

# Isodiana Crupi

## List of Publications by Year in descending order

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91  
papers

1,835  
citations

218592

26  
h-index

302012

39  
g-index

95  
all docs

95  
docs citations

95  
times ranked

2109  
citing authors

#	ARTICLE	IF	CITATIONS
1	Optimization of ZnO:Al/Ag/ZnO:Al structures for ultra-thin high-performance transparent conductive electrodes. <i>Thin Solid Films</i> , 2012, 520, 4432-4435.	0.8	104
2	Light absorption in silicon quantum dots embedded in silica. <i>Journal of Applied Physics</i> , 2009, 106, .	1.1	90
3	Self-assembled silver nanoparticles for plasmon-enhanced solar cell back reflectors: correlation between structural and optical properties. <i>Nanotechnology</i> , 2013, 24, 265601.	1.3	77
4	Colloidal plasmonic back reflectors for light trapping in solar cells. <i>Nanoscale</i> , 2014, 6, 4796-4805.	2.8	74
5	Electroluminescence and transport properties in amorphous silicon nanostructures. <i>Nanotechnology</i> , 2006, 17, 1428-1436.	1.3	68
6	Broadband photocurrent enhancement in a-Si:H solar cells with plasmonic back reflectors. <i>Optics Express</i> , 2014, 22, A1059.	1.7	60
7	Plasmonic nanostructures for light trapping in thin-film solar cells. <i>Materials Science in Semiconductor Processing</i> , 2019, 92, 10-18.	1.9	59
8	High-efficiency silicon-compatible photodetectors based on Ge quantum dots. <i>Applied Physics Letters</i> , 2011, 98, .	1.5	58
9	How far will silicon nanocrystals push the scaling limits of NVMs technologies?. , 0, , .		52
10	Broadband light trapping in thin film solar cells with self-organized plasmonic nano-colloids. <i>Nanotechnology</i> , 2015, 26, 135202.	1.3	51
11	TCO/Ag/TCO transparent electrodes for solar cells application. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 116, 1287-1291.	1.1	50
12	Experimental quantification of useful and parasitic absorption of light in plasmon-enhanced thin silicon films for solar cells application. <i>Scientific Reports</i> , 2016, 6, 22481.	1.6	50
13	Robustness and electrical reliability of AZO/Ag/AZO thin film after bending stress. <i>Solar Energy Materials and Solar Cells</i> , 2017, 165, 88-93.	3.0	44
14	Formation and Evolution of Nanoscale Metal Structures on ITO Surface by Nanosecond Laser Irradiations of Thin Au and Ag Films. <i>Science of Advanced Materials</i> , 2012, 4, 708-718.	0.1	44
15	Photoluminescence transient study of surface defects in ZnO nanorods grown by chemical bath deposition. <i>Applied Physics Letters</i> , 2015, 106, .	1.5	42
16	Plasmonic and diffractive nanostructures for light trapping—an experimental comparison. <i>Optica</i> , 2015, 2, 194.	4.8	40
17	Transient photoresponse and incident power dependence of high-efficiency germanium quantum dot photodetectors. <i>Journal of Applied Physics</i> , 2012, 112, .	1.1	39
18	Structural, Electronic, and Electrical Properties of an Undoped n-Type CdO Thin Film with High Electron Concentration. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15019-15026.	1.5	38

#	ARTICLE	IF	CITATIONS
19	Silicon-Based Light-Emitting Devices: Properties and Applications of Crystalline, Amorphous and Er-Doped Nanoclusters. IEEE Journal of Selected Topics in Quantum Electronics, 2006, 12, 1596-1606.	1.9	37
20	Photonic-crystal silicon-nanocluster light-emitting device. Applied Physics Letters, 2006, 88, 033501.	1.5	37
21	Pd/Au/SiC Nanostructured Diodes for Nanoelectronics: Room Temperature Electrical Properties. IEEE Nanotechnology Magazine, 2010, 9, 414-421.	1.1	36
22	Formation and evolution of self-organized Au nanorings on indium-tin-oxide surface. Applied Physics Letters, 2011, 98, 023101.	1.5	36
23	Nanocrystal metal-oxide-semiconductor memories obtained by chemical vapor deposition of Si nanocrystals. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 2075.	1.6	34
24	Size dependent light absorption modulation and enhanced carrier transport in germanium quantum dots devices. Solar Energy Materials and Solar Cells, 2015, 135, 22-28.	3.0	32
25	Nanocrystal memories for FLASH device applications. Solid-State Electronics, 2004, 48, 1483-1488.	0.8	31
26	Carrier-induced quenching processes on the erbium luminescence in silicon nanocluster devices. Physical Review B, 2006, 73, .	1.1	30
27	Room-temperature efficient light detection by amorphous Ge quantum wells. Nanoscale Research Letters, 2013, 8, 128.	3.1	28
28	Light harvesting with Ge quantum dots embedded in SiO <sub>2</sub> or Si <sub>3</sub> N <sub>4</sub> . Journal of Applied Physics, 2014, 115, .	1.1	27
29	Low-cost high-haze films based on ZnO nanorods for light scattering in thin c-Si solar cells. Applied Physics Letters, 2015, 106, .	1.5	21
30	Electrical and structural characterization of metal-oxide-semiconductor capacitors with silicon rich oxide. Journal of Applied Physics, 2001, 89, 5552-5558.	1.1	20
31	Energy and Spatial Distribution of Traps in $\text{SiO}_2/\text{Al}_2\text{O}_3/\text{Si}$ nMOSFETs. IEEE Transactions on Device and Materials Reliability, 2006, 6, 509-516.	1.5	20
32	Boron doping of silicon rich carbides: Electrical properties. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 551-558.	1.7	18
33	Nanostructured CdO thin films for water treatments. Materials Science in Semiconductor Processing, 2016, 42, 85-88.	1.9	18
34	Residual Crystalline Silicon Phase in Silicon-Rich-Oxide Films Subjected to High Temperature Annealing. Journal of the Electrochemical Society, 2002, 149, G376.	1.3	17
35	Sub-gap defect density characterization of molybdenum oxide: An annealing study for solar cell applications. Nano Research, 2020, 13, 3416-3424.	5.8	17
36	Reduction of thermal damage in ultrathin gate oxides after intrinsic dielectric breakdown. Applied Physics Letters, 2001, 79, 1522-1524.	1.5	15

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37	Peculiar aspects of nanocrystal memory cells: data and extrapolations. IEEE Nanotechnology Magazine, 2003, 2, 319-323.	1.1	15
38	Effect of ion irradiation on the stability of amorphous Ge <sub>2</sub> Sb <sub>2</sub> Te <sub>5</sub> thin films. Nuclear Instruments & Methods in Physics Research B, 2008, 266, 2511-2514.	0.6	15
39	Rayleigh instability driven dewetting of thin Au and Ag films on indium tin oxide surface under nanosecond laser irradiations. Micro and Nano Letters, 2013, 8, 127-130.	0.6	15
40	Radiation Tolerance of NROM Embedded Products. IEEE Transactions on Nuclear Science, 2010, 57, 2309-2317.	1.2	14
41	Improved Cu <sub>2</sub> O/AZO Heterojunction by Inserting a Thin ZnO Interlayer Grown by Pulsed Laser Deposition. Journal of Electronic Materials, 2019, 48, 4381-4388.	1.0	14
42	Ion irradiation of AZO thin films for flexible electronics. Nuclear Instruments & Methods in Physics Research B, 2017, 392, 14-20.	0.6	13
43	Characterization of soft breakdown in thin oxide NMOSFETs based on the analysis of the substrate current. IEEE Transactions on Electron Devices, 2001, 48, 1109-1113.	1.6	12
44	Multi-bit storage through Si nanocrystals embedded in SiO <sub>2</sub> . Microelectronic Engineering, 2004, 72, 411-414.	1.1	12
45	Progress in Violet Light-Emitting Diodes Based on ZnO/GaN Heterojunction. Electronics (Switzerland), 2020, 9, 991.	1.8	12
46	Role of Ge nanoclusters in the performance of photodetectors compatible with Si technology. Thin Solid Films, 2013, 548, 551-555.	0.8	11
47	Laser irradiation of ZnO:Al/Ag/ZnO:Al multilayers for electrical isolation in thin film photovoltaics. Nanoscale Research Letters, 2013, 8, 392.	3.1	11
48	Sputtered cuprous oxide thin films and nitrogen doping by ion implantation. Thin Solid Films, 2016, 600, 71-75.	0.8	11
49	Memory effects in MOS devices based on Si quantum dots. Materials Science and Engineering C, 2003, 23, 33-36.	3.8	10
50	Role of the strain in the epitaxial regrowth rate of heavily doped amorphous Si films. Applied Physics Letters, 2008, 93, .	1.5	9
51	Light absorption and electrical transport in Si:O alloys for photovoltaics. Journal of Applied Physics, 2010, 108, .	1.1	9
52	Nanostructuring thin Au films on transparent conductive oxide substrates. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 533-541.	1.7	9
53	Colloidal Self-assembled Nanosphere Arrays for Plasmon-enhanced Light Trapping in Thin Film Silicon Solar Cells. Energy Procedia, 2014, 44, 184-191.	1.8	9
54	Reliability and Retention Study of Nanocrystal Cell Array. , 2002, , .		8

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55	Effects of partial self-ordering of Si dots formed by chemical vapor deposition on the threshold voltage window distribution of Si nanocrystal memories. <i>Journal of Applied Physics</i> , 2006, 100, 086104.	1.1	8
56	Hot carrier effects in n-MOSFETs with SiO <sub>2</sub> /HfO <sub>2</sub> /HfSiO gate stack and TaN metal gate. <i>Microelectronic Engineering</i> , 2009, 86, 1-3.	1.1	8
57	Polymer/metal hybrid multilayers modified Schottky devices. <i>Applied Physics Letters</i> , 2013, 103, 193117.	1.5	8
58	Localized charge storage in nanocrystal memories: feasibility of a multi-bit cell. , 0, , .		7
59	Anomalous and normal Hall effect in hydrogenated amorphous Si prepared by plasma enhanced chemical vapor deposition. <i>Journal of Applied Physics</i> , 2010, 107, 043503.	1.1	7
60	Light absorption and conversion in solar cell based on Si:O alloy. <i>Journal of Applied Physics</i> , 2013, 114, 053507.	1.1	7
61	Current Spreading Length and Injection Efficiency in ZnO/GaN-Based Light-Emitting Diodes. <i>IEEE Transactions on Electron Devices</i> , 2019, 66, 4811-4816.	1.6	6
62	Distribution and generation of traps in SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> gate stacks. <i>Microelectronics Reliability</i> , 2007, 47, 525-527.	0.9	5
63	Influence of the electro-optical properties of an $\hat{\pm}$ -Si:H single layer on the performances of a pin solar cell. <i>Thin Solid Films</i> , 2012, 520, 4036-4040.	0.8	5
64	Light trapping by plasmonic nanoparticles. , 2020, , 277-313.		5
65	Custom measurement system for memristor characterisation. <i>Solid-State Electronics</i> , 2021, 186, 108049.	0.8	5
66	Location of holes in silicon-rich oxide as memory states. <i>Applied Physics Letters</i> , 2002, 81, 3591-3593.	1.5	3
67	Growth kinetics of colloidal Ge nanocrystals for light harvesters. <i>RSC Advances</i> , 2016, 6, 38454-38462.	1.7	3
68	Sb-implanted ZnO ultra-thin films. <i>Materials Science in Semiconductor Processing</i> , 2017, 69, 32-35.	1.9	3
69	Characterization of the defect density states in MoO <sub>x</sub> for c-Si solar cell applications. <i>Solid-State Electronics</i> , 2021, 185, 108135.	0.8	3
70	Origin of the substrate current after soft-breakdown in thin oxide n-MOSFETs. , 1999, , .		2
71	Memory effects in MOS capacitors with silicon quantum dots. <i>Materials Science and Engineering C</i> , 2001, 15, 283-285.	3.8	2
72	Effect of high-k materials in the control dielectric stack of nanocrystal memories. , 0, , .		2

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73	Room-Temperature Electrical Characteristics of Pd <sup>+</sup> -SiC Diodes with Embedded Au Nanoparticles at the Interface. , 2010, , .		2
74	Enhanced light scattering in Si nanostructures produced by pulsed laser irradiation. Applied Physics Letters, 2013, 103, 221902.	1.5	2
75	Schottky barrier height tuning by Hybrid organic-inorganic multilayers. Materials Research Society Symposia Proceedings, 2014, 1660, 19.	0.1	2
76	Effect of the Si doping on the properties of AZO/SiC/Si heterojunctions grown by low temperature pulsed laser deposition. Semiconductor Science and Technology, 2021, 36, 015001.	1.0	2
77	Analysis of Transition Metal Oxides based Heterojunction Solar Cells with S-shaped J-V curves. , 2020, , .		2
78	Nanocrystal MOS Memories Obtained by LPCVD Deposition of Si Nanograins. Solid State Phenomena, 2002, 82-84, 663-668.	0.3	1
79	Programming options for nanocrystal MOS memories. Materials Science and Engineering C, 2003, 23, 687-689.	3.8	1
80	Improvement of the P/E window in nanocrystal memories by the use of high-k materials in the control dielectric. Microelectronics Reliability, 2005, 45, 895-898.	0.9	1
81	Compact instrumentation for radiation tolerance test of flash memories in space environment. , 2010, , .		1
82	Fast, high-efficiency Germanium quantum dot photodetectors. , 2012, , .		1
83	Chemical Bath Deposition as a Simple Way to Grow Isolated and Coalesced ZnO Nanorods for Light-Emitting Diodes Fabrication. , 2018, , .		1
84	Density of states characterization of TiO <sub>2</sub> films deposited by pulsed laser deposition for heterojunction solar cells. Nano Research, 2022, 15, 4048-4057.	5.8	1
85	Empowering Photovoltaics with Smart Light Management Technologies. , 2022, , 1165-1248.		1
86	Memory effects in MOS capacitors with silicon rich oxide insulators. Materials Research Society Symposia Proceedings, 2000, 609, 2911.	0.1	0
87	Effects of Nitridation by N <sub>2</sub> O or No on the Electrical Properties of Thin Gate or Tunnel Oxides. Materials Research Society Symposia Proceedings, 2000, 611, 1.	0.1	0
88	Nanocrystal MOS with Silicon-Rich Oxide. Solid State Phenomena, 2002, 82-84, 675-680.	0.3	0
89	Memory Effects in Single-Electron Nanostructures. Solid State Phenomena, 2002, 82-84, 669-674.	0.3	0
90	Profiling of traps in SiO <sub>2</sub> /Al <sub>2</sub> O <sub>3</sub> gate stack by the charge pumping technique. Materials Science in Semiconductor Processing, 2006, 9, 889-891.	1.9	0

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91	Photocurrent enhancement in thin a-Si:H solar cells via plasmonic light trapping. , 2014, , .		0