

Markus Clark Scharber

List of Publications by Year in descending order

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15937
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#	ARTICLE	IF	CITATIONS
1	Design Rules for Donors in Bulk-Heterojunction Solar Cells—Towards 10% Energy-Conversion Efficiency. <i>Advanced Materials</i> , 2006, 18, 789-794.	21.0	4,534
2	Polymer-Fullerene Bulk-Heterojunction Solar Cells. <i>Advanced Materials</i> , 2009, 21, 1323-1338.	21.0	3,060
3	Efficiency of bulk-heterojunction organic solar cells. <i>Progress in Polymer Science</i> , 2013, 38, 1929-1940.	24.7	881
4	Ultrathin, highly flexible and stretchable PLEDs. <i>Nature Photonics</i> , 2013, 7, 811-816.	31.4	832
5	Flexible high power-per-weight perovskite solar cells with chromium oxide—metal contacts for improved stability in air. <i>Nature Materials</i> , 2015, 14, 1032-1039.	27.5	807
6	Design Rules for Donors in Bulk-Heterojunction Tandem Solar Cells—Towards 15 % Energy-Conversion Efficiency. <i>Advanced Materials</i> , 2008, 20, 579-583.	21.0	502
7	Panchromatic Conjugated Polymers Containing Alternating Donor/Acceptor Units for Photovoltaic Applications. <i>Macromolecules</i> , 2007, 40, 1981-1986.	4.8	428
8	Bimolecular Crystals of Fullerenes in Conjugated Polymers and the Implications of Molecular Mixing for Solar Cells. <i>Advanced Functional Materials</i> , 2009, 19, 1173-1179.	14.9	392
9	Influence of the Bridging Atom on the Performance of a Low-Bandgap Bulk Heterojunction Solar Cell. <i>Advanced Materials</i> , 2010, 22, 367-370.	21.0	323
10	Bimolecular Recombination Coefficient as a Sensitive Testing Parameter for Low-Mobility Solar-Cell Materials. <i>Physical Review Letters</i> , 2005, 94, 176806.	7.8	297
11	Near IR Sensitization of Organic Bulk Heterojunction Solar Cells: Towards Optimization of the Spectral Response of Organic Solar Cells. <i>Advanced Functional Materials</i> , 2010, 20, 338-346.	14.9	276
12	Physics of organic bulk heterojunction devices for photovoltaic applications. <i>Journal of Applied Physics</i> , 2006, 99, 104503.	2.5	227
13	Stabilization of the nanomorphology of polymer—fullerene bulk heterojunction—blends using a novel polymerizable fullerene derivative. <i>Journal of Materials Chemistry</i> , 2005, 15, 5158.	6.7	221
14	Exciton diffusion length in narrow bandgap polymers. <i>Energy and Environmental Science</i> , 2012, 5, 6960.	30.8	207
15	Charge Transfer Excitons in Bulk Heterojunctions of a Polyfluorene Copolymer and a Fullerene Derivative. <i>Advanced Functional Materials</i> , 2007, 17, 2111-2116.	14.9	197
16	Fabrication, Optical Modeling, and Color Characterization of Semitransparent Bulk-Heterojunction Organic Solar Cells in an Inverted Structure. <i>Advanced Functional Materials</i> , 2010, 20, 1592-1598.	14.9	182
17	Two Novel Cyclopentadithiophene-Based Alternating Copolymers as Potential Donor Components for High-Efficiency Bulk-Heterojunction-Type Solar Cells. <i>Chemistry of Materials</i> , 2008, 20, 4045-4050.	6.7	179
18	On the Efficiency Limit of Conjugated Polymer:Fullerene-Based Bulk Heterojunction Solar Cells. <i>Advanced Materials</i> , 2016, 28, 1994-2001.	21.0	176

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19	Nanomorphology and Charge Generation in Bulk Heterojunctions Based on Low-Bandgap Dithiophene Polymers with Different Bridging Atoms. <i>Advanced Functional Materials</i> , 2010, 20, 1180-1188.	14.9	173
20	Bipolar Charge Transport in PCPDTBT-PCBM Bulk-Heterojunctions for Photovoltaic Applications. <i>Advanced Functional Materials</i> , 2008, 18, 1757-1766.	14.9	156
21	Angle dependence of external and internal quantum efficiencies in bulk-heterojunction organic solar cells. <i>Journal of Applied Physics</i> , 2007, 102, .	2.5	152
22	Photoinduced charge carriers in conjugated polymer-fullerene composites studied with light-induced electron-spin resonance. <i>Physical Review B</i> , 1999, 59, 8019-8025.	3.2	150
23	Performance improvement of organic solar cells with moth eye anti-reflection coating. <i>Thin Solid Films</i> , 2008, 516, 7167-7170.	1.8	141
24	Optical and electronic properties of mixed halide (X = I, Cl, Br) methylammonium lead perovskite solar cells. <i>Journal of Materials Chemistry C</i> , 2017, 5, 1714-1723.	5.5	120
25	Low Band Gap Conjugated Semiconducting Polymers. <i>Advanced Materials Technologies</i> , 2021, 6, 2000857.	5.8	112
26	Charge Transport and Recombination in Low-Bandgap Bulk Heterojunction Solar Cell using Bis-adduct Fullerene. <i>Advanced Energy Materials</i> , 2011, 1, 1162-1168.	19.5	108
27	Confining metal-halide perovskites in nanoporous thin films. <i>Science Advances</i> , 2017, 3, e1700738.	10.3	103
28	Organic Field-Effect Devices as Tool to Characterize the Bipolar Transport in Polymer-Fullerene Blends: The Case of P3HT-PCBM. <i>Advanced Functional Materials</i> , 2007, 17, 3274-3283.	14.9	98
29	Realization, characterization, and optical modeling of inverted bulk-heterojunction organic solar cells. <i>Journal of Applied Physics</i> , 2008, 103, .	2.5	90
30	Polyterthiophenes as Donors for Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2007, 17, 1371-1376.	14.9	89
31	Novel Regiospecific MDMO-PPV Copolymer with Improved Charge Transport for Bulk Heterojunction Solar Cells. <i>Journal of Physical Chemistry B</i> , 2004, 108, 5235-5242.	2.6	86
32	4% Efficient Polymer Solar Cells on Paper Substrates. <i>Journal of Physical Chemistry C</i> , 2014, 118, 16813-16817.	3.1	85
33	Low-Temperature Behaviour of Charge Transfer Excitons in Narrow-Bandgap Polymer-Based Bulk Heterojunctions. <i>Advanced Energy Materials</i> , 2011, 1, 604-609.	19.5	83
34	Solution processed perovskite solar cells using highly conductive PEDOT:PSS interfacial layer. <i>Solar Energy Materials and Solar Cells</i> , 2016, 157, 318-325.	6.2	69
35	Charge transfer excitons in low band gap polymer based solar cells and the role of processing additives. <i>Energy and Environmental Science</i> , 2011, 4, 5077.	30.8	66
36	Charge Separation in PCPDTBT:PCBM Blends from an EPR Perspective. <i>Journal of Physical Chemistry C</i> , 2014, 118, 28482-28493.	3.1	61

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37	The Influence of Interchain Branches on Solid State Packing, Hole Mobility and Photovoltaic Properties of Poly(3-hexylthiophene) (P3HT). <i>Macromolecular Rapid Communications</i> , 2007, 28, 1781-1785.	3.9	58
38	Alternating quinoxaline/oligothiophene copolymers' synthesis and unexpected absorption properties. <i>Journal of Materials Chemistry</i> , 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. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2020, 217, 2000291.	1.8	54
40	Double injection as a technique to study charge carrier transport and recombination in bulk-heterojunction solar cells. <i>Applied Physics Letters</i> , 2005, 87, 222110.	3.3	45
41	Performance Boost of Organic Light-Emitting Diodes with Plasmonic Nanostars. <i>Advanced Optical Materials</i> , 2016, 4, 772-781.	7.3	45
42	Designing Ultraflexible Perovskite X-Ray Detectors through Interface Engineering. <i>Advanced Science</i> , 2020, 7, 2002586.	11.2	44
43	Determination of vertical phase separation in a polyfluorene copolymer: fullerene derivative solar cell blend by X-ray photoelectron spectroscopy. <i>Journal of Materials Chemistry</i> , 2009, 19, 4899.	6.7	43
44	Silicon/organic hybrid heterojunction infrared photodetector operating in the telecom regime. <i>Organic Electronics</i> , 2013, 14, 1344-1350.	2.6	41
45	Inverted bulk-heterojunction solar cell with cross-linked hole-blocking layer. <i>Organic Electronics</i> , 2014, 15, 997-1001.	2.6	41
46	Transparent conductive ZnO layers on polymer substrates: Thin film deposition and application in organic solar cells. <i>Thin Solid Films</i> , 2015, 591, 97-104.	1.8	38
47	The influence of perovskite precursor composition on the morphology and photovoltaic performance of mixed halide MAPbI ₃ -xCl _x solar cells. <i>Solar Energy</i> , 2018, 163, 215-223.	6.1	36
48	Photoinduced Charge Transfer between Tetracyano-Anthraquino-Dimethane Derivatives and Conjugated Polymers for Photovoltaics. <i>Journal of Physical Chemistry A</i> , 2000, 104, 8315-8322.	2.5	35
49	CuI as versatile hole-selective contact for organic solar cell based on anthracene-containing PPE-PPV. <i>Solar Energy Materials and Solar Cells</i> , 2015, 143, 369-374.	6.2	35
50	Influence of disorder on the photoinduced excitations in phenyl substituted polythiophenes. <i>Journal of Chemical Physics</i> , 2001, 115, 7235-7244.	3.0	34
51	Anderson-Localization and the Mott-Ioffe-Regel Limit in Glassy-Metallic PEDOT. <i>Advanced Electronic Materials</i> , 2017, 3, 1700050.	5.1	34
52	Reverse Micelle Templating Route to Ordered Monodispersed Spherical Organo-Lead Halide Perovskite Nanoparticles for Light Emission. <i>ACS Applied Nano Materials</i> , 2019, 2, 4121-4132.	5.0	32
53	Are Polyaniline and Polypyrrole Electrocatalysts for Oxygen (O ₂) Reduction to Hydrogen Peroxide (H ₂ O ₂)?. <i>ACS Applied Energy Materials</i> , 2020, 3, 10611-10618.	5.1	30
54	Reversible Photochemical Isomerization of <i>N,N</i> -Di(<i>n</i> -butoxycarbonyl)indigos. <i>Journal of Physical Chemistry A</i> , 2015, 119, 3563-3568.	2.5	29

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55	Electrochemical Self-Assembly of Nanostructured CuSCN/Rhodamine B Hybrid Thin Film and Its Dye-Sensitized Photocathodic Properties. <i>Journal of Physical Chemistry C</i> , 2014, 118, 16581-16590.	3.1	28
56	Long-Lived Photoinduced Charges in Donor-Acceptor Anthraquinone-Substituted Thiophene Copolymers. <i>Journal of Physical Chemistry B</i> , 2006, 110, 5351-5358.	2.6	27
57	Double-injection current transients as a way of measuring transport in insulating organic films. <i>Journal of Applied Physics</i> , 2007, 101, 114505.	2.5	26
58	Synthesis conditions influencing formation of MAPbBr ₃ perovskite nanoparticles prepared by the ligand-assisted precipitation method. <i>Scientific Reports</i> , 2020, 10, 15720.	3.3	26
59	Systematic Investigation of Porphyrin-Thiophene Conjugates for Ternary Bulk Heterojunction Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600957.	19.5	25
60	Spectroscopic properties of PEDOTEHIITN. <i>Synthetic Metals</i> , 2003, 137, 1435-1436.	3.9	24
61	The Role of Heteroatoms Leading to Hydrogen Bonds in View of Extended Chemical Stability of Organic Semiconductors. <i>Advanced Functional Materials</i> , 2015, 25, 6679-6688.	14.9	24
62	Understanding the low voltage losses in high-performance non-fullerene acceptor-based organic solar cells. <i>Materials Advances</i> , 2021, 2, 4291-4302.	5.4	24
63	Enhancing the c-TiO ₂ based perovskite solar cell performance via modification by a serial of boronic acid derivative self-assembled monolayers. <i>Applied Surface Science</i> , 2017, 423, 521-527.	6.1	22
64	Controlling Quantum Confinement in Luminescent Perovskite Nanoparticles for Optoelectronic Devices by the Addition of Water. <i>ACS Applied Nano Materials</i> , 2020, 3, 1242-1249.	5.0	21
65	Nanoscale Charge Accumulation and Its Effect on Carrier Dynamics in Tri-cation Perovskite Structures. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 48057-48066.	8.0	21
66	Wide-bandgap organic solar cells with a novel perylene-based non-fullerene acceptor enabling open-circuit voltages beyond 1.4 V. <i>Journal of Materials Chemistry A</i> , 2022, 10, 2888-2906.	10.3	21
67	Microwave-Assisted Preparation of Organo-Lead Halide Perovskite Single Crystals. <i>Crystal Growth and Design</i> , 2020, 20, 1388-1393.	3.0	20
68	Local order drives the metallic state in PEDOT:PSS. <i>Journal of Materials Chemistry C</i> , 2016, 4, 6982-6987.	5.5	19
69	Photoinduced electron transfer in solid C ₆₀ donor/acceptor complexes. <i>Synthetic Metals</i> , 2001, 121, 1127-1128.	3.9	17
70	Inverted (p-i-n) perovskite solar cells using a low temperature processed TiO _x interlayer. <i>RSC Advances</i> , 2018, 8, 24836-24846.	3.6	17
71	Novel Regiospecific MDMO-PPV Polymers with Improved Charge Transport Properties for Bulk Heterojunction Solar Cells. <i>Synthetic Metals</i> , 2005, 153, 81-84.	3.9	16
72	Nano-morphology characterization of organic bulk heterojunctions based on mono and bis-adduct fullerenes. <i>Organic Electronics</i> , 2012, 13, 1315-1321.	2.6	16

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73	Factors determining large observed increases in power conversion efficiency of P3HT:PCBM solar cells embedded with MoS ₂ nanowires. <i>Synthetic Metals</i> , 2016, 212, 105-112.	3.9	16
74	Hybrid Multilayered Plasmonic Nanostars for Coherent Random Lasing. <i>Journal of Physical Chemistry C</i> , 2016, 120, 23707-23715.	3.1	15
75	Electrocatalytic Reduction of Carbon Dioxide using Sol-gel Processed Copper Indium Sulfide (CIS) Immobilized on ITO-Coated Glass Electrode. <i>Electrocatalysis</i> , 2015, 6, 405-413.	3.0	14
76	Iodide-Capped PbS Quantum Dots: Full Optical Characterization of a Versatile Absorber. <i>Advanced Materials</i> , 2015, 27, 1533-1539.	21.0	14
77	Optoelectronic Properties of Layered Perovskite Solar Cells. <i>Solar Rrl</i> , 2019, 3, 1900126.	5.8	13
78	Conducting Polymer-Based Biocomposites Using Deoxyribonucleic Acid (DNA) as Counterion. <i>Advanced Materials Technologies</i> , 2020, 5, 1900699.	5.8	13
79	Light-induced ESR studies in conjugated polymer-fullerene composites. <i>Synthetic Metals</i> , 1999, 102, 1241-1242.	3.9	12
80	Tuning of the photoinduced charge transfer process in donor-acceptor double-cable copolymers. <i>Synthetic Metals</i> , 2003, 139, 731-733.	3.9	12
81	Substrate-Oriented Nanorod Scaffolds in Polymer-Fullerene Bulk Heterojunction Solar Cells. <i>ChemPhysChem</i> , 2014, 15, 1070-1075.	2.1	12
82	Acetylacetone Improves the Performance of Mixed Halide Perovskite Solar Cells. <i>Journal of Physical Chemistry C</i> , 2019, 123, 23807-23816.	3.1	12
83	Photoinduced Electron Transfer in Solid C ₆₀ Donor/Acceptor Complexes Studied by Light-Induced Electron-Spin Resonance. <i>Molecular Crystals and Liquid Crystals</i> , 2005, 427, 3/[315]-21/[333].	0.9	11
84	Different Device Architectures for Bulk-Heterojunction Solar Cells. <i>Frontiers in Materials</i> , 2016, 3, .	2.4	10
85	Plasmon-Assisted Direction- and Polarization-Sensitive Organic Thin-Film Detector. <i>Nanomaterials</i> , 2020, 10, 1866.	4.1	10
86	Tunable Properties of Nature-Inspired N ² -Alkylated Riboflavin Semiconductors. <i>Molecules</i> , 2021, 26, 27.	3.8	10
87	Degradation kinetics in different polymer-fullerene blends investigated by electron spin resonance. <i>Journal of Materials Research</i> , 2018, 33, 1853-1859.	2.6	9
88	Improving the Performance of Perovskite Solar Cells using a Polyphosphazene Interfacing Layer. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2019, 216, 1900436.	1.8	9
89	Photoinduced Energy Transfer from Poly(vinylcarbazole) to Tricarbonylchloro(2,2'-bipyridyl)rhenium(I). <i>ChemPhysChem</i> , 2014, 15, 3634-3638.	2.1	8
90	Anti-Stokes photoluminescence study on a methylammonium lead bromide nanoparticle film. <i>Nanoscale</i> , 2020, 12, 16556-16561.	5.6	8

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91	Comparison of fluorene, silafluorene and carbazole as linkers in perylene monoimide based non-fullerene acceptors. <i>Materials Advances</i> , 2020, 1, 2095-2106.	5.4	7
92	Anomalous photoinduced absorption of conjugated polymer/fullerene mixtures at low temperatures and high frequencies. <i>Synthetic Metals</i> , 2004, 141, 109-112.	3.9	6
93	Electrical properties of pSi/[6,6] phenyl-C61 butyric acid methyl ester/Al hybrid heterojunctions: Experimental and theoretical evaluation of diode operation. <i>Journal of Applied Physics</i> , 2012, 112, 114508.	2.5	6
94	Magnetic Field Effects on the Current of PCPDTBT-based Diode. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11727-11732.	3.1	6
95	Ion-driven nanograin formation in early-stage degradation of tri-cation perovskite films. <i>Nanoscale</i> , 2022, 14, 2605-2616.	5.6	6
96	Overcoming intra-molecular repulsions in PEDTT by sulphate counter-ion. <i>Science and Technology of Advanced Materials</i> , 2021, 22, 985-997.	6.1	5
97	Phenylene-Bridged Perylene Monoimides as Acceptors for Organic Solar Cells: A Study on the Structure-Property Relationship. <i>Chemistry - A European Journal</i> , 2022, 28, .	3.3	5
98	Time resolved photoinduced electron spin resonance studies on conjugated polymer fullerene mixtures in solution. <i>Synthetic Metals</i> , 1999, 101, 356-357.	3.9	4
99	Ultrafast spectroscopy of polaron pairs in polymer solar cells. <i>Synthetic Metals</i> , 2003, 137, 1475-1476.	3.9	4
100	Universal Transfer Printing of Micelle-Templated Nanoparticles Using Plasma-Functionalized Graphene. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 46530-46538.	8.0	4
101	Photoexcitations in carbazolyl substituted polydiacetylene (PDA) fullerene composites. <i>Synthetic Metals</i> , 1999, 101, 298-299.	3.9	3
102	Stable Hall voltages in presence of dynamic quasi-continuum bands in poly(3,4-ethylene-dioxythiophene). <i>Organic Electronics</i> , 2019, 65, 412-418.	2.6	3
103	Size control of CH ₃ NH ₃ PbBr ₃ perovskite cuboid fine crystals synthesized by ligand-free reprecipitation method. <i>Microsystem Technologies</i> , 2018, 24, 619-623.	2.0	2
104	Photoconductive Properties of Dibenzotetrathiafulvalene-Tetracyanoquinodimethane (DBTTF-TCNQ) Nanorods Prepared by the Reprecipitation Method. <i>Journal of Nanoscience and Nanotechnology</i> , 2019, 19, 4599-4602.	0.9	2
105	Magnetic resonance studies on conjugated polymer fullerene mixtures. <i>Synthetic Metals</i> , 2001, 121, 1567-1568.	3.9	1
106	Radiative Recombination in Bulk-Heterojunction Solar Cells. <i>Israel Journal of Chemistry</i> , 0, , .	2.3	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