Markus Clark Scharber

List of Publications by Year
in descending order

111	17,068	66234	27345
papers	citations	42 h-index	106 g-index

112	112	112	15937
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design Rules for Donors in Bulk-Heterojunction Solar Cellsâ€"Towards 10â€‰% Energy-Conversion Efficiency. Advanced Materials, 2006, 18, 789-794.	11.1	4,534
2	Polymerâ€Fullerene Bulkâ€Heterojunction Solar Cells. Advanced Materials, 2009, 21, 1323-1338.	11.1	3,060
3	Efficiency of bulk-heterojunction organic solar cells. Progress in Polymer Science, 2013, 38, 1929-1940.	11.8	881
4	Ultrathin, highly flexible and stretchable PLEDs. Nature Photonics, 2013, 7, 811-816.	15.6	832
5	Flexible high power-per-weight perovskite solar cells with chromium oxideâ€"metal contacts for improved stability in air. Nature Materials, 2015, 14, 1032-1039.	13.3	807
6	Design Rules for Donors in Bulkâ€Heterojunction Tandem Solar Cellsï¿½Towards 15 % Energyâ€Conversion Efficiency. Advanced Materials, 2008, 20, 579-583.	11.1	502
7	Panchromatic Conjugated Polymers Containing Alternating Donor/Acceptor Units for Photovoltaic Applications. Macromolecules, 2007, 40, 1981-1986.	2.2	428
8	Bimolecular Crystals of Fullerenes in Conjugated Polymers and the Implications of Molecular Mixing for Solar Cells. Advanced Functional Materials, 2009, 19, 1173-1179.	7.8	392
9	Influence of the Bridging Atom on the Performance of a Lowâ€Bandgap Bulk Heterojunction Solar Cell. Advanced Materials, 2010, 22, 367-370.	11.1	323
10	Bimolecular Recombination Coefficient as a Sensitive Testing Parameter for Low-Mobility Solar-Cell Materials. Physical Review Letters, 2005, 94, 176806.	2.9	297
11	Near IR Sensitization of Organic Bulk Heterojunction Solar Cells: Towards Optimization of the Spectral Response of Organic Solar Cells. Advanced Functional Materials, 2010, 20, 338-346.	7.8	276
12	Physics of organic bulk heterojunction devices for photovoltaic applications. Journal of Applied Physics, 2006, 99, 104503.	1.1	227
13	Stabilization of the nanomorphology of polymerâ€"fullerene â€œbulk heterojunctionâ€•blends using a novel polymerizable fullerene derivative. Journal of Materials Chemistry, 2005, 15, 5158.	6.7	221
14	Exciton diffusion length in narrow bandgap polymers. Energy and Environmental Science, 2012, 5, 6960.	15.6	207
15	Charge Transfer Excitons in Bulk Heterojunctions of a Polyfluorene Copolymer and a Fullerene Derivative. Advanced Functional Materials, 2007, 17, 2111-2116.	7.8	197
16	Fabrication, Optical Modeling, and Color Characterization of Semitransparent Bulkâ€Heterojunction Organic Solar Cells in an Inverted Structure. Advanced Functional Materials, 2010, 20, 1592-1598.	7.8	182
17	Two Novel Cyclopentadithiophene-Based Alternating Copolymers as Potential Donor Components for High-Efficiency Bulk-Heterojunction-Type Solar Cells. Chemistry of Materials, 2008, 20, 4045-4050.	3.2	179
18	On the Efficiency Limit of Conjugated Polymer:Fullereneâ€Based Bulk Heterojunction Solar Cells. Advanced Materials, 2016, 28, 1994-2001.	11.1	176

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19	Nanomorphology and Charge Generation in Bulk Heterojunctions Based on Lowâ€Bandgap Dithiophene Polymers with Different Bridging Atoms. Advanced Functional Materials, 2010, 20, 1180-1188.	7.8	173
20	Bipolar Charge Transport in PCPDTBTâ€PCBM Bulkâ€Heterojunctions for Photovoltaic Applications. Advanced Functional Materials, 2008, 18, 1757-1766.	7.8	156
21	Angle dependence of external and internal quantum efficiencies in bulk-heterojunction organic solar cells. Journal of Applied Physics, 2007, 102, .	1.1	152
22	Photoinduced charge carriers in conjugated polymerâ€“fullerene composites studied with light-induced electron-spin resonance. Physical Review B, 1999, 59, 8019-8025.	1.1	150
23	Performance improvement of organic solar cells with moth eye anti-reflection coating. Thin Solid Films, 2008, 516, 7167-7170.	0.8	141
24	Optical and electronic properties of mixed halide (X = I, Cl, Br) methylammonium lead perovskite solar cells. Journal of Materials Chemistry C, 2017, 5, 1714-1723.	2.7	120
25	Low Band Gap Conjugated Semiconducting Polymers. Advanced Materials Technologies, 2021, 6, 2000857.	3.0	112
26	Charge Transport and Recombination in Lowâ€Bandgap Bulk Heterojunction Solar Cell using Bisâ€adduct Fullerene. Advanced Energy Materials, 2011, 1, 1162-1168.	10.2	108
27	Confining metal-halide perovskites in nanoporous thin films. Science Advances, 2017, 3, e1700738.	4.7	103
28	Organic Fieldâ€Effect Devices as Tool to Characterize the Bipolar Transport in Polymerâ€Fullerene Blends: The Case of P3HTâ€PCBM. Advanced Functional Materials, 2007, 17, 3274-3283.	7.8	98
29	Realization, characterization, and optical modeling of inverted bulk-heterojunction organic solar cells. Journal of Applied Physics, 2008, 103, .	1.1	90
30	Polyterthiophenes as Donors for Polymer Solar Cells. Advanced Functional Materials, 2007, 17, 1371-1376.	7.8	89
31	Novel Regiospecific MDMOâ^PPV Copolymer with Improved Charge Transport for Bulk Heterojunction Solar Cells. Journal of Physical Chemistry B, 2004, 108, 5235-5242.	1.2	86
32	4% Efficient Polymer Solar Cells on Paper Substrates. Journal of Physical Chemistry C, 2014, 118, 16813-16817.	1.5	85
33	Lowâ€Temperature Behaviour of Charge Transfer Excitons in Narrowâ€Bandgap Polymerâ€Based Bulk Heterojunctions. Advanced Energy Materials, 2011, 1, 604-609.	10.2	83
34	Solution processed perovskite solar cells using highly conductive PEDOT:PSS interfacial layer. Solar Energy Materials and Solar Cells, 2016, 157, 318-325.	3.0	69
35	Charge transfer excitons in low band gap polymer based solar cells and the role of processing additives. Energy and Environmental Science, 2011, 4, 5077.	15.6	66
36	Charge Separation in PCPDTBT:PCBM Blends from an EPR Perspective. Journal of Physical Chemistry C, 2014, 118, 28482-28493.	1.5	61

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37	The Influence of Interchain Branches on Solid State Packing, Hole Mobility and Photovoltaic Properties of Poly(3â€hexylthiophene) (P3HT). Macromolecular Rapid Communications, 2007, 28, 1781-1785.	2.0	58
38	Alternating quinoxaline/oligothiophene copolymersâ€"synthesis and unexpected absorption properties. Journal of Materials Chemistry, 2007, 17, 1353-1355.	6.7	54
39	Impedance Spectroscopy of Perovskite Solar Cells: Studying the Dynamics of Charge Carriers Before and After Continuous Operation. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000291.	0.8	54
40	Double injection as a technique to study charge carrier transport and recombination in bulk-heterojunction solar cells. Applied Physics Letters, 2005, 87, 222110.	1.5	45
41	Performance Boost of Organic Lightâ€Emitting Diodes with Plasmonic Nanostars. Advanced Optical Materials, 2016, 4, 772-781.	3.6	45
42	Designing Ultraflexible Perovskite Xâ€Ray Detectors through Interface Engineering. Advanced Science, 2020, 7, 2002586.	5.6	44
43	Determination of vertical phase separation in a polyfluorene copolymer: fullerene derivative solar cell blend by X-ray photoelectron spectroscopy. Journal of Materials Chemistry, 2009, 19, 4899.	6.7	43
44	Silicon/organic hybrid heterojunction infrared photodetector operating in the telecom regime. Organic Electronics, 2013, 14, 1344-1350.	1.4	41
45	Inverted bulk-heterojunction solar cell with cross-linked hole-blocking layer. Organic Electronics, 2014, 15, 997-1001.	1.4	41
46	Transparent conductive ZnO layers on polymer substrates: Thin film deposition and application in organic solar cells. Thin Solid Films, 2015, 591, 97-104.	0.8	38
47	The influence of perovskite precursor composition on the morphology and photovoltaic performance of mixed halide MAPbI3-xClx solar cells. Solar Energy, 2018, 163, 215-223.	2.9	36
48	Photoinduced Charge Transfer between Tetracyano-Anthraquino-Dimethane Derivatives and Conjugated Polymers for Photovoltaics. Journal of Physical Chemistry A, 2000, 104, 8315-8322.	1.1	35
49	CuI as versatile hole-selective contact for organic solar cell based on anthracene-containing PPEâ€"PPV. Solar Energy Materials and Solar Cells, 2015, 143, 369-374.	3.0	35
50	Influence of disorder on the photoinduced excitations in phenyl substituted polythiophenes. Journal of Chemical Physics, 2001, 115, 7235-7244.	1.2	34
51	Andersonâ€Localization and the Mottâ€"Ioffeâ€"Regel Limit in Glassyâ€Metallic PEDOT. Advanced Electronic Materials, 2017, 3, 1700050.	2.6	34
52	Reverse Micelle Templating Route to Ordered Monodispersed Spherical Organo-Lead Halide Perovskite Nanoparticles for Light Emission. ACS Applied Nano Materials, 2019, 2, 4121-4132.	2.4	32
53	Are Polyaniline and Polypyrrole Electrocatalysts for Oxygen (O₂) Reduction to Hydrogen Peroxide (H₂O₂)?. ACS Applied Energy Materials, 2020, 3, 10611-10618.	2.5	30
54	Reversible Photochemical Isomerization of N,Nâ€²-Di(t-butoxycarbonyl)indigos. Journal of Physical Chemistry A, 2015, 119, 3563-3568.	1.1	29

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55	Electrochemical Self-Assembly of Nanostructured CuSCN/Rhodamine B Hybrid Thin Film and Its Dye-Sensitized Photocathodic Properties. Journal of Physical Chemistry C, 2014, 118, 16581-16590.	1.5	28
56	Long-Lived Photoinduced Charges in Donorâ"Acceptor Anthraquinone-Substituted Thiophene Copolymers. Journal of Physical Chemistry B, 2006, 110, 5351-5358.	1.2	27
57	Double-injection current transients as a way of measuring transport in insulating organic films. Journal of Applied Physics, 2007, 101, 114505.	1.1	26
58	Synthesis conditions influencing formation of MAPbBr3 perovskite nanoparticles prepared by the ligand-assisted precipitation method. Scientific Reports, 2020, 10, 15720.	1.6	26
59	Systematic Investigation of Porphyrinâ€Thiophene Conjugates for Ternary Bulk Heterojunction Solar Cells. Advanced Energy Materials, 2016, 6, 1600957.	10.2	25
60	Spectroscopic properties of PEDOTEHIITN. Synthetic Metals, 2003, 137, 1435-1436.	2.1	24
61	The Role of Heteroatoms Leading to Hydrogen Bonds in View of Extended Chemical Stability of Organic Semiconductors. Advanced Functional Materials, 2015, 25, 6679-6688.	7.8	24
62	Understanding the low voltage losses in high-performance non-fullerene acceptor-based organic solar cells. Materials Advances, 2021, 2, 4291-4302.	2.6	24
63	Enhancing the c-TiO2 based perovskite solar cell performance via modification by a serial of boronic acid derivative self-assembled monolayers. Applied Surface Science, 2017, 423, 521-527.	3.1	22
64	Controlling Quantum Confinement in Luminescent Perovskite Nanoparticles for Optoelectronic Devices by the Addition of Water. ACS Applied Nano Materials, 2020, 3, 1242-1249.	2.4	21
65	Nanoscale Charge Accumulation and Its Effect on Carrier Dynamics in Tri-cation Perovskite Structures. ACS Applied Materials & Interfaces, 2020, 12, 48057-48066.	4.0	21
66	Wide-bandgap organic solar cells with a novel perylene-based non-fullerene acceptor enabling open-circuit voltages beyond 1.4 V. Journal of Materials Chemistry A, 2022, 10, 2888-2906.	5.2	21
67	Microwave-Assisted Preparation of Organo-Lead Halide Perovskite Single Crystals. Crystal Growth and Design, 2020, 20, 1388-1393.	1.4	20
68	Local order drives the metallic state in PEDOT:PSS. Journal of Materials Chemistry C, 2016, 4, 6982-6987.	2.7	19
69	Photoinduced electron transfer in solid C60 donor/acceptor complexes. Synthetic Metals, 2001, 121, 1127-1128.	2.1	17
70	Inverted (pâ€"iâ€"n) perovskite solar cells using a low temperature processed TiO_xinterlayer. RSC Advances, 2018, 8, 24836-24846.	1.7	17
71	Novel Regiospecific MDMO-PPV Polymers with Improved Charge Transport Properties for Bulk Heterojunction Solar Cells. Synthetic Metals, 2005, 153, 81-84.	2.1	16
72	Nano-morphology characterization of organic bulk heterojunctions based on mono and bis-adduct fullerenes. Organic Electronics, 2012, 13, 1315-1321.	1.4	16

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73	Factors determining large observed increases in power conversion efficiency of P3HT:PCBM solar cells embedded with Mo6S9â^'xIx nanowires. Synthetic Metals, 2016, 212, 105-112.	2.1	16
74	Hybrid Multilayered Plasmonic Nanostars for Coherent Random Lasing. Journal of Physical Chemistry C, 2016, 120, 23707-23715.	1.5	15
75	Electrocatalytic Reduction of Carbon Dioxide using Sol-gel Processed Copper Indium Sulfide (CIS) Immobilized on ITO-Coated Glass Electrode. Electrocatalysis, 2015, 6, 405-413.	1.5	14
76	Iodideâ€Capped PbS Quantum Dots: Full Optical Characterization of a Versatile Absorber. Advanced Materials, 2015, 27, 1533-1539.	11.1	14
77	Optoelectronic Properties of Layered Perovskite Solar Cells. Solar Rrl, 2019, 3, 1900126.	3.1	13
78	Conducting Polymerâ€Based Biocomposites Using Deoxyribonucleic Acid (DNA) as Counterion. Advanced Materials Technologies, 2020, 5, 1900699.	3.0	13
79	Light-induced ESR studies in conjugated polymer-fullerene composites. Synthetic Metals, 1999, 102, 1241-1242.	2.1	12
80	Tuning of the photoinduced charge transfer process in donorâ€“acceptor double-cable copolymers. Synthetic Metals, 2003, 139, 731-733.	2.1	12
81	Substrateâ€Oriented Nanorod Scaffolds in Polymerâ€“Fullerene Bulk Heterojunction Solar Cells. ChemPhysChem, 2014, 15, 1070-1075.	1.0	12
82	Acetylacetone Improves the Performance of Mixed Halide Perovskite Solar Cells. Journal of Physical Chemistry C, 2019, 123, 23807-23816.	1.5	12
83	Photoinduced Electron Transfer in Solid C60Donor/Acceptor Complexes Studied by Light-Induced Electron-Spin Resonance. Molecular Crystals and Liquid Crystals, 2005, 427, 3/[315]-21/[333].	0.4	11
84	Different Device Architectures for Bulk-Heterojunction Solar Cells. Frontiers in Materials, 2016, 3, .	1.2	10
85	Plasmon-Assisted Direction- and Polarization-Sensitive Organic Thin-Film Detector. Nanomaterials, 2020, 10, 1866.	1.9	10
86	Tunable Properties of Nature-Inspired N,Nâ€²-Alkylated Riboflavin Semiconductors. Molecules, 2021, 26, 27.	1.7	10
87	Degradation kinetics in different polymerâ€“fullerene blends investigated by electron spin resonance. Journal of Materials Research, 2018, 33, 1853-1859.	1.2	9
88	Improving the Performance of Perovskite Solar Cells using a Polyphosphazene Interfacing Layer. Physica Status Solidi (A) Applications and Materials Science, 2019, 216, 1900436.	0.8	9
89	Photoinduced Energy Transfer from Poly(Nâ€vinylcarbazole) to Tricarbonylchloroâ€(2,2â€²â€bipyridyl)rhenium(I). ChemPhysChem, 2014, 15, 3634-3638.	1.0	8
90	Anti-Stokes photoluminescence study on a methylammonium lead bromide nanoparticle film. Nanoscale, 2020, 12, 16556-16561.	2.8	8

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91	Comparison of fluorene, silafluorene and carbazole as linkers in perylene monoimide based non-fullerene acceptors. Materials Advances, 2020, 1, 2095-2106.	2.6	7
92	Anomalous photoinduced absorption of conjugated polymer/fullerene mixtures at low temperatures and high frequencies. Synthetic Metals, 2004, 141, 109-112.	2.1	6
93	Electrical properties of pSi/[6,6] phenyl-C61 butyric acid methyl ester/Al hybrid heterojunctions: Experimental and theoretical evaluation of diode operation. Journal of Applied Physics, 2012, 112, 114508.	1.1	6
94	Magnetic Field Effects on the Current of PCPDTBT-based Diode. Journal of Physical Chemistry C, 2017, 121, 11727-11732.	1.5	6
95	Ion-driven nanograin formation in early-stage degradation of tri-cation perovskite films. Nanoscale, 2022, 14, 2605-2616.	2.8	6
96	Overcoming intra-molecular repulsions in PEDTT by sulphate counter-ion. Science and Technology of Advanced Materials, 2021, 22, 985-997.	2.8	5
97	Phenyleneâ€Bridged Perylene Monoimides as Acceptors for Organic Solar Cells: A Study on the Structureâ€“Property Relationship. Chemistry - A European Journal, 2022, 28, .	1.7	5
98	Time resolved photoinduced electron spin resonance studies on conjugated polymer fullerene mixtures in solution. Synthetic Metals, 1999, 101, 356-357.	2.1	4
99	Ultrafast spectroscopy of polaron pairs in polymer solar cells. Synthetic Metals, 2003, 137, 1475-1476.	2.1	4
100	Universal Transfer Printing of Micelle-Templated Nanoparticles Using Plasma-Functionalized Graphene. ACS Applied Materials & Interfaces, 2020, 12, 46530-46538.	4.0	4
101	Photoexcitations in carbazolyl substituted polydiacetylene (PDA) fullerene composites. Synthetic Metals, 1999, 101, 298-299.	2.1	3
102	Stable Hall voltages in presence of dynamic quasi-continuum bands in poly(3,4-ethylene-dioxythiophene). Organic Electronics, 2019, 65, 412-418.	1.4	3
103	Size control of CH3NH3PbBr3 perovskite cuboid fine crystals synthesized by ligand-free reprecipitation method. Microsystem Technologies, 2018, 24, 619-623.	1.2	2
104	Photoconductive Properties of Dibenzotetrathiafulvalene-Tetracyanoquinodimethane (DBTTF-TCNQ) Nanorods Prepared by the Reprecipitation Method. Journal of Nanoscience and Nanotechnology, 2019, 19, 4599-4602.	0.9	2
105	Magnetic resonance studies on conjugated polymer fullerene mixtures. Synthetic Metals, 2001, 121, 1567-1568.	2.1	1
106	Radiative Recombination in Bulkâ€Heterojunction Solar Cells. Israel Journal of Chemistry, 0, , .	1.0	1
107	Dielectric and electro-optic studies of a novel ferroelectric liquid crystal mixture. , 1998, , .		0
108	Tuning of the photoinduced charge transfer process in donor-acceptor double-cable copolymers. , 2004, 5215, 41.		0

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109	Photon management in organic light-emitting diodes with multilayered plasmonic nanostars. , 2017, , .		0
110	Substrate-assisted Transfer of Nanoparticles by Graphene on Metal-Organic Interfaces. , 2020, , .		0
111	Highly fluorescent thin films formation by water-enhanced colloidal perovskite nanoparticles. , 2021, , .		0