

# Carmen M Ruiz Herrero

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1694131/publications.pdf>

Version: 2024-02-01

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	Study of Optical Properties and Molecular Aggregation of Conjugated Low Band Gap Copolymers: PTB7 and PTB7-Th. <i>Journal of Physical Chemistry C</i> , 2015, 119, 24643-24648.	3.1	87
2	Raman scattering and structural analysis of electrodeposited $\text{CuInSe}_2$ and $\text{S}_x\text{Se}_{1-x}$ quaternary $\text{CuIn}(\text{S,Se})_2$ semiconductors for solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2009, 206, 1001-1004.	1.8	51
3	Optical methodology for process monitoring of chalcopyrite photovoltaic technologies: Application to low cost $\text{Cu}(\text{In,Ga})(\text{S,Se})_2$ electrodeposition based processes. <i>Solar Energy Materials and Solar Cells</i> , 2016, 158, 168-183.	6.2	51
4	Modeling the Back Contact of $\text{Cu}_2\text{ZnSnSe}_4$ Solar Cells. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 1292-1297.	2.5	45
5	Photoluminescence and photoconductivity in CdTe crystals doped with Bi. <i>Journal of Applied Physics</i> , 2006, 100, 104901.	2.5	33
6	Impact of electronic defects on the Raman spectra from electrodeposited $\text{Cu}(\text{In,Ga})\text{Se}_2$ solar cells: Application for non-destructive defect assessment. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	30
7	Key role of $\text{Cu}_2\text{Se}$ binary phases in electrodeposited $\text{CuInSe}_2$ precursors on final distribution of $\text{Cu}_2\text{S}$ phases in $\text{CuIn}(\text{S,Se})_2$ absorbers. <i>Thin Solid Films</i> , 2009, 517, 2268-2271.	1.8	29
8	Growth and properties of CdTe:Bi-doped crystals. <i>Journal of Crystal Growth</i> , 2006, 291, 416-423.	1.5	28
9	Advanced characterization of electrodeposition-based high efficiency solar cells: Non-destructive Raman scattering quantitative assessment of the anion chemical composition in $\text{Cu}(\text{In,Ga})(\text{S,Se})_2$ absorbers. <i>Solar Energy Materials and Solar Cells</i> , 2015, 143, 212-217.	6.2	26
10	Transparent conducting oxides as selective filters in thermophotovoltaic devices. <i>Journal of Physics Condensed Matter</i> , 2005, 17, 6377-6384.	1.8	21
11	Investigation of the origin of deep levels in CdTe doped with Bi. <i>Journal of Applied Physics</i> , 2008, 103, 094901.	2.5	20
12	Electrochemical synthesis of $\text{CuIn}(\text{S,Se})_2$ alloys with graded composition for high efficiency solar cells. <i>Applied Physics Letters</i> , 2009, 94, 061915.	3.3	20
13	Optical modeling and optimizations of $\text{Cu}_2\text{ZnSnSe}_4$ solar cells using the modified transfer matrix method. <i>Optics Express</i> , 2016, 24, A1201.	3.4	20
14	Optical and electrical properties of In-doped $\text{Cu}_2\text{ZnSnSe}_4$ . <i>Solar Energy Materials and Solar Cells</i> , 2016, 151, 44-51.	6.2	19
15	Physical properties of Bi doped CdTe thin films grown by CSVT and their influence on the CdS/CdTe solar cells PV-properties. <i>Thin Solid Films</i> , 2007, 515, 5819-5823.	1.8	17
16	Remarkable 8.3% efficiency and extended electron lifetime towards highly stable semi-transparent iodine-free DSSCs by mitigating the in-situ triiodide generation. <i>Chemical Engineering Journal</i> , 2022, 446, 136777.	12.7	17
17	Simulation and characterization of CdTe:Bi crystals grown by the Markov method. <i>Journal of Crystal Growth</i> , 2005, 275, e471-e477.	1.5	16
18	Study of the physical properties of Bi doped CdTe thin films deposited by close space vapour transport. <i>Thin Solid Films</i> , 2008, 516, 3818-3823.	1.8	16

#	ARTICLE	IF	CITATIONS
19	High Efficiency Digital Inkjet Printed Non Fullerene Polymer Blends Using Non Halogenated Solvents. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000086.	5.8	16
20	Impact of Cu Au type domains in high current density CuInS <sub>2</sub> solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2015, 139, 101-107.	6.2	15
21	Photovoltaic Solar Cells for Outdoor LiFi Communications. <i>Journal of Lightwave Technology</i> , 2020, , 1-1.	4.6	15
22	Physical properties of Bi doped CdTe thin films grown by the CSVT method. <i>Solar Energy Materials and Solar Cells</i> , 2006, 90, 2228-2234.	6.2	14
23	A study of the optical absorption in CdTe by photoacoustic spectroscopy. <i>Journal of Materials Science</i> , 2007, 42, 7176-7179.	3.7	14
24	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. <i>Semiconductor Science and Technology</i> , 2006, 21, 76-80.	2.0	13
25	Phase evolution during CuInSe <sub>2</sub> electrodeposition on polycrystalline Mo. <i>Thin Solid Films</i> , 2010, 518, 3674-3679.	1.8	13
26	Self-assembled antireflection coatings for light trapping based on SiGe random metasurfaces. <i>Physical Review Materials</i> , 2018, 2, .	2.4	13
27	Effect of Yb concentration on the resistivity and lifetime of CdTe:Ge:Yb codoped crystals. <i>Applied Physics Letters</i> , 2007, 91, .	3.3	12
28	Hexagonal CdTe-Like Rods Prompted from Bi <sub>2</sub> Te <sub>3</sub> Droplets. <i>Journal of Physical Chemistry C</i> , 2007, 111, 5588-5591.	3.1	12
29	Raman microscopy and infrared optical properties of SiGe Mie resonators formed on SiO <sub>2</sub> via Ge condensation and solid state dewetting. <i>Nanotechnology</i> , 2020, 31, 195602.	2.6	11
30	Bi doped CdTe: increasing potentialities of CdTe based solar cells. <i>Journal of Physics Condensed Matter</i> , 2006, 18, 7163-7169.	1.8	10
31	Effect of shell thickness of gold-silica core-shell nanospheres embedded in an organic buffer matrix for plasmonic solar cells. <i>Journal of Applied Physics</i> , 2018, 123, 063102.	2.5	10
32	Organic inorganic doped nickel oxide nanocrystals for hole transport layers in inverted polymer solar cells with color tuning. <i>Materials Chemistry Frontiers</i> , 2021, 5, 418-429.	5.9	10
33	Impact of the structure of Mo(S,Se) <sub>2</sub> interfacial region in electrodeposited CuIn(S,Se) <sub>2</sub> solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 61-66.	1.8	8
34	GaAsP/SiGe tandem solar cells on porous Si substrates. <i>Solar Energy</i> , 2021, 230, 925-934.	6.1	8
35	Formation of CdTe columnar structures prompted by In- and Ga-rich nanodots. <i>Journal of Crystal Growth</i> , 2005, 275, e1131-e1135.	1.5	7
36	Analysis of electronic transport properties of thin film CuIn(S,Se) <sub>2</sub> solar cells based on electrodeposition. <i>Thin Solid Films</i> , 2008, 516, 6999-7003.	1.8	7

#	ARTICLE	IF	CITATIONS
37	Cu <sub>2</sub> ZnSnSe <sub>4</sub> 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
38	Exploring Charge Transport in High-Temperature Polymorphism of ITIC Derivatives in Simple Processed Unipolar Bottom Contact Organic Field-Effect Transistor. Advanced Electronic Materials, 2022, 8, .	5.1	7
39	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
40	Evaluation of diffusion-recombination parameters in electrodeposited CuIn(S, Se) <sub>2</sub> solar cells by means of electron beam induced current experiments and modelling. Superlattices and Microstructures, 2009, 45, 161-167.	3.1	6
41	Plasticized I <sub>2</sub> -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
42	On the doping problem of CdTe films: The bismuth case. Thin Solid Films, 2008, 516, 7013-7015.	1.8	5
43	Growth of GaP Layers on Si Substrates in a Standard MOVPE Reactor for Multijunction Solar Cells. Coatings, 2021, 11, 398.	2.6	5
44	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
45	Capacitance measurements for subcell characterization in multijunction solar cells. , 2010, , .		3
46	1D and 2D numerical simulations of Cu <sub>2</sub> ZnSnSe <sub>4</sub> solar cells. , 2015, , .		3
47	Formation of cyanide compounds during preparation of gold surfaces evidenced by surface-enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2018, 49, 1184-1189.	2.5	3
48	Formation of Al <sub>x</sub> Ga <sub>1-x</sub> Sb films over GaSb substrates by Al diffusion. EPJ Applied Physics, 2004, 27, 423-426.	0.7	3
49	Numerical analysis of heat transfer for the modified markov method. Crystal Research and Technology, 2004, 39, 886-891.	1.3	2
50	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
51	Application of capacitance-based techniques to the characterization of multijunction solar cells. , 2009, , .		2
52	Using combined photoreflectance and photoluminescence for understanding optical transitions in perovskites. , 2015, , .		2
53	Specific tools for studying the optical response of heterogeneous thin film layers. Journal of Nanophotonics, 2017, 11, 016009.	1.0	2
54	RBS analysis of AlGaSb thin films. Nuclear Instruments & Methods in Physics Research B, 2004, 219-220, 928-932.	1.4	1

#	ARTICLE	IF	CITATIONS
55	Analysis of Er incorporation on GaSb substrates by diffusion. Crystal Research and Technology, 2004, 39, 932-935.	1.3	1
56	Cathodoluminescence study of ytterbium doped GaSb. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2005, 121, 108-111.	3.5	1
57	Characterisation of erbium-erbium oxide bilayer structures deposited on GaSb substrates by electron beam evaporation. Applied Surface Science, 2005, 239, 193-200.	6.1	1
58	Growth and characterization of CdTe:Ge:Yb. Journal of Crystal Growth, 2008, 310, 2076-2079.	1.5	1
59	Understanding CIGS device performances through photoreflectance spectroscopy. , 2012, , .		1
60	Developing Raman scattering as quality control technique: Correlation with presence of electronic defects in CIGS-based devices. , 2012, , .		1
61	High efficiency Cu <sub>2</sub> ZnSnSe <sub>4</sub> :In doped based solar cells. , 2015, , .		1
62	Toward a nanoimprinted nanoantenna to perform optical rectification through molecular diodes. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	1
63	Characterization and modeling tools for light management in heterogeneous thin film layers. , 2016, , .		0
64	LBIC analysis of perovskite based solar cells stability. , 2017, , .		0
65	Innovative approaches in thin-film photovoltaic cells. , 2018, , 595-632.		0