814.	0.8	7

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73	Electrical characterization of NiSi/Si interfaces formed by a single and a two-step rapid thermal silicidation. Semiconductor Science and Technology, 2005, 20, 716-719.	1.0	6
74	A novel 3D nanolens for sub-wavelength focusing by self-aligned nanolithography. Microelectronic Engineering, 2010, 87, 1506-1508.	1.1	6
75	Effective polarization control of metallic planar chiral metamaterials with complementary rosette pattern fabricated by nanoimprint lithography. Microelectronic Engineering, 2010, 87, 985-988.	1.1	6
76	Influence of nano-embossing on properties of poly(VDF-TrFE). Microelectronic Engineering, 2010, 87, 890-892.	1.1	6
77	Dielectric Fresnel zone plates on optical fibers for micro-focusing applications. Microelectronic Engineering, 2011, 88, 2650-2652.	1.1	6
78	Investigation of oxygen and argon plasma treatment on Mg-doped InZnO thin film transistors. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	1.1	6
79	Electroless Deposition of Pure Co on TaN Substrate for Interconnect Metallization. Journal of the Electrochemical Society, 2022, 169, 072507.	1.3	6
80	Nanofabrication of SiC templates for direct hot embossing for metallic photonic structures and meta materials. Microelectronic Engineering, 2008, 85, 1147-1151.	1.1	5
81	Density Functional Theory Study of Cu Adhesion on Rh, Ir, Pd, Ta, Mo, Ru, Co, and Os Surfaces. Japanese Journal of Applied Physics, 2011, 50, 105701.	0.8	5
82	Pattern transfer of nano-scale ferroelectric PZT gratings by a reversal nanoimprint lithography. Microelectronic Engineering, 2011, 88, 2037-2040.	1.1	5
83	Study of Schottky barrier height modulation for NiSi/Si contact with an antimony interlayer. Microelectronic Engineering, 2013, 106, 121-124.	1.1	5
84	A non-destructive, fast evaluation of PVD diffusion barriers deposited on porous low-k dielectrics. Microelectronic Engineering, 2018, 198, 22-28.	1.1	5
85	Chemical Mechanical Polishing of Molybdenum in Potassium Iodate-Based Acidic Slurries. ECS Journal of Solid State Science and Technology, 2018, 7, P299-P304.	0.9	5
86	Two-step degradation of a-InGaZnO thin film transistors under DC bias stress. Solid-State Electronics, 2019, 152, 4-10.	0.8	5
87	Removal of Nanoceria Abrasive Particles by Using Diluted SC1 and Non-Ionic Surfactant. ECS Journal of Solid State Science and Technology, 2021, 10, 034010.	0.9	5
88	Boron and phosphorous diffusion in ion-beam-sputtering deposited SiGe films. Materials Letters, 2002, 57, 921-924.	1.3	4
89	Surface and interface morphology of CoSi2 films formed by multilayer solid-state reaction. Materials Characterization, 2002, 48, 229-235.	1.9	4
90	Pre-doping effects on Ni fully silicided metal gate on SiO2 dielectric. Applied Surface Science, 2008, 255, 1744-1749.	3.1	4

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91	Characterization of Ni/Ho and Ni/Er fully silicided metal gates on SiO2 gate dielectric. Microelectronic Engineering, 2008, 85, 2032-2036.	1.1	4
92	Fabrication of 150 nm Half-Pitch Grating Templates for Nanoimprint Lithography. Journal of Nanoscience and Nanotechnology, 2009, 9, 1437-1440.	0.9	4
93	Surface plasmon enhanced transmission through gold planar crystals with various aperture arrangements. Microelectronic Engineering, 2010, 87, 1340-1343.	1.1	4
94	A novel surface plasmon biosensor with imprinted waveguide metal gratings for protein detection. Microelectronic Engineering, 2011, 88, 2647-2649.	1.1	4
95	Reflow discoloration formation on pure tin (Sn) surface finish. Microelectronics Reliability, 2012, 52, 1153-1156.	0.9	4
96	Improved contact resistivity and enhanced mobility of metal-graphene FET by inserting ultra-thin MoOx layer at source/drain region. AIP Advances, 2019, 9, .	0.6	4
97	Density Functional Theory Study of Cu Adhesion on Rh, Ir, Pd, Ta, Mo, Ru, Co, and Os Surfaces. Japanese Journal of Applied Physics, 2011, 50, 105701.	0.8	4
98	Schottky contact properties of Ni/n-poly-Si0.87Ge0.13/n-Si(100) heterostructure. Materials Letters, 2004, 58, 2082-2086.	1.3	3
99	A New Chemically Amplified Resist for High Resolution Patterning by E-Beam Lithography. Journal of Nanoscience and Nanotechnology, 2010, 10, 7130-7133.	0.9	3
100	Nanoimprint lithography for optic fluidics with phase gratings for environmental monitoring application. Microelectronic Engineering, 2010, 87, 824-826.	1.1	3
101	Effects of colloidal silica on the CMP of Molybdenum in the alkaline slurry. , 2014, , .		3
102	Study of adhesion for Cu/Ru(Zn) on dielectrics by an improved four-point bending measurement. , 2020, , .		3
103	Investigation of RuZn alloy as barrier to Cu interconnect. Journal of Materials Science: Materials in Electronics, 2022, 33, 6318-6328.	1.1	3
104	Silicide Formation for Ni and Pd Bilayers on Si(100) Substrates. Materials Research Society Symposia Proceedings, 2001, 670, 1.	0.1	2
105	X-ray photoelectron spectroscopy study of NiSi formation on shallow junctions. Applied Surface Science, 2009, 256, 698-701.	3.1	2
106	Cu contact on NiSi/Si with thin Ru/TaN barrier. Microelectronic Engineering, 2011, 88, 545-547.	1.1	2
107	Nanoscale control of domain arrangements in Pb(Zr0.3,Ti0.7)O3 ferroelectric films. Microelectronic Engineering, 2011, 88, 2041-2044.	1.1	2
108	TaNâˆ•Ta as an Effective Diffusion Barrier for Direct Contact of Copper and NiSi. Electrochemical and Solid-State Letters, 2012, 15, H9.	2.2	2

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109	Investigation of CH4, NH3, H2 and He plasma treatment on porous low-k films and its effects on resisting moisture absorption and ions penetration. Microelectronic Engineering, 2013, 106, 85-90.	1.1	2
110	Pronounced effects of argon plasma etching on photoluminescence and Schottky contact properties of Pt/ZnO nanorods. Optical Materials, 2018, 84, 404-408.	1.7	2
111	Role of Post-Deposition Annealing of Sputtered Ti on Fermi Level Depinning in Ti/TiOx/n-Ge. ECS Journal of Solid State Science and Technology, 2019, 8, P153-P158.	0.9	2
112	Linewidth related resistivities and growth behavior of nickel silicide nanowires by solid state reaction between Ni and electron-beam lithography prepared Si nanowires. Thin Solid Films, 2021, 724, 138612.	0.8	2
113	Electrodeposition of Cu on CoTa Barrier in the Alkaline CuSO₄-Ethylenediamine Solution. Journal of the Electrochemical Society, 2021, 168, 062501.	1.3	2
114	An atomic force microscopy study of thin CoSi/sub 2/ films formed by solid state reaction. , 0, , .		1
115	Formation and Characterization of Spe Grown Ultra-Thin Cobalt Disilicide Film. Materials Research Society Symposia Proceedings, 1999, 564, 157.	0.1	1
116	A Beem Study of PtSi Schottky Contacts on Ion-Milled Si. Materials Research Society Symposia Proceedings, 1999, 564, 201.	0.1	1
117	Linear growth of Ni2Si thin film on n+/p junction at low temperature. Journal of Materials Research, 2006, 21, 3017-3021.	1.2	1
118	Comparison of Ru/Ta and Ru/TaN as Barrier Stack for Copper Metallization. Materials Research Society Symposia Proceedings, 2006, 914, 1.	0.1	1
119	Fabrication and characterization of high extinction ratio transmission polarizers. Microelectronic Engineering, 2010, 87, 1005-1007.	1.1	1
120	Study of the sputtered Mo/TaN and Mo-Ta thin film as diffusion barrier for copper metallization. , 2010, , .		1
121	Effects of oxygen plasma etching and post-annealing on Pt Schottky contact on Mg-doped InZnO. , 2012, , .		1
122	Silver surface-enhanced raman scattering substrates prepared by a nanofabrication process using Electron Beam Lithography and magnetron sputtering. , 2013, , .		1
123	The photoresponsivity of monolayer molybdenum disulfide grown by chemical vapor deposition with different seeding promoters. Applied Physics Express, 2020, 13, 071006.	1.1	1
124	Multilayer solid phase reaction and epitaxial growth of metal silicide on Si. , 0, , .		0
125	The effect of amorphous Si on the epitaxial growth of CoSi/sub 2/ by Co/Si/Ti/Si solid state epitaxy. , 0, , .		0
126	Si/CoSi/sub 2//Si[100] heteroepitaxial growth by molecular beam epitaxy and novel solid phase epitaxy. , 0, , .		0

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127	Process and Mechanism of CoSi2/Si Solid Phase Epitaxy by Multilayer Reaction. Materials Research Society Symposia Proceedings, 1999, 580, 117.	0.1	0
128	Nucleation of CoSi/sub 2/ and MnSi/sub 1.7/ in the Co/Mn/Si ternary system. , 0, , .		0
129	Comment on â€œSchottky barrier rectifier with high current density using vanadium as barrier metalâ€• [Appl. Phys. Lett., 79, 860 (2001)]. Applied Physics Letters, 2003, 82, 1311-1312.	1.5	0
130	The reaction characteristics of ultra-thin Ni films on undoped and doped Si (100). Journal of Electronic Materials, 2004, 33, 770-773.	1.0	0
131	Arsenic redistribution induced by low-temperature Ni silicidation at 450Â°C on shallow junctions. Journal of Electronic Materials, 2006, 35, 937-940.	1.0	0
132	Copper pulse plating on Ru/TaSiN barrier. , 2006, , .		0
133	Investigation of Co/TaN bilayer as Cu diffusion barrier. , 2010, , .		0
134	Ru/TaSiN with different Ta/Si atomic ratio as barrier for Cu contact on NiSi substrate. , 2010, , .		0