

Thomas Rath

List of Publications by Year in descending order

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78
papers

4,176
citations

249298

26
h-index

124990

64
g-index

78
all docs

78
docs citations

78
times ranked

7529
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	5.2	21
2	Metal Sulfide Thin Films with Tunable Nanoporosity for Photocatalytic Applications. <i>ACS Applied Nano Materials</i> , 2022, 5, 1508-1520.	2.4	10
3	Honeycomb-structured copper indium sulfide thin films obtained via a nanosphere colloidal lithography method. <i>Materials Advances</i> , 2022, 3, 2884-2895.	2.6	6
4	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, .	1.7	5
5	Synthesis and Nanoarchitectonics of Novel Squaraine Derivatives for Organic Photovoltaic Devices. <i>Nanomaterials</i> , 2022, 12, 1206.	1.9	9
6	Benefits of direct electron detection and PCA for EELS investigation of organic photovoltaics materials. <i>Micron</i> , 2021, 140, 102981.	1.1	11
7	A pyrrolopyridazinedione-based copolymer for fullerene-free organic solar cells. <i>New Journal of Chemistry</i> , 2021, 45, 1001-1009.	1.4	3
8	The electron beam freeform fabrication of NiTi shape memory alloys. Part I: Microstructure and physical-chemical behavior. <i>Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications</i> , 2021, 235, 709-716.	0.7	2
9	Simulating the Performance of a Formamidinium Based Mixed Cation Lead Halide Perovskite Solar Cell. <i>Materials</i> , 2021, 14, 6341.	1.3	19
10	Recent Progress in the Design of Fused-Ring Non-Fullerene Acceptors—Relations between Molecular Structure and Optical, Electronic, and Photovoltaic Properties. <i>ACS Applied Energy Materials</i> , 2021, 4, 11899-11981.	2.5	37
11	Synthesis and characterization of zinc di(2,2-dimethylpentan-3-yl dithiocarbonates) bearing pyridine or tetramethylethylenediamine coligands and investigation of their thermal conversion mechanisms towards nanocrystalline zinc sulfide. <i>Dalton Transactions</i> , 2020, 49, 14564-14575.	1.6	6
12	Comparison of fluorene, silafluorene and carbazole as linkers in perylene monoimide based non-fullerene acceptors. <i>Materials Advances</i> , 2020, 1, 2095-2106.	2.6	7
13	New Solar Cell-Battery Hybrid Energy System: Integrating Organic Photovoltaics with Li-Ion and Na-Ion Technologies. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 19155-19168.	3.2	14
14	Elemental Nanoanalysis of Interfacial Alumina-Aryl Fluoride Interactions in Fullerene-Free Organic Tandem Solar Cells. <i>Advanced Materials Interfaces</i> , 2019, 6, 1901053.	1.9	8
15	Dependence of material properties and photovoltaic performance of triple cation tin perovskites on the iodide to bromide ratio. <i>Monatshefte für Chemie</i> , 2019, 150, 1921-1927.	0.9	10
16	Elucidation of Donor:Acceptor Phase Separation in Nonfullerene Organic Solar Cells and Its Implications on Device Performance and Charge Carrier Mobility. <i>ACS Applied Energy Materials</i> , 2019, 2, 7535-7545.	2.5	11
17	Improved Charge Separation and Photovoltaic Performance of Bil ₃ Absorber Layers by Use of an In Situ Formed BiSI Interlayer. <i>ACS Applied Energy Materials</i> , 2019, 2, 7056-7061.	2.5	20
18	Ligand-free preparation of polymer/CuInS ₂ nanocrystal films and the influence of 1,3-benzenedithiol on their photovoltaic performance and charge recombination properties. <i>Journal of Materials Chemistry C</i> , 2019, 7, 943-952.	2.7	8

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19	Hot injection synthesis of CuInS ₂ nanocrystals using metal xanthates and their application in hybrid solar cells. <i>New Journal of Chemistry</i> , 2019, 43, 356-363.	1.4	15
20	The effect of alkylthio substituents on the photovoltaic properties of conjugated polymers. <i>Organic Electronics</i> , 2019, 68, 50-55.	1.4	7
21	Modification of NiOx hole transport layers with 4-bromobenzylphosphonic acid and its influence on the performance of lead halide perovskite solar cells. <i>Journal of Materials Science: Materials in Electronics</i> , 2019, 30, 9602-9611.	1.1	16
22	Synthesis of a tetrazine- <i>quaterthiophene</i> copolymer and its optical, structural and photovoltaic properties. <i>Journal of Materials Science</i> , 2019, 54, 10065-10076.	1.7	8
23	Photovoltaic properties of a triple cation methylammonium/formamidinium/phenylethylammonium tin iodide perovskite. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9523-9529.	5.2	31
24	A Benzobis(thiazole)-Based Copolymer for Highly Efficient Non-Fullerene Polymer Solar Cells. <i>Chemistry of Materials</i> , 2019, 31, 919-926.	3.2	28
25	Influence of the Iodide to Bromide Ratio on Crystallographic and Optoelectronic Properties of Rubidium Antimony Halide Perovskites. <i>ACS Applied Energy Materials</i> , 2019, 2, 539-547.	2.5	28
26	Multi-layered nanoscale cellulose/CuInS ₂ sandwich type thin films. <i>Carbohydrate Polymers</i> , 2019, 203, 219-227.	5.1	12
27	The effect of polymer molecular weight on the performance of PTB7-Th:O-IDTBR non-fullerene organic solar cells. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9506-9516.	5.2	76
28	Enhanced Performance of Germanium Halide Perovskite Solar Cells through Compositional Engineering. <i>ACS Applied Energy Materials</i> , 2018, 1, 343-347.	2.5	200
29	Investigation of NiOx-hole transport layers in triple cation perovskite solar cells. <i>Journal of Materials Science: Materials in Electronics</i> , 2018, 29, 1847-1855.	1.1	25
30	Efficient Hybrid Solar Cells Based on Solution Processed Mesoporous TiO ₂ /Tin(II) Sulfide Heterojunctions. <i>ACS Applied Energy Materials</i> , 2018, 1, 3042-3047.	2.5	26
31	A Zero-Dimensional Mixed-Anion Hybrid Halogenobismuthate(III) Semiconductor: Structural, Optical, and Photovoltaic Properties. <i>Inorganic Chemistry</i> , 2018, 57, 10576-10586.	1.9	26
32	Progress on lead-free metal halide perovskites for photovoltaic applications: a review. <i>Monatshefte für Chemie</i> , 2017, 148, 795-826.	0.9	431
33	Biobased Cellulosic-CuInS ₂ Nanocomposites for Optoelectronic Applications. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 3115-3122.	3.2	24
34	Synthesis of a conjugated pyrrolopyridazinedione-benzodithiophene (PPD-BDT) copolymer and its application in organic and hybrid solar cells. <i>Monatshefte für Chemie</i> , 2017, 148, 855-862.	0.9	10
35	Nickel sulfide thin films and nanocrystals synthesized from nickel xanthate precursors. <i>Journal of Materials Science</i> , 2017, 52, 10898-10914.	1.7	41
36	A comparison of copper indium sulfide-polymer nanocomposite solar cells in inverted and regular device architecture. <i>Synthetic Metals</i> , 2016, 222, 115-123.	2.1	13

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37	Room temperature synthesis of CuInS ₂ nanocrystals. RSC Advances, 2016, 6, 106120-106129.	1.7	30
38	The Role of Oxygen in the Degradation of Methylammonium Lead Trihalide Perovskite Photoactive Layers. Angewandte Chemie - International Edition, 2015, 54, 8208-8212.	7.2	749
39	The Role of Oxygen in the Degradation of Methylammonium Lead Trihalide Perovskite Photoactive Layers. Angewandte Chemie, 2015, 127, 8326-8330.	1.6	154
40	Formation of porous SnS nanoplate networks from solution and their application in hybrid solar cells. Chemical Communications, 2015, 51, 10198-10201.	2.2	41
41	Structural, optical and charge generation properties of chalcocite and tetrahedrite copper antimony sulfide thin films prepared from metal xanthates. Journal of Materials Chemistry A, 2015, 3, 24155-24162.	5.2	74
42	Polymer/Nanocrystal Hybrid Solar Cells: Influence of Molecular Precursor Design on Film Nanomorphology, Charge Generation and Device Performance. Advanced Functional Materials, 2015, 25, 409-420.	7.8	44
43	Investigation on the formation of copper zinc tin sulphide nanoparticles from metal salts and dodecanethiol. Materials Chemistry and Physics, 2015, 149-150, 94-98.	2.0	6
44	Flexible polymer/copper indium sulfide hybrid solar cells and modules based on the metal xanthate route and low temperature annealing. Solar Energy Materials and Solar Cells, 2014, 124, 117-125.	3.0	35
45	Influence of TiO _x and Ti cathode interlayers on the performance and stability of hybrid solar cells. Solar Energy Materials and Solar Cells, 2014, 130, 217-224.	3.0	5
46	Worldwide outdoor round robin study of organic photovoltaic devices and modules. Solar Energy Materials and Solar Cells, 2014, 130, 281-290.	3.0	23
47	In situ syntheses of semiconducting nanoparticles in conjugated polymer matrices and their application in photovoltaics.. Hybrid Materials, 2014, 1, .	0.7	4
48	Real time X-ray scattering study of the formation of ZnS nanoparticles using synchrotron radiation. Materials Chemistry and Physics, 2014, 144, 310-317.	2.0	6
49	Nanoimprinted Comb Structures in a Low Bandgap Polymer: Thermal Processing and Their Application in Hybrid Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 7633-7642.	4.0	9
50	Direct extreme UV-lithographic conversion of metal xanthates into nanostructured metal sulfide layers for hybrid photovoltaics. Journal of Materials Chemistry A, 2013, 1, 11135.	5.2	24
51	Bismuth sulphide-polymer nanocomposites from a highly soluble bismuth xanthate precursor. Journal of Materials Chemistry C, 2013, 1, 7825.	2.7	52
52	Exploring polymer/nanoparticle hybrid solar cells in tandem architecture. RSC Advances, 2013, 3, 18643.	1.7	17
53	Solution-processed copper zinc tin sulfide thin films from metal xanthate precursors. Monatshefte für Chemie, 2013, 144, 273-283.	0.9	27
54	Solution-processed small molecule/copper indium sulfide hybrid solar cells. Solar Energy Materials and Solar Cells, 2013, 114, 38-42.	3.0	26

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55	Influence of morphology and polymer:nanoparticle ratio on device performance of hybrid solar cells – an approach in experiment and simulation. <i>Nanotechnology</i> , 2013, 24, 484005.	1.3	27
56	Comparing photovoltaic parameters of conventional cathodes with a novel silver nanoparticle/aluminum cathode in polymer based solar cells. , 2013, , .		0
57	UV-induced modulation of the conductivity of polyaniline: towards a photo-patternable charge injection layer for structured organic light emitting diodes. <i>Journal of Materials Chemistry</i> , 2012, 22, 2922-2928.	6.7	29
58	Comprehensive Investigation of Silver Nanoparticle/Aluminum Electrodes for Copper Indium Sulfide/Polymer Hybrid Solar Cells. <i>Journal of Physical Chemistry C</i> , 2012, 116, 19191-19196.	1.5	17
59	Investigation of CuInS ₂ Thin Film Formation by a Low-Temperature Chemical Deposition Method. <i>ACS Applied Materials & Interfaces</i> , 2012, 4, 382-390.	4.0	18
60	Copper zinc tin sulfide layers prepared from solution processable metal dithiocarbamate precursors. <i>Materials Chemistry and Physics</i> , 2012, 136, 582-588.	2.0	17
61	Structural characterisation of alkyl amine-capped zinc sulphide nanoparticles. <i>Journal of Colloid and Interface Science</i> , 2012, 369, 154-159.	5.0	16
62	Synthesis and characterization of copper zinc tin chalcogenide nanoparticles: Influence of reactants on the chemical composition. <i>Solar Energy Materials and Solar Cells</i> , 2012, 101, 87-94.	3.0	61
63	Patterned Immobilization of a Luminescent Ru(II) Complex in Polymer Films Using the Photoreaction of Benzyl thiocyanate: Toward Color Emission Tuning of Electroluminescent Devices. <i>Macromolecular Chemistry and Physics</i> , 2012, 213, 367-373.	1.1	3
64	The stoichiometry of single nanoparticles of copper zinc tin selenide. <i>Chemical Communications</i> , 2011, 47, 2050-2052.	2.2	44
65	Investigation of the Formation of CuInS ₂ Nanoparticles by the Oleylamine Route: Comparison of Microwave-Assisted and Conventional Syntheses. <i>Inorganic Chemistry</i> , 2011, 50, 193-200.	1.9	84
66	An inter-laboratory stability study of roll-to-roll coated flexible polymer solar modules. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1398-1416.	3.0	132
67	Consensus stability testing protocols for organic photovoltaic materials and devices. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1253-1267.	3.0	812
68	Electron Beam-Induced Current (EBIC) in solution-processed solar cells. <i>Scanning</i> , 2011, 33, 1-6.	0.7	42
69	A Direct Route Towards Polymer/Copper Indium Sulfide Nanocomposite Solar Cells. <i>Advanced Energy Materials</i> , 2011, 1, 1046-1050.	10.2	102
70	CuInS ₂ -Poly(3-(ethyl-4-butanoate)thiophene) nanocomposite solar cells: Preparation by an in situ formation route, performance and stability issues. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 1354-1361.	3.0	45
71	Metal sulfide-polymer nanocomposite thin films prepared by a direct formation route for photovoltaic applications. <i>Thin Solid Films</i> , 2011, 519, 4201-4206.	0.8	24
72	Solar Cells based on Cu ₂ ZnSnS ₄ Thin Films Prepared from Metal Salts and Thioacetamide. <i>Materials Research Society Symposia Proceedings</i> , 2010, 1247, 1.	0.1	0

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73	Polymer - CuInS ₂ /hybrid solar cells obtained by an in-situ formation route. , 2010, , .		2
74	Investigation of Cu ₂ ZnSnS ₄ Formation from Metal Salts and Thioacetamide. Chemistry of Materials, 2010, 22, 3399-3406.	3.2	109
75	Investigation of Primary Crystallite Sizes in Nanocrystalline ZnS Powders: Comparison of Microwave Assisted with Conventional Synthesis Routes. Inorganic Chemistry, 2008, 47, 3014-3022.	1.9	25
76	Photoreactive Polynorbornene Bearing 4-(Diphenylamino)benzoate Groups: Synthesis and Application in Electroluminescent Devices. Monatshefte für Chemie, 2007, 138, 269-276.	0.9	10
77	Hybrid solar cells based on CuInS ₂ and MEH-PPV. , 2006, , .		7
78	Investigation of new polymers with regard to the application in hybrid solar cells. , 2006, , .		0