Mauricio E Calvo

List of Publications by Year in Descending Order

105 papers	3,926 citations	34 h-index	60 g-index
118 ext. papers	4,341 ext. citations	9.3 avg, IF	5.7 L-index

#	Paper	IF	Citations
105	Effect of Spatial Inhomogeneity on Quantum Trapping.. *Journal of Physical Chemistry Letters*, **2022**, 4513-4519	6.4	1
104	Disentangling Electron-Phonon Coupling and Thermal Expansion Effects in the Band Gap Renormalization of Perovskite Nanocrystals. *Journal of Physical Chemistry Letters*, **2021**, 12, 569-575	6.4	10
103	The Complex Interplay of Lead Halide Perovskites with Their Surroundings. *Advanced Optical Materials*, **2021**, 9, 2100133	8.1	4
102	The Role of the Atmosphere on the Photophysics of Ligand-Free Lead-Halide Perovskite Nanocrystals. *Advanced Optical Materials*, **2021**, 9, 2100605	8.1	2
101	Highly Versatile Upconverting Oxyfluoride-Based Nanophosphor Films. *ACS Applied Materials & Interfaces*, **2021**, 13, 30051-30060	9.5	1
100	Enhanced Directional Light Extraction from Patterned Rare-Earth Phosphor Films. *Advanced Optical Materials*, **2021**, 9, 2001611	8.1	7
99	Ligand-Free MAPbI3 Quantum Dot Solar Cells Based on Nanostructured Insulating Matrices. *Solar Rrl*, **2021**, 5, 2100204	7.1	6
98	Persistent luminescent nanoparticles: Challenges and opportunities for a shimmering future. *Journal of Applied Physics*, **2021**, 130, 080902	2.5	4
97	Local Rearrangement of the Iodide Defect Structure Determines the Phase Segregation Effect in Mixed-Halide Perovskites. *Journal of Physical Chemistry Letters*, **2020**, 11, 4911-4916	6.4	10
96	Monitoring, Modeling, and Optimization of Lead Halide Perovskite Nanocrystal Growth within Porous Matrices. *Journal of Physical Chemistry C*, **2020**, 124, 8041-8046	3.8	1
95	Mesoporous Matrices as Hosts for Metal Halide Perovskite Nanocrystals. *Advanced Optical Materials*, **2020**, 8, 1901868	8.1	14
94	Optical Responses of Localized and Extended Modes in a Mesoporous Layer on Plasmonic Array to Isopropanol Vapor. *Journal of Physical Chemistry C*, **2020**, 124, 5772-5779	3.8	2
93	Localized surface plasmon effects on the photophysics of perovskite thin films embedding metal nanoparticles. *Journal of Materials Chemistry C*, **2020**, 8, 916-921	7.1	17
92	Finite Size Effects on Light Propagation throughout Random Media: Relation between Optical Properties and Scattering Event Statistics. *Advanced Optical Materials*, **2020**, 8, 1901196	8.1	3
91	Internal quantum efficiency and time signals from intensity-modulated photocurrent spectra of perovskite solar cells. *Journal of Applied Physics*, **2020**, 128, 133103	2.5	8
90	Efficient third harmonic generation from FAPbBr3 perovskite nanocrystals. *Journal of Materials Chemistry C*, **2020**, 8, 15990-15995	7.1	9
89	Casimir-Lifshitz Force Based Optical Resonators. *Journal of Physical Chemistry Letters*, **2019**, 10, 5856-5860	6.4	6

88	Spatially Resolved Analysis of Defect Annihilation and Recovery Dynamics in Metal Halide Perovskite Single Crystals. *ACS Applied Energy Materials*, **2019**, 2, 6967-6972	6.1	10
87	Flexible nanophosphor films doped with Mie resonators for enhanced out-coupling of the emission. *Journal of Materials Chemistry C*, **2019**, 7, 267-274	7.1	9
86	Nanoparticle Bragg reflectors: A smart analytical tool for biosensing. *Biosensors and Bioelectronics: X*, **2019**, 1, 100012	2.9	4
85	Tamm Plasmons Directionally Enhance Rare-Earth Nanophosphor Emission. *ACS Photonics*, **2019**, 6, 634-641	6.5	10
84	Highly Efficient Transparent Nanophosphor Films for Tunable White-Light-Emitting Layered Coatings. *ACS Applied Materials & Interfaces*, **2019**, 11, 4219-4225	9.5	7
83	Mechanism of Photoluminescence Intermittency in Organic-Inorganic Perovskite Nanocrystals. *ACS Applied Materials & Interfaces*, **2019**, 11, 6344-6349	9.5	13
82	Photonic structuring improves the colour purity of rare-earth nanophosphors. *Materials Horizons*, **2018**, 5, 661-667	14.4	7
81	Absorption and Emission of Light in Optoelectronic Nanomaterials: The Role of the Local Optical Environment. *Journal of Physical Chemistry Letters*, **2018**, 9, 2077-2084	6.4	11
80	Origin of Light-Induced Photophysical Effects in Organic Metal Halide Perovskites in the Presence of Oxygen. *Journal of Physical Chemistry Letters*, **2018**, 9, 3891-3896	6.4	84
79	Flexible and Adaptable Light-Emitting Coatings for Arbitrary Metal Surfaces based on Optical Tamm Mode Coupling. *Advanced Optical Materials*, **2018**, 6, 1700560	8.1	13
78	Improving the Bulk Emission Properties of CH3NH3PbBr3 by Modifying the Halide-Related Defect Structure. *Journal of Physical Chemistry C*, **2018**, 122, 27250-27255	3.8	3
77	High voltage vacuum-deposited CH3NH3PbI3□CH3NH3PbI3 tandem solar cells. *Energy and Environmental Science*, **2018**, 11, 3292-3297	35.4	74
76	Highly Efficient and Environmentally Stable Flexible Color Converters Based on Confined CHNHPbBr Nanocrystals. *ACS Applied Materials & Interfaces*, **2018**, 10, 38334-38340	9.5	10
75	Absorption enhancement in methylammonium lead iodide perovskite solar cells with embedded arrays of dielectric particles. *Optics Express*, **2018**, 26, A865-A878	3.3	15
74	Strong Quantum Confinement and Fast Photoemission Activation in CH3NH3PbI3 Perovskite Nanocrystals Grown within Periodically Mesostructured Films. *Advanced Optical Materials*, **2017**, 5, 1601087	8.1	52
73	Photonic Tuning of the Emission Color of Nanophosphor Films Processed at High Temperature. *Advanced Optical Materials*, **2017**, 5, 1700099	8.1	12
72	Design and Realization of a Novel Optically Disordered Material: A Demonstration of a Mie Glass. *Advanced Optical Materials*, **2017**, 5, 1700025	8.1	7
71	Aperiodic Metal-Dielectric Multilayers as Highly Efficient Sunlight Reflectors. *Advanced Optical Materials*, **2017**, 5, 1600833	8.1	8

70	Electron injection and scaffold effects in perovskite solar cells. *Journal of Materials Chemistry C*, **2017**, 5, 634-644	7.1	52
69	Facile Synthesis of Hybrid Organic-Inorganic Perovskite Microcubes of Optical Quality Using Polar Antisolvents. *ACS Applied Materials & Interfaces*, **2017**, 9, 35505-35510	9.5	3
68	Fluorescent Humidity Sensors Based on Photonic Resonators. *Advanced Optical Materials*, **2017**, 5, 1700663	8.1	23
67	ABX3 Perovskites for Tandem Solar Cells. *Joule*, **2017**, 1, 769-793	27.8	125
66	Materials chemistry approaches to the control of the optical features of perovskite solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 20561-20578	13	27
65	Photophysical Analysis of the Formation of Organic-Inorganic Trihalide Perovskite Films: Identification and Characterization of Crystal Nucleation and Growth. *Journal of Physical Chemistry C*, **2016**, 120, 3071-3076	3.8	21
64	Efficient bifacial dye-sensitized solar cells through disorder by design. *Journal of Materials Chemistry A*, **2016**, 4, 1953-1961	13	28
63	Unbroken Perovskite: Interplay of Morphology, Electro-optical Properties, and Ionic Movement. *Advanced Materials*, **2016**, 28, 5031-7	24	208
62	Optical analysis of CHNHSn Pb I absorbers: a roadmap for perovskite-on-perovskite tandem solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 11214-11221	13	87
61	Three-Dimensional Optical Tomography and Correlated Elemental Analysis of Hybrid Perovskite Microstructures: An Insight into Defect-Related Lattice Distortion and Photoinduced Ion Migration. *Journal of Physical Chemistry Letters*, **2016**, 7, 5227-5234	6.4	32
60	A panchromatic modification of the light absorption spectra of metal-organic frameworks. *Chemical Communications*, **2016**, 52, 6665-8	5.8	34
59	Maximized performance of dye solar cells on plastic: a combined theoretical and experimental optimization approach. *Energy and Environmental Science*, **2016**, 9, 2061-2071	35.4	15
58	Solution processed high refractive index contrast distributed Bragg reflectors. *Journal of Materials Chemistry C*, **2016**, 4, 4532-4537	7.1	25
57	Integration of Photonic Crystals into Flexible Dye Solar Cells: A Route toward Bendable and Adaptable Optoelectronic Devices Displaying Structural Color and Enhanced Efficiency. *Advanced Optical Materials*, **2016**, 4, 464-471	8.1	25
56	Flexible Distributed Bragg Reflectors from Nanocolumnar Templates. *Advanced Optical Materials*, **2015**, 3, 171-175	8.1	13
55	Absorption Enhancement in Organic-Inorganic Halide Perovskite Films with Embedded Plasmonic Gold Nanoparticles. *Journal of Physical Chemistry C*, **2015**, 119, 18635-18640	3.8	89
54	Nanolevitation Phenomena in Real Plane-Parallel Systems Due to the Balance between Casimir and Gravity Forces. *Journal of Physical Chemistry C*, **2015**, 119, 5663-5670	3.8	12
53	Design and realization of transparent solar modules based on luminescent solar concentrators integrating nanostructured photonic crystals. *Progress in Photovoltaics: Research and Applications*, **2015**, 23, 1785-1792	6.8	9

52	Synergistic strategies for the preparation of highly efficient dye-sensitized solar cells on plastic substrates: combination of chemical and physical sintering. *RSC Advances*, **2015**, 5, 76795-76803	3.7	6
51	Full solution processed mesostructured optical resonators integrating colloidal semiconductor quantum dots. *Nanoscale*, **2015**, 7, 16583-9	7.7	8
50	Optical Description of Mesostructured Organic-Inorganic Halide Perovskite Solar Cells. *Journal of Physical Chemistry Letters*, **2015**, 6, 48-53	6.4	51
49	Skin Protection: Biocompatible Films with Tailored Spectral Response for Prevention of DNA Damage in Skin Cells (Adv. Healthcare Mater. 13/2015). *Advanced Healthcare Materials*, **2015**, 4, 2048-2048	10.1	
48	Adaptable Ultraviolet Reflecting Polymeric Multilayer Coatings of High Refractive Index Contrast. *Advanced Optical Materials*, **2015**, 3, 1633-1639	8.1	14
47	Environmental Effects on the Photophysics of Organic-Inorganic Halide Perovskites. *Journal of Physical Chemistry Letters*, **2015**, 6, 2200-5	6.4	181
46	Fine Tuning the Emission Properties of Nanoemitters in Multilayered Structures by Deterministic Control of their Local Photonic Environment. *Small*, **2015**, 11, 2727-32	11	14
45	Biocompatible films with tailored spectral response for prevention of DNA damage in skin cells. *Advanced Healthcare Materials*, **2015**, 4, 1944-8	10.1	11
44	Highly efficient perovskite solar cells with tunable structural color. *Nano Letters*, **2015**, 15, 1698-702	11.5	240
43	Nanometer-Scale Precision Tuning of 3D Photonic Crystals Made Possible Using Polyelectrolytes with Controlled Short Chain Length and Narrow Polydispersity. *Advanced Materials Interfaces*, **2014**, 1, 1300051	4.6	3
42	Fully stable numerical calculations for finite one-dimensional structures: Mapping the transfer matrix method. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2014**, 134, 9-20	2.1	14
41	Multidirectional Light-Harvesting Enhancement in Dye Solar Cells by Surface Patterning. *Advanced Optical Materials*, **2014**, 2, 879-884	8.1	12
40	Panchromatic porous specular back reflectors for efficient transparent dye solar cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 663-8	3.6	16
39	Microwave-assisted synthesis of biocompatible europium-doped calcium hydroxyapatite and fluoroapatite luminescent nanospindles functionalized with poly(acrylic acid). *Langmuir*, **2013**, 29, 1985-94	4	76
38	Angular response of photonic crystal based dye sensitized solar cells. *Energy and Environmental Science*, **2013**, 6, 1260-1266	35.4	36
37	Resonant photocurrent generation in dye-sensitized periodically nanostructured photoconductors by optical field confinement effects. *Journal of the American Chemical Society*, **2013**, 135, 7803-6	16.4	17
36	Selective UV Reflecting Mirrors Based on Nanoparticle Multilayers. *Advanced Functional Materials*, **2013**, 23, 2805-2811	15.6	65
35	Effect of nanostructured electrode architecture and semiconductor deposition strategy on the photovoltaic performance of quantum dot sensitized solar cells. *Electrochimica Acta*, **2012**, 75, 139-147	6.7	61

34	Enhanced diffusion through porous nanoparticle optical multilayers. *Journal of Materials Chemistry*, **2012**, 22, 1751-1757		22
33	Characterization of mesoporous thin films by specular reflectance porosimetry. *Langmuir*, **2012**, 28, 13777-82	4	10
32	Introducing structural colour in DSCs by using photonic crystals: interplay between conversion efficiency and optical properties. *Energy and Environmental Science*, **2012**, 5, 8238	35.4	45
31	Novel approaches to flexible visible transparent hybrid films for ultraviolet protection. *Journal of Polymer Science, Part B: Polymer Physics*, **2012**, 50, 945-956	2.6	93
30	Integration of gold nanoparticles in optical resonators. *Langmuir*, **2012**, 28, 9161-7	4	11
29	Efficient Transparent Thin Dye Solar Cells Based on Highly Porous 1D Photonic Crystals. *Advanced Functional Materials*, **2012**, 22, 1303-1310	15.6	72
28	Collective osmotic shock in ordered materials. *Nature Materials*, **2011**, 11, 53-7	27	54
27	Porous one dimensional photonic crystals: novel multifunctional materials for environmental and energy applications. *Energy and Environmental Science*, **2011**, 4, 4800	35.4	96
26	Porous Supramolecularly Templated Optical Resonators Built in 1D Photonic Crystals. *Advanced Functional Materials*, **2011**, 21, 2534-2540	15.6	30
25	Interplay of resonant cavity modes with localized surface plasmons: optical absorption properties of Bragg stacks integrating gold nanoparticles. *Advanced Materials*, **2011**, 23, 2108-12	24	31
24	Angular emission properties of a layer of rare-earth based nanophosphors embedded in one-dimensional photonic crystal coatings. *Applied Physics Letters*, **2011**, 99, 051111	3.4	3
23	Theoretical Analysis of the Performance of One-Dimensional Photonic Crystal-Based Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2010**, 114, 3681-3687	3.8	62
22	Flexible, Adhesive, and Biocompatible Bragg Mirrors Based on Polydimethylsiloxane Infiltrated Nanoparticle Multilayers. *Chemistry of Materials*, **2010**, 22, 3909-3915	9.6	42
21	TiO2/SiO2 one-dimensional photonic crystals of controlled porosity by glancing angle physical vapour deposition. *Journal of Materials Chemistry*, **2010**, 20, 6408		63
20	Porous One-Dimensional Photonic Crystal Coatings for Gas Detection. *IEEE Sensors Journal*, **2010**, 10, 1206-1212	4	18
19	Versatility and multifunctionality of highly reflecting Bragg mirrors based on nanoparticle multilayers. *Journal of Materials Chemistry*, **2010**, 20, 8240		31
18	Environmentally responsive nanoparticle-based luminescent optical resonators. *Nanoscale*, **2010**, 2, 936-41	7.7	22
17	Gallium arsenide infiltration of nanoporous multilayers: a route to high-dielectric-contrast one-dimensional photonic crystals. *Small*, **2010**, 6, 1283-7	11	6

16	Porous One-Dimensional Photonic Crystals Improve the Power-Conversion Efficiency of Dye-Sensitized Solar Cells. *Advanced Materials*, **2009**, 21, 764-770	24	227
15	Mesostructured thin films as responsive optical coatings of photonic crystals. *Small*, **2009**, 5, 2309-15	11	32
14	Experimental Demonstration of the Mechanism of Light Harvesting Enhancement in Photonic-Crystal-Based Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2009**, 113, 1150-1154	3.8	56
13	Control over the structural and optical features of nanoparticle-based one-dimensional photonic crystals. *Langmuir*, **2009**, 25, 2443-8	4	31
12	Molding with nanoparticle-based one-dimensional photonic crystals: a route to flexible and transferable Bragg mirrors of high dielectric contrast. *Journal of Materials Chemistry*, **2009**, 19, 3144		57
11	Nanoparticle Based Multilayers as Multifunctional Optical Coatings. *Materials Research Society Symposia Proceedings*, **2009**, 1188, 15		
10	Nanoparticle-based one-dimensional photonic crystals. *Langmuir*, **2008**, 24, 4430-4	4	171
9	Sorption Properties of Mesoporous Multilayer Thin Films. *Journal of Physical Chemistry C*, **2008**, 112, 3157-3163	3.8	101
8	Spectral Response of Opal-Based Dye-Sensitized Solar Cells. *Journal of Physical Chemistry C*, **2008**, 112, 13-17	3.8	131
7	Photoconducting Bragg Mirrors based on TiO2 Nanoparticle Multilayers. *Advanced Functional Materials*, **2008**, 18, 2708-2715	15.6	72
6	Mesoporous Anatase TiO2 Films: Use of Ti K XANES for the Quantification of the Nanocrystalline Character and Substrate Effects in the Photocatalysis Behavior. *Journal of Physical Chemistry C*, **2007**, 111, 10886-10893	3.8	116
5	Mesoporous Hybrid Thin Films: Building Blocks for Complex Materials with Spatial Organization. *Materials Research Society Symposia Proceedings*, **2007**, 1007, 1		1
4	Hybrid non-silica mesoporous thin films. *New Journal of Chemistry*, **2005**, 29, 59-63	3.6	42
3	Enhancement of salicylate photodegradation under bias in binary mixtures. *Catalysis Today*, **2002**, 76, 133-139	5.3	9
2	Photooxidation of organic mixtures on biased TiO2 films. *Environmental Science & Technology*, **2001**, 35, 4132-8	10.3	58
1	Optoelectronic Devices Based on Scaffold Stabilized Black-Phase CsPbI 3 Nanocrystals. *Advanced Optical Materials*,2102112	8.1	0