Rita Rizzoli

List of Publications by Year
in descending order

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85 papers	1,422 citations	394421 19 h-index	361022 35 g-index
86 all docs	86 docs citations	86 times ranked	2121 citing authors

#	Article	IF	Citations
1	Nanomolded buried light-scattering (BLiS) back-reflectors using dielectric nanoparticles for light harvesting in thin-film silicon solar cells. EPJ Photovoltaics, 2020, 11, 2.	1.6	2
2	A ternaryâ€“3D analysis of the optical properties of amorphous hydrogenated siliconâ€“rich carbide. Materials Chemistry and Physics, 2019, 221, 301-310.	4.0	0
3	Mechanical and electrical characterization of CVD-grown graphene transferred on chalcogenide Ge2Sb2Te5 layers. Carbon, 2018, 132, 141-151.	10.3	8
4	Local epitaxy from the silicon substrate in siliconâ€“rich SiC during Siâ€“nanocrystals formation. Thin Solid Films, 2017, 628, 54-60.	1.8	1
5	Combining light-harvesting with detachability in high-efficiency thin-film silicon solar cells. Nanoscale, 2017, 9, 7169-7178.	5.6	2
6	Efficient light-trapping with quasi-periodic uniaxial nanowrinkles for thin-film silicon solar cells. Nano Energy, 2017, 35, 341-349.	16.0	16
7	Contamination-free graphene by chemical vapor deposition in quartz furnaces. Scientific Reports, 2017, 7, 9927.	3.3	70
8	Injection of auxiliary electrons for increasing the plasma density in highly charged and high intensity ion sources. Review of Scientific Instruments, 2016, 87, 02A740.	1.3	2
9	Large area fabrication of self-standing nanoporous graphene-on-PMMA substrate. Materials Letters, 2016, 184, 47-51.	2.6	12
10	Novel back-reflector architecture with nanoparticle based buried light-scattering microstructures for improved solar cell performance. Nanoscale, 2016, 8, 12035-12046.	5.6	10
11	Graphene-lipids interaction: Towards the fabrication of a novel sensor for biomedical uses. , 2015, , .		1
12	Enhanced Performance of Grapheneâ€“Epoxy Flexible Capacitors by Means of Ceramic Fillers. Macromolecular Chemistry and Physics, 2015, 216, 707-713.	2.2	8
13	Graphene as transparent conducting layer for high temperature thin film device applications. Solar Energy Materials and Solar Cells, 2015, 138, 35-40.	6.2	18
14	Directly patterned TiO2 nanostructures for efficient light harvesting in thin film solar cells. Journal Physics D: Applied Physics, 2015, 48, 365101.	2.8	9
15	Rapid fabrication and trimming of nanostructured backside reflectors for enhanced optical absorption in a-Si:H solar cells. Applied Physics A: Materials Science and Processing, 2015, 120, 417-425.	2.3	6
16	Enhancement of electrical and thermal conductivity of Su-8 photocrosslinked coatings containing graphene. Progress in Organic Coatings, 2015, 86, 143-146.	3.9	25
17	Graphene as transparent front contact for dye sensitized solar cells. Solar Energy Materials and Solar Cells, 2015, 135, 99-105.	6.2	40
18	Grapheneâ€“Epoxy Flexible Transparent Capacitor Obtained By Grapheneâ€“Polymer Transfer and UVâ€Induced Bonding. Macromolecular Rapid Communications, 2014, 35, 355-359.	3.9	13

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19	ITO-Free Organic Light-Emitting Transistors with Graphene Gate Electrode. ACS Photonics, 2014, 1, 1082-1088.	6.6	20
20	Modulation of charge transport properties of reduced graphene oxide by submonolayer physisorption of an organic dye. Organic Electronics, 2013, 14, 1787-1792.	2.6	17
21	An investigation on the formation of suprathermal electrons in aB-min ECR machine and a novel method for their damping. Plasma Sources Science and Technology, 2013, 22, 065006.	3.1	15
22	Modification of anisotropic plasma diffusion via auxiliary electrons emitted by a carbon nanotubes-based electron gun in an electron cyclotron resonance ion source. Review of Scientific Instruments, 2012, 83, 02A343.	1.3	5
23	Charge transport in grapheneâ€“polythiophene blends as studied by Kelvin Probe Force Microscopy and transistor characterization. Journal of Materials Chemistry, 2011, 21, 2924.	6.7	127
24	Honeycomb arrays of carbon nanotubes in alumina templates for field emission based devices and electron sources. Physica E: Low-Dimensional Systems and Nanostructures, 2010, 42, 1469-1476.	2.7	10
25	Carbon-Cap for Ohmic Contacts on Ion-Implanted 4Hâ€“SiC. Electrochemical and Solid-State Letters, 2010, 13, H432.	2.2	48
26	Field emission properties of carbon nanotube arrays grown in porous anodic alumina. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 2164-2169.	0.8	4
27	High density electron emission source based on carbon nanotubes for industrial applications. Diamond and Related Materials, 2009, 18, 963-966.	3.9	4
28	Hydrocarbon molecules deposited onto monolayer steps onto Si(1â€‰0â€‰0): a study of adsorption and conductance. Modelling and Simulation in Materials Science and Engineering, 2007, 15, 523-533.	2.0	3
29	The structural, electronic and transport properties of monatomic chains deposited onto silicon surfaces: A study at semi-empirical level. Solid State Communications, 2007, 144, 158-162.	1.9	0
30	Growth of carbon nanotubes by Fe-catalyzed chemical vapor processes on silicon-based substrates. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 11-15.	2.7	10
31	The conductance of monoatomic As and Ag chains deposited onto silicon steps evaluated using a simplified scattering approach. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 292-297.	2.7	1
32	Effects of Ni catalystâ€“substrate interaction on carbon nanotubes growth by CVD. Physica E: Low-Dimensional Systems and Nanostructures, 2007, 37, 21-25.	2.7	17
33	Hydrocarbon Molecules Deposited onto Silicon Surfaces: A DFT Study of Adsorption and Conductance. Journal of Cluster Science, 2007, 18, 869-881.	3.3	0
34	Hydrocarbon molecules deposited onto monolayer steps on Si(100): A study of adsorption and conductance. Applied Surface Science, 2007, 253, 4537-4541.	6.1	1
35	Simulation with GEANT4 of a Novel Position Detector Based on Nanotechnologies. , 2006, , .		0
36	A novel position detector based on nanotechnologies: the NanoChanT project. Nuclear Physics, Section B, Proceedings Supplements, 2006, 150, 140-143.	0.4	3

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37	The conductance of monoatomic As and Ag chains deposited onto silicon steps evaluated using a simplified scattering approach. Modelling and Simulation in Materials Science and Engineering, 2006, 14, 923-931.	2.0	3
38	INFLUENCE OF THE SUBSTRATE TYPES AND TREATMENTS ON CARBON NANOTUBE GROWTH BY CHEMICAL VAPOR DEPOSITION WITH NICKEL CATALYST. , 2006, , 61-62.		0
39	An optimized texturing process for silicon solar cell substrates using TMAH. Solar Energy Materials and Solar Cells, 2005, 87, 725-732.	6.2	84
40	Wide band-gap silicon-carbon alloys deposited by very high frequency plasma enhanced chemical vapor deposition. Journal of Applied Physics, 2004, 96, 3987-3997.	2.5	36
41	Laser induced crystallization of hydrogenated amorphous silicon-carbon alloys. Journal of Applied Physics, 2004, 96, 3998-4005.	2.5	6
42	Silicon heterojunction solar cells with p nanocrystalline thin emitter on monocrystalline substrate. Thin Solid Films, 2004, 451-452, 350-354.	1.8	15
43	Silicon Heterojunction Solar Cell: A New Buffer Layer Concept With Low-Temperature Epitaxial Silicon. IEEE Transactions on Electron Devices, 2004, 51, 1818-1824.	3.0	25
44	Silicon heterojunction solar cells with microcrystalline emitter. Journal of Non-Crystalline Solids, 2004, 338-340, 706-709.	3.1	5
45	Microcrystalline silicon pâ€“iâ€“n photodetectors for telecommunications and photovoltaic applications. Journal of Non-Crystalline Solids, 2004, 338-340, 784-787.	3.1	1
46	Optimization of ITO layers for applications in a-Si/c-Si heterojunction solar cells. Thin Solid Films, 2003, 425, 185-192.	1.8	85
47	Application of nanotechnologies in high energy physics. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 164-168.	0.4	8
48	a-Si:H based two-dimensional photonic crystals. Physica E: Low-Dimensional Systems and Nanostructures, 2003, 16, 539-543.	2.7	4
49	Parametrization of optical properties of indiumâ€“tinâ€“oxide thin films by spectroscopic ellipsometry: Substrate interfacial reactivity. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2002, 20, 37-42.	2.1	65
50	Open circuit voltage in homojunction and heterojunction silicon solar cells grown by VHF-PECVD. Journal of Non-Crystalline Solids, 2002, 299-302, 1203-1207.	3.1	18
51	Homojunction and heterojunction silicon solar cells deposited by low temperatureâ€“high frequency plasma enhanced chemical vapour deposition. Thin Solid Films, 2002, 405, 248-255.	1.8	25
52	Amorphous carbon deposited by pulsed laser ablation as material for cold cathode flat emitters. Applied Surface Science, 2002, 186, 423-428.	6.1	4
53	Ultrathin Î¼c-Si films deposited by PECVD. Thin Solid Films, 2001, 383, 7-10.	1.8	13
54	Plasma-enhanced chemical vapour deposition of microcrystalline silicon: on the dynamics of the amorphous-microcrystalline interface by optical methods. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 459-473.	0.6	0

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55	Anatomy of Î¼c-Si thin films by plasma enhanced chemical vapor deposition: An investigation by spectroscopic ellipsometry. Journal of Applied Physics, 2000, 88, 2408-2414.	2.5	40
56	Very high frequency hydrogen plasma treatment of growing surfaces: a study of the p-type amorphous to microcrystalline silicon transition. Journal of Non-Crystalline Solids, 2000, 266-269, 624-629.	3.1	18
57	a-SiN:H multilayer versus bulk structure: a real improvement of radiative efficiency?. Journal of Non-Crystalline Solids, 2000, 266-269, 1062-1066.	3.1	7
58	Plasma-enhanced chemical vapour deposition of microcrystalline silicon: On the dynamics of the amorphous-microcrystalline interface by optical methods. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 459-473.	0.6	13
59	Photocarrier collection in a-SiC:H/c-Si heterojunction solar cells. Journal of Non-Crystalline Solids, 1998, 227-230, 1291-1294.	3.1	26
60	Photoluminescence and electroluminescence properties of a-Si1âˆ'xNx:H based superlattice structures. Journal of Non-Crystalline Solids, 1998, 227-230, 1127-1131.	3.1	5
61	Amorphous Silicon Carbide/Crystalline Silicon Heterojunction Solar Cells: A Comprehensive Study of the Photocarrier Collection. Japanese Journal of Applied Physics, 1998, 37, 3926-3932.	1.5	59
62	Optical, structural and electrical properties of device-quality hydrogenated amorphous silicon-nitrogen films deposited by plasma-enhanced chemical vapour deposition. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 77, 925-944.	0.6	75
63	Effect of Hydrogen Plasma Treatments at very High Frequency on p-Type Amorphous and Microcrystalline Silicon Films. Materials Research Society Symposia Proceedings, 1998, 536, 517.	0.1	5
64	Photoluminescence and Optical Characterization of a-SixN1-x:H based Multilayers Grown by PECVD. Materials Research Society Symposia Proceedings, 1997, 467, 489.	0.1	1
65	Influence of Front Contact Material on Silicon Heterojunction Solar Cell Performance. Materials Research Society Symposia Proceedings, 1997, 467, 807.	0.1	5
66	Optoelectronic properties, structure and composition of a-SiC:H films grown in undiluted and H2 diluted silane-methane plasma. Journal of Applied Physics, 1997, 81, 7973-7980.	2.5	53
67	Compositional, optoelectronic and structural properties of amorphous silicon-nitrogen alloys deposited by plasma enhanced chemical vapor deposition. Journal of Non-Crystalline Solids, 1996, 198-200, 596-600.	3.1	7
68	Study of a-Si:H / c-Si Heterojunctions for PV Applications. Materials Research Society Symposia Proceedings, 1996, 420, 45.	0.1	5
69	Optimization of relevant deposition parameters for high quality a-SiC:H films. Solar Energy Materials and Solar Cells, 1995, 37, 315-321.	6.2	8
70	Boron and phosphorus doping of a-SiC:H thin films by means of ion implantation. Thin Solid Films, 1995, 265, 113-118.	1.8	5
71	Powder Dissipation in PECVD for SiH₄-CH₄-H₂ Gas Mixtures. European Physical Journal Special Topics, 1995, 05, C5-1125-C5-1132.	0.2	0
72	Defect Distribution and Bonding Structure in High Band Gap a-Si_{1â"x}C_x:H Films Deposited in H₂ Dilution. Materials Research Society Symposia Proceedings, 1994, 336, 517.	0.1	6

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73	Boron and Phosphorus Ion Implantation In a-SixC1â˜'x:H Thin Films. Materials Research Society Symposia Proceedings, 1994, 336, 571.	0.1	0
74	The influence of hydrogen dilution on the optoelectronic and structural properties of hydrogenated amorphous silicon carbide films. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1994, 69, 377-386.	0.6	35
75	Photoluminescence and photothermal deflection spectroscopy in potassium doped a-Si:H. Journal of Non-Crystalline Solids, 1993, 164-166, 635-638.	3.1	0
76	Spectral behavior of solar cells based on the â€˜â€˜junction near local defect layerâ€™â€™ design. Applied Physics Letters, 1993, 63, 785-787.	3.3	20
77	Doping of amorphous silicon by potassium ion implantation. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1993, 67, 131-142.	0.6	4
78	Optimization of Optoelectronic Properties of a-SiC:H Films. Materials Research Society Symposia Proceedings, 1993, 297, 681.	0.1	1
79	Potassium Ion Implantation Doping of the n-Layer for p-i-n Amorphous Silicon Solar Cells. , 1991, , 1072-1074.		1
80	Anomalous distribution of As during implantation in silicon under selfâ€annealing conditions. Journal of Applied Physics, 1989, 66, 2940-2946.	2.5	7
81	Electrical and structural characterization of BF2+ self-annealed implantation. Nuclear Instruments & Methods in Physics Research B, 1987, 19-20, 466-469.	1.4	9
82	The nature of electrically inactive antimony in silicon. Journal of Applied Physics, 1986, 59, 1908-1917.	2.5	79
83	Decomposition kinetics of supersaturated solid solutions in ion implanted silicon. Nuclear Instruments & Methods in Physics Research, 1983, 209-210, 645-650.	0.9	3
84	Carbon Nanotubes Grown by Catalytic CVD on Silicon Based Substrates for Electronics Applications. Materials Science Forum, 0, 539-543, 669-674.	0.3	0
85	Carbon-Cap for Ohmic Contacts on n-Type Ion Implanted 4H-SiC. Materials Science Forum, 0, 679-680, 504-507.	0.3	0