Carmen M Ruiz Herrero

List of Publications by Year
in descending order

65 papers	830 citations	567281 15 h-index	552781 26 g-index
65 all docs	65 docs citations	65 times ranked	1208 citing authors

#	Article	IF	Citations
1	Exploring Charge Transport in Highâ€Temperature Polymorphism of ITIC Derivatives in Simple Processed Unipolar Bottom Contact Organic Fieldâ€Effect Transistor. Advanced Electronic Materials, 2022, 8, .	5.1	7
2	Remarkable 8.3% efficiency and extended electron lifetime towards highly stable semi-transparent iodine-free DSSCs by mitigating the in-situ triiodide generation. Chemical Engineering Journal, 2022, 446, 136777.	12.7	17
3	Organicâ€“inorganic doped nickel oxide nanocrystals for hole transport layers in inverted polymer solar cells with color tuning. Materials Chemistry Frontiers, 2021, 5, 418-429.	5.9	10
4	Growth of GaP Layers on Si Substrates in a Standard MOVPE Reactor for Multijunction Solar Cells. Coatings, 2021, 11, 398.	2.6	5
5	Highâ€Efficiency Digital Inkjetâ€Printed Nonâ€Fullerene Polymer Blends Using Nonâ€Halogenated Solvents. Advanced Energy and Sustainability Research, 2021, 2, 2000086.	5.8	16
6	Plasticized I2-free polysiloxane ionic conductors as electrolytes for stable and flexible solid-state dye-sensitized solar cells. Applied Surface Science Advances, 2021, 5, 100120.	6.8	6
7	GaAsP/SiGe tandem solar cells on porous Si substrates. Solar Energy, 2021, 230, 925-934.	6.1	8
8	Photovoltaic Solar Cells for Outdoor LiFi Communications. Journal of Lightwave Technology, 2020, , 1-1.	4.6	15
9	Raman microscopy and infrared optical properties of SiGe Mie resonators formed on SiO2 via Ge condensation and solid state dewetting. Nanotechnology, 2020, 31, 195602.	2.6	11
10	Formation of cyanide compounds during preparation of gold surfaces evidenced by surfaceâ€enhanced <scp>R</scp>aman spectroscopy. Journal of Raman Spectroscopy, 2018, 49, 1184-1189.	2.5	3
11	Effect of shell thickness of gold-silica core-shell nanospheres embedded in an organic buffer matrix for plasmonic solar cells. Journal of Applied Physics, 2018, 123, 063102.	2.5	10
12	Innovative approaches in thin-film photovoltaic cells. , 2018, , 595-632.		0
13	Self-assembled antireflection coatings for light trapping based on SiGe random metasurfaces. Physical Review Materials, 2018, 2, .	2.4	13
14	Specific tools for studying the optical response of heterogeneous thin film layers. Journal of Nanophotonics, 2017, 11, 016009.	1.0	2
15	Toward a nanoimprinted nanoantenna to perform optical rectification through molecular diodes. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	1
16	LBIC analysis of perovskite based solar cells stability. , 2017, , .		0
17	Optical modeling and optimizations of Cu_2ZnSnSe_4 solar cells using the modified transfer matrix method. Optics Express, 2016, 24, A1201.	3.4	20
18	Characterization and modeling tools for light management in heterogeneous thin film layers. , 2016, , .		0

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19	Modeling the Back Contact of Cu₂ZnSnSe₄Solar Cells. IEEE Journal of Photovoltaics, 2016, 6, 1292-1297.	2.5	45
20	Optical methodology for process monitoring of chalcopyrite photovoltaic technologies: Application to low cost Cu(In,Ga)(S,Se)2 electrodeposition based processes. Solar Energy Materials and Solar Cells, 2016, 158, 168-183.	6.2	51
21	Optical and electrical properties of In-doped Cu2ZnSnSe4. Solar Energy Materials and Solar Cells, 2016, 151, 44-51.	6.2	19
22	High efficiency Cu2ZnSnSe4:In doped based solar cells. , 2015, , .		1
23	Using combined photoreflectance and photoluminescence for understanding optical transitions in perovskites. , 2015, , .		2
24	1D and 2D numerical simulations of Cu2ZnSnSe4 solar cells. , 2015, , .		3
25	Impact of the structure of Mo(S,Se)₂ interfacial region in electrodeposited CuIn(S,Se)₂ solar cells. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 61-66.	1.8	8
26	Advanced characterization of electrodeposition-based high efficiency solar cells: Non-destructive Raman scattering quantitative assessment of the anion chemical composition in Cu(In,Ga)(S,Se)2 absorbers. Solar Energy Materials and Solar Cells, 2015, 143, 212-217.	6.2	26
27	Impact of Cuâ€“Au type domains in high current density CuInS 2 solar cells. Solar Energy Materials and Solar Cells, 2015, 139, 101-107.	6.2	15
28	Study of Optical Properties and Molecular Aggregation of Conjugated Low Band Gap Copolymers: PTB7 and PTB7-Th. Journal of Physical Chemistry C, 2015, 119, 24643-24648.	3.1	87
29	Cu₂ ZnSnSe₄ thin film solar cells above 5% conversion efficiency from electrodeposited Cu Sn Zn precursors. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 2082-2085.	1.8	7
30	Impact of electronic defects on the Raman spectra from electrodeposited Cu(In,Ga)Se2 solar cells: Application for non-destructive defect assessment. Applied Physics Letters, 2013, 102, .	3.3	30
31	Understanding CIGS device performances through photoreflectance spectroscopy. , 2012, , .		1
32	Developing Raman scattering as quality control technique: Correlation with presence of electronic defects in CIGS-based devices. , 2012, , .		1
33	Phase evolution during CuInSe2 electrodeposition on polycrystalline Mo. Thin Solid Films, 2010, 518, 3674-3679.	1.8	13
34	Capacitance measurements for subcell characterization in multijunction solar cells. , 2010, , .		3
35	Electrochemical synthesis of CuIn(S,Se)2 alloys with graded composition for high efficiency solar cells. Applied Physics Letters, 2009, 94, 061915.	3.3	20
36	Application of capacitance-based techniques to the characterization of multijunction solar cells. , 2009, , .		2

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37	Raman scattering and structural analysis of electrodeposited CuInSe₂ and Sâ€rich quaternary CuIn(S,Se)₂ semiconductors for solar cells. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1001-1004.	1.8	51
38	Key role of Cuâ€“Se binary phases in electrodeposited CuInSe2 precursors on final distribution of Cuâ€“S phases in CuIn(S,Se)2 absorbers. Thin Solid Films, 2009, 517, 2268-2271.	1.8	29
39	Evaluation of diffusion-recombination parameters in electrodeposited CuIn(S, Se)2 solar cells by means of electron beam induced current experiments and modelling. Superlattices and Microstructures, 2009, 45, 161-167.	3.1	6
40	Analysis of electronic transport properties of thin film CuIn(S,Se)2 solar cells based on electrodeposition. Thin Solid Films, 2008, 516, 6999-7003.	1.8	7
41	On the doping problem of CdTe films: The bismuth case. Thin Solid Films, 2008, 516, 7013-7015.	1.8	5
42	Growth and characterization of CdTe:Ge:Yb. Journal of Crystal Growth, 2008, 310, 2076-2079.	1.5	1
43	Study of the physical properties of Bi doped CdTe thin films deposited by close space vapour transport. Thin Solid Films, 2008, 516, 3818-3823.	1.8	16
44	Investigation of the origin of deep levels in CdTe doped with Bi. Journal of Applied Physics, 2008, 103, 094901.	2.5	20
45	Effect of Yb concentration on the resistivity and lifetime of CdTe:Ge:Yb codoped crystals. Applied Physics Letters, 2007, 91, .	3.3	12
46	Hexagonal CdTe-Like Rods Prompted from Bi2Te3Droplets. Journal of Physical Chemistry C, 2007, 111, 5588-5591.	3.1	12
47	Physical properties of Bi doped CdTe thin films grown by CSVT and their influence on the CdS/CdTe solar cells PV-properties. Thin Solid Films, 2007, 515, 5819-5823.	1.8	17
48	A study of the optical absorption in CdTe by photoacoustic spectroscopy. Journal of Materials Science, 2007, 42, 7176-7179.	3.7	14
49	Bi doped CdTe: increasing potentialities of CdTe based solar cells. Journal of Physics Condensed Matter, 2006, 18, 7163-7169.	1.8	10
50	Photoluminescence and photoconductivity in CdTe crystals doped with Bi. Journal of Applied Physics, 2006, 100, 104901.	2.5	33
51	Influence of Sn concentration on the physical properties of CdO:Sn thin films deposited by spray pyrolysis. Physica Status Solidi (A) Applications and Materials Science, 2006, 203, 3713-3719.	1.8	6
52	Growth and properties of CdTe:Bi-doped crystals. Journal of Crystal Growth, 2006, 291, 416-423.	1.5	28
53	Physical properties of Bi doped CdTe thin films grown by the CSVT method. Solar Energy Materials and Solar Cells, 2006, 90, 2228-2234.	6.2	14
54	Passivation properties of CdS thin films grown by chemical bath deposition on GaSb: the influence of the S/Cd ratio in the solution and of the CdS layer thickness on the surface recombination velocity. Semiconductor Science and Technology, 2006, 21, 76-80.	2.0	13

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55	Simulation and characterization of CdTe:Bi crystals grown by the Markov method. Journal of Crystal Growth, 2005, 275, e471-e477.	1.5	16
56	Formation of CdTe columnar structures prompted by In- and Ga-rich nanodots. Journal of Crystal Growth, 2005, 275, e1131-e1135.	1.5	7
57	Cathodoluminescence study of ytterbium doped GaSb. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 121, 108-111.	3.5	1
58	Characterisation of erbiumâ€“erbium oxide bilayer structures deposited on GaSb substrates by electron beam evaporation. Applied Surface Science, 2005, 239, 193-200.	6.1	1
59	Transparent conducting oxides as selective filters in thermophotovoltaic devices. Journal of Physics Condensed Matter, 2005, 17, 6377-6384.	1.8	21
60	RBS analysis of AlGaSb thin films. Nuclear Instruments & Methods in Physics Research B, 2004, 219-220, 928-932.	1.4	1
61	Numerical analysis of heat transfer for the modified markov method. Crystal Research and Technology, 2004, 39, 886-891.	1.3	2
62	Addition of an insulating element to the Modified Markov Method for CdTe single crystals growth. Crystal Research and Technology, 2004, 39, 892-898.	1.3	2
63	Analysis of Er incorporation on GaSb substrates by diffusion. Crystal Research and Technology, 2004, 39, 932-935.	1.3	1
64	Formation of AlxGa1â^'xSb films over GaSb substrates by Al diffusion. EPJ Applied Physics, 2004, 27, 423-426.	0.7	3
65	Study of induced structural defects on GaSb films grown on different substrates by the liquid phase epitaxy technique. Journal of Physics Condensed Matter, 2002, 14, 12755-12759.	1.8	3