Marcus Halik

List of Publications by Year
in descending order

118 papers	10,267 citations	50244 46 h-index	32815 100 g-index
121 all docs	121 docs citations	121 times ranked	11453 citing authors

#	Article	IF	Citations
1	Intercalating-Organic-Cation-Induced Stability Bowing in Quasi-2D Metal-Halide Perovskites. ACS Energy Letters, 2022, 7, 70-77.	8.8	26
2	Supraparticles with a Mechanically Triggerable Colorâ€Changeâ€Effect to Equip Coatings with the Ability to Report Damage. Small, 2022, 18, e2107513.	5.2	5
3	A universal concept for areaâ€selective assembly of metal oxide coreâ€shell nanoparticles, nanorods, and organic molecules via amide coupling reactions. Nano Select, 2022, 3, 1223-1231.	1.9	0
4	Real-time monitoring of magnetic nanoparticle-assisted nanoplastic agglomeration and separation from water. Environmental Science: Nano, 2022, 9, 2427-2439.	2.2	9
5	An Innovative Anode Interface Combination for Perovskite Solar Cells with Improved Efficiency, Stability, and Reproducibility. Solar Rrl, 2022, 6, .	3.1	3
6	The remediation of nano-/microplastics from water. Materials Today, 2021, 48, 38-46.	8.3	56
7	Oligothiophene Phosphonic Acids for Self-Assembled Monolayer Field-Effect Transistors. ACS Applied Materials & Interfaces, 2021, 13, 32461-32466.	4.0	7
8	2D van der Waals Heterojunction of Organic and Inorganic Monolayers for High Responsivity Phototransistors. Advanced Functional Materials, 2021, 31, 2105444.	7.8	28
9	Chemical-recognition-driven selectivity of SnO2-nanowire-based gas sensors. Nano Today, 2021, 40, 101265.	6.2	25
10	Hostâ€Guest Systems on the Surface of Functionalized Superparamagnetic Iron Oxide Nanoparticles (SPIONs) Utilizing Hamilton Receptors and Cyanurate Derivative Molecules. Chemistry - A European Journal, 2021, 27, 16429-16439.	1.7	3
11	Magnetite nanoparticles as efficient materials for removal of glyphosate from water. Nature Sustainability, 2020, 3, 129-135.	11.5	72
12	Mixed Organic Ligand Shells: Controlling the Nanoparticle Surface Morphology toward Tuning the Optoelectronic Properties. Small, 2020, 16, e1903729.	5.2	10
13	Areaâ€Selective Growth of HfS₂ Thin Films via Atomic Layer Deposition at Low Temperature. Advanced Materials Interfaces, 2020, 7, 2001493.	1.9	10
14	Waferâ€Scale Organic Complementary Inverters Fabricated with Selfâ€Assembled Monolayer Fieldâ€Effect Transistors. Advanced Electronic Materials, 2020, 6, 2000515.	2.6	10
15	Non-substituted fused bis-tetracene based thin-film transistor with self-assembled monolayer hybrid dielectrics. Frontiers of Materials Science, 2020, 14, 314-322.	1.1	0
16	Anthraceneâˆ’Pentacene Dyads: Synthesis and OFET Characterization. ChemPlusChem, 2020, 85, 921-926.	1.3	3
17	Buried Microphase Separation by Dynamic Interplay of Crystallization and Microphase Separation in Semicrystalline PEO-Rich PS-<i>b</i>-PEO Block Copolymer Thin Films. Macromolecules, 2020, 53, 5604-5613.	2.2	6
18	Effect of Ligand Treatment on the Tuning of Infrared Plasmonic Indium Tin Oxide Nanocrystal Electrochromic Devices. Advanced Engineering Materials, 2020, 22, 2000112.	1.6	15

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19	Fully Printed Infrared Photodetectors from PbS Nanocrystals with Perovskite Ligands. ACS Nano, 2019, 13, 2389-2397.	7.3	30
20	Dewetted Au Nanoparticles on TiO₂ Surfaces: Evidence of a Size-Independent Plasmonic Photoelectrochemical Response. Journal of Physical Chemistry C, 2019, 123, 16934-16942.	1.5	26
21	Superoleophilic Magnetic Iron Oxide Nanoparticles for Effective Hydrocarbon Removal from Water. Advanced Functional Materials, 2019, 29, 1805742.	7.8	32
22	Multifunctional and Tunable Surfaces Based on Pyrene Functionalized Nanoparticles. Advanced Materials Interfaces, 2019, 6, 1801930.	1.9	12
23	Manufacturing Nanoparticles with Orthogonally Adjustable Dispersibility in Hydrocarbons, Fluorocarbons, and Water. ChemistryOpen, 2018, 7, 282-287.	0.9	18
24	Enhanced In Vitro Biocompatibility and Water Dispersibility of Magnetite and Cobalt Ferrite Nanoparticles Employed as ROS Formation Enhancer in Radiation Cancer Therapy. Small, 2018, 14, e1704111.	5.2	57
25	Evidence of Tailoring the Interfacial Chemical Composition in Normal Structure Hybrid Organohalide Perovskites by a Self-Assembled Monolayer. ACS Applied Materials & Interfaces, 2018, 10, 5511-5518.	4.0	32
26	Manufacturing Nanoparticles with Orthogonally Adjustable Dispersibility in Hydrocarbons, Fluorocarbons, and Water. ChemistryOpen, 2018, 7, 277-277.	0.9	0
27	Highly Efficient Encapsulation and Phase Separation of Apolar Molecules by Magnetic Shellâ€byâ€Shellâ€Coated Nanocarriers in Water. Chemistry - A European Journal, 2018, 24, 13589-13595.	1.7	11
28	Formation of Perfluoroalkyl Fullerene Alkylphosphonic Acid Self-Assembled Monolayers on Aluminum Oxide. ECS Journal of Solid State Science and Technology, 2017, 6, M3163-M3167.	0.9	3
29	Suppression of Hysteresis Effects in Organohalide Perovskite Solar Cells. Advanced Materials Interfaces, 2017, 4, 1700007.	1.9	57
30	Memory Effect of Selfâ€Assembled PSâ€‹<i>b</i>â€PEO Block Copolymer Films with Selectively Embedded Functionalized TiO₂ Nanoparticles. Advanced Materials Interfaces, 2017, 4, 1700230.	1.9	13
31	Effect of Structure and Disorder on the Charge Transport in Defined Self-Assembled Monolayers of Organic Semiconductors. ACS Nano, 2017, 11, 8747-8757.	7.3	23
32	Self-assembled monolayer field-effect transistors based on oligo-9,9â€²-dioctylfluorene phosphonic acids. Nanoscale, 2017, 9, 18584-18589.	2.8	17
33	A generic interface to reduce the efficiency-stability-cost gap of perovskite solar cells. Science, 2017, 358, 1192-1197.	6.0	554
34	Enhancing the Dispersibility of TiO₂ Nanorods and Gaining Control over Region-Selective Layer Formation. Langmuir, 2016, 32, 10604-10609.	1.6	5
35	Assigning Electronic States in Carbon Nanodots. Advanced Functional Materials, 2016, 26, 7975-7985.	7.8	52
36	Selfâ€Assembled Monolayer Dielectrics for Lowâ€Voltage Carbon Nanotube Transistors with Controlled Network Density. Advanced Materials Interfaces, 2016, 3, 1600215.	1.9	19

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37	Wide Bandâ€Gap Bismuthâ€based pâ€Dopants for Optoâ€Electronic Applications. Angewandte Chemie - International Edition, 2016, 55, 10493-10497.	7.2	11
38	Quantitative Determination and Comparison of the Surface Binding of Phosphonic Acid, Carboxylic Acid, and Catechol Ligands on TiO₂ Nanoparticles. Chemistry - A European Journal, 2016, 22, 13506-13512.	1.7	63
39	Carbon Nanodots: Assigning Electronic States in Carbon Nanodots (Adv. Funct. Mater. 44/2016). Advanced Functional Materials, 2016, 26, 8147-8147.	7.8	1
40	Very Facile Polarity Umpolung and Noncovalent Functionalization of Inorganic Nanoparticles: A Tool Kit for Supramolecular Materials Chemistry. Chemistry - A European Journal, 2015, 21, 14030-14035.	1.7	19
41	Improving the Performance of Organic Thinâ€Film Transistors by Ion Doping of Ethyleneâ€Glycolâ€Based Selfâ€Assembled Monolayer Hybrid Dielectrics. Advanced Materials, 2015, 27, 8023-8027.	11.1	19
42	Regionâ€Selective Deposition of Coreâ€“Shell Nanoparticles for 3â€‰D Hierarchical Assemblies by the Huisgen 1,3â€Dipolar Cycloaddition. Angewandte Chemie - International Edition, 2015, 54, 9235-9238.	7.2	19
43	Green Processing of Metal Oxide Coreâ€“Shell Nanoparticles as Lowâ€Temperature Dielectrics in Organic Thinâ€Film Transistors. Advanced Materials, 2015, 27, 5950-5954.	11.1	16
44	Lowâ€Temperature and Hysteresisâ€Free Electronâ€Transporting Layers for Efficient, Regular, and Planar Structure Perovskite Solar Cells. Advanced Energy Materials, 2015, 5, 1501056.	10.2	69
45	Structural Investigations of Self-Assembled Monolayers for Organic Electronics: Results from X-ray Reflectivity. Accounts of Chemical Research, 2015, 48, 1901-1908.	7.6	66
46	A facile approach to synthesize an oxo-functionalized graphene/polymer composite for low-voltage operating memory devices. Journal of Materials Chemistry C, 2015, 3, 8595-8604.	2.7	30
47	Basal-Plane Functionalization of Chemically Exfoliated Molybdenum Disulfide by Diazonium Salts. ACS Nano, 2015, 9, 6018-6030.	7.3	293
48	Tuning the molecular order of C₆₀-based self-assembled monolayers in field-effect transistors. Nanoscale, 2014, 6, 13022-13027.	2.8	26
49	Scalable self-assembled reduced graphene oxide transistors on flexible substrate. Applied Physics Letters, 2014, 104, 243502.	1.5	13
50	Interface Engineering of Molecular Charge Storage Dielectric Layers for Organic Thinâ€Film Memory Transistors. Advanced Materials Interfaces, 2014, 1, 1400238.	1.9	8
51	Modeling charge transport in C60-based self-assembled monolayers for applications in field-effect transistors. Journal of Chemical Physics, 2014, 140, 204702.	1.2	17
52	Solution-processed single-crystalline organic transistors on patterned ultrathin gate insulators. Organic Electronics, 2014, 15, 1184-1188.	1.4	15
53	Morphology analysis of near IR sensitized polymer/fullerene organic solar cells by implementing low bandgap heteroanalogue C-/Si-PCPDTBT. Journal of Materials Chemistry A, 2014, 2, 19461-19472.	5.2	68
54	The mutual influence of surface energy and substrate temperature on the saturation mobility in organic semiconductors. Organic Electronics, 2014, 15, 3082-3086.	1.4	7

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55	Fullerene Van der Waals Oligomers as Electron Traps. Journal of the American Chemical Society, 2014, 136, 10890-10893.	6.6	46
56	Smoothly Tunable Surface Properties of Aluminum Oxide Coreâ€"Shell Nanoparticles By A Mixed-Ligand Approach. ACS Applied Materials & Interfaces, 2014, 6, 5977-5982.	4.0	59
57	Driving forces for the self-assembly of graphene oxide on organic monolayers. Nanoscale, 2014, 6, 11344-11350.	2.8	14
58	Fullerene-Based FETs. , 2014, , 1-12.		0
59	Region-Selective Self-Assembly of Functionalized Carbon Allotropes from Solution. ACS Nano, 2013, 7, 11427-11434.	7.3	21
60	An unsymmetrical pentacene derivative with ambipolar behavior in organic thin-film transistors. Chemical Communications, 2013, 49, 6725.	2.2	25
61	Improving the Charge Transport in Self-Assembled Monolayer Field-Effect Transistors: From Theory to Devices. Journal of the American Chemical Society, 2013, 135, 4893-4900.	6.6	72
62	ITOâ€Free and Fully Solutionâ€Processed Semitransparent Organic Solar Cells with High Fill Factors. Advanced Energy Materials, 2013, 3, 1062-1067.	10.2	172
63	Overcoming interface losses in organic solar cells by applying low temperature, solution processed aluminum-doped zinc oxide electron extraction layers. Journal of Materials Chemistry A, 2013, 1, 6004.	5.2	79
64	High-Mobility ZnO Nanorod Field-Effect Transistors by Self-Alignment and Electrolyte-Gating. ACS Applied Materials & Interfaces, 2013, 5, 1656-1662.	4.0	67
65	Lowâ€Voltage Selfâ€Assembled Monolayer Fieldâ€Effect Transistors on Flexible Substrates. Advanced Materials, 2013, 25, 4511-4514.	11.1	78
66	Phosphonate- and Carboxylate-Based Self-Assembled Monolayers for Organic Devices: A Theoretical Study of Surface Binding on Aluminum Oxide with Experimental Support. ACS Applied Materials & Interfaces, 2013, 5, 6073-6080.	4.0	111
67	Photoactive self-assembled monolayers for optically switchable organic thin-film transistors. Applied Physics Letters, 2013, 102, 203301.	1.5	22
68	Fully Patterned Lowâ€Voltage Transparent Metal Oxide Transistors Deposited Solely by Chemical Spray Pyrolysis. Advanced Functional Materials, 2013, 23, 2828-2834.	7.8	44
69	Mixed self-assembled monolayer of molecules with dipolar and acceptor characterâ€"Influence on hysteresis and threshold voltage in organic thin-film transistors. Applied Physics Letters, 2012, 100, .	1.5	25
70	Self-Assembled Monolayer Exchange Reactions as a Tool for Channel Interface Engineering in Low-Voltage Organic Thin-Film Transistors. Langmuir, 2012, 28, 13900-13904.	1.6	33
71	Concept of a thin film memory transistor based on ZnO nanoparticles insulated by a ligand shell. Nanoscale, 2012, 4, 444-447.	2.8	25
72	Impact of Oxygen Plasma Treatment on the Device Performance of Zinc Oxide Nanoparticle-Based Thin-Film Transistors. ACS Applied Materials & Interfaces, 2012, 4, 1693-1696.	4.0	64

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73	Low-Voltage Organic Field Effect Transistors with a 2-Tridecyl[1]benzothieno[3,2-<i>b</i>][1]benzothiophene Semiconductor Layer. Journal of the American Chemical Society, 2012, 134, 16548-16550.	6.6	179
74	Increasing the Fill Factor of Inverted P3HT:PCBM Solar Cells Through Surface Modification of Alâ€Doped ZnO via Phosphonic Acidâ€Anchored C60 SAMs. Advanced Energy Materials, 2012, 2, 532-535.	10.2	116
75	The Relationship between Threshold Voltage and Dipolar Character of Self-Assembled Monolayers in Organic Thin-Film Transistors. Journal of the American Chemical Society, 2012, 134, 12648-12652.	6.6	88
76	Morphological impact of zinc oxide layers on the device performance in thin-film transistors. Nanoscale, 2011, 3, 897-899.	2.8	40
77	High shunt resistance in polymer solar cells comprising a MoO3 hole extraction layer processed from nanoparticle suspension. Applied Physics Letters, 2011, 98, .	1.5	149
78	Interface Engineering in High-Performance Low-Voltage Organic Thin-Film Transistors Based on 2,7-Dialkyl-[1]benzothieno[3,2-<i>b</i>][1]benzothiophenes. Langmuir, 2011, 27, 15340-15344.	1.6	24
79	Tuning the Molecular Order of C₆₀ Functionalized Phosphonic Acid Monolayers. Langmuir, 2011, 27, 15016-15023.	1.6	55
80	Cyclic voltammetry on n-alkylphosphonic acid self-assembled monolayer modified large area indium tin oxide electrodes. Thin Solid Films, 2011, 519, 7809-7812.	0.8	6
81	Low-Voltage p- and n-Type Organic Self-Assembled Monolayer Field Effect Transistors. Nano Letters, 2011, 11, 156-159.	4.5	108
82	The Potential of Molecular Selfâ€Assembled Monolayers in Organic Electronic Devices. Advanced Materials, 2011, 23, 2689-2695.	11.1	179
83	Influence of self-assembled monolayer dielectrics on the morphology and performance of Î±,Ï‰-dihexylquaterthiophene in thin film transistors. Applied Physics Letters, 2011, 98, .	1.5	36
84	Concept of a Molecular Charge Storage Dielectric Layer for Organic Thinâ€Film Memory Transistors. Advanced Materials, 2010, 22, 2525-2528.	11.1	113
85	The morphology of integrated self-assembled monolayers and their impact on devices â€“ A computational and experimental approach. Organic Electronics, 2010, 11, 1476-1482.	1.4	47
86	Flexible copper-7,7,8,8 tetracyanochinodimethane memory devices â€” Operation, cross talk and bending. Thin Solid Films, 2010, 518, 2222-2227.	0.8	8
87	In situ STXM investigations of pentacene-based OFETs during operation. Journal of Materials Chemistry, 2010, 20, 4884.	6.7	26
88	Toward strain resistant flexible organic thin film transistors. Applied Physics Letters, 2009, 95, .	1.5	82
89	Lowâ€Temperature Solutionâ€Processed Memory Transistors Based on Zinc Oxide Nanoparticles. Advanced Materials, 2009, 21, 3099-3104.	11.1	112
90	The impact of self-assembled monolayer thickness in hybrid gate dielectrics for organic thin-film transistors. Organic Electronics, 2009, 10, 1442-1447.	1.4	77

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91	Oligothiophenes in organic thin film transistors â€“ Morphology, stability and temperature operation. Organic Electronics, 2008, 9, 1061-1068.	1.4	21
92	Microcontact-Printed Self-Assembled Monolayers as Ultrathin Gate Dielectrics in Organic Thin-Film Transistors and Complementary Circuits. Langmuir, 2008, 24, 1665-1669.	1.6	81
93	Low-voltage organic thin-film transistors with large transconductance. Journal of Applied Physics, 2007, 102, .	1.1	125
94	Ultralow-power organic complementary circuits. Nature, 2007, 445, 745-748.	13.7	1,329
95	Decyl-End-Capped Thiopheneâ"Phenylene Oligomers as Organic Semiconducting Materials with Improved Oxidation Stability. Chemistry of Materials, 2006, 18, 579-586.	3.2	81
96	Gate Dielectrics. , 2006, , 132-162.		4
97	Low-voltage organic thin film transistors and circuits with molecular gate dielectrics. , 2005, , .		3
98	Flexible Organic Complementary Circuits. IEEE Transactions on Electron Devices, 2005, 52, 618-622.	1.6	146
99	Solvent effects on the vibronic one-photon absorption profiles of dioxaborine heterocycles. Journal of Chemical Physics, 2005, 123, 194311.	1.2	24
100	1,4-bis(5-decyl-2,2â€²-bithien-5-yl)benzene as new stable organic semiconductor for high performance thin film transistors. Synthetic Metals, 2005, 149, 231-235.	2.1	26
101	Mechanical force sensors using organic thin-film transistors. Journal of Applied Physics, 2005, 97, 093708.	1.1	92
102	Two-Photon Absorption in Linear Bis-dioxaborine Compoundsâ€"The Impact of Correlation-Induced Oscillator-Strength Redistribution. ChemPhysChem, 2004, 5, 982-988.	1.0	25
103	Organic electronics on paper. Applied Physics Letters, 2004, 84, 2673-2675.	1.5	330
104	Electron-Transport Properties and Use in Organic Light-Emitting Diodes of a Bis(dioxaborine)fluorene Derivativeâ€. Journal of Physical Chemistry B, 2004, 108, 8647-8651.	1.2	94
105	Limitations of Essential-State Models for the Description of Two-Photon Absorption Processes:Â The Example of Bis(dioxaborine)-Substituted Chromophoresâ€. Journal of Physical Chemistry B, 2004, 108, 8641-8646.	1.2	31
106	Low-voltage organic transistors with an amorphous molecular gate dielectric. Nature, 2004, 431, 963-966.	13.7	755
107	Relationship Between Molecular Structure and Electrical Performance of Oligothiophene Organic Thin Film Transistors. Advanced Materials, 2003, 15, 917-922.	11.1	418
108	Flexible Organic Circuits with Printed Gate Electrodes. Advanced Materials, 2003, 15, 1147-1151.	11.1	168

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109	Bis(dioxaborine) compounds with large two-photon cross sections, and their use in the photodeposition of silver. Chemical Communications, 2003, , 1490-1491.	2.2	90
110	An anionic organic mixed-valence system with a remarkably well-resolved vibrational structure in its intervalence band. Chemical Communications, 2003, , 194-195.	2.2	24
111	High-mobility organic thin-film transistors based on Î±,Î±â€²-didecyloligothiophenes. Journal of Applied Physics, 2003, 93, 2977-2981.	1.1	95
112	Pentacene organic transistors and ring oscillators on glass and on flexible polymeric substrates. Applied Physics Letters, 2003, 82, 4175-4177.	1.5	341
113	Oligothiophene Organic Thin Film Transistors and Circuits. Materials Research Society Symposia Proceedings, 2003, 771, 321.	0.1	2
114	High-mobility polymer gate dielectric pentacene thin film transistors. Journal of Applied Physics, 2002, 92, 5259-5263.	1.1	1,131
115	Fully patterned all-organic thin film transistors. Applied Physics Letters, 2002, 81, 289-291.	1.5	186
116	Polymer Gate Dielectrics and Conducting-Polymer Contactsfor High-Performance Organic Thin-Film Transistors. Advanced Materials, 2002, 14, 1717-1722.	11.1	175
117	Synthesis and Characterization of New Long-Wavelength-Absorbing Oxonol Dyes from the 2,2-Difluoro-1,3,2-dioxaborine Type. Chemistry - A European Journal, 1999, 5, 2511-2517.	1.7	34
118	Diastereoselective epoxidation and bishydroxylation of cyclic tert-butyl allyl peroxides. Tetrahedron, 1996, 52, 13151-13166.	1.0	14