

# Gebhard J Matt

## List of Publications by Year in descending order

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34  
papers

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citations

257450

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docs citations

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times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Surface versus Bulk Currents and Ionic Space-Charge Effects in CsPbBr <sub>3</sub> Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 3824-3830.	4.6	11
2	Degradation through Directional Self-Doping and Homogeneous Density of Recombination Centers Hindered by 1,8-Diiodooctane Additive in Non-Fullerene Organic Solar Cells. <i>Solar Rrl</i> , 2021, 5, 2100024.	5.8	4
3	Discovery of temperature-induced stability reversal in perovskites using high-throughput robotic learning. <i>Nature Communications</i> , 2021, 12, 2191.	12.8	77
4	Self-Healing Cs <sub>3</sub> Bi <sub>2</sub> Br <sub>3</sub> I <sub>6</sub> Perovskite Wafers for X-Ray Detection. <i>Advanced Functional Materials</i> , 2021, 31, 2102713.	14.9	29
5	Characterization of Aerosol Deposited Cesium Lead Tribromide Perovskite Films on Interdigitated ITO Electrodes. <i>Advanced Electronic Materials</i> , 2021, 7, 2001165.	5.1	5
6	Analytical model for light modulating impedance spectroscopy (LIMIS) in all-solid-state p-n junction solar cells at open-circuit. <i>Applied Physics Letters</i> , 2020, 116, .	3.3	13
7	Strain-activated light-induced halide segregation in mixed-halide perovskite solids. <i>Nature Communications</i> , 2020, 11, 6328.	12.8	86
8	Light intensity modulated impedance spectroscopy (LIMIS) in all-solid-state solar cells at open-circuit. <i>Nano Energy</i> , 2020, 75, 104982.	16.0	22
9	Sensitive Direct Converting X-Ray Detectors Utilizing Crystalline CsPbBr <sub>3</sub> Perovskite Films Fabricated via Scalable Melt Processing. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901575.	3.7	83
10	Looking beyond the Surface: The Band Gap of Bulk Methylammonium Lead Iodide. <i>Nano Letters</i> , 2020, 20, 3090-3097.	9.1	16
11	A perspective on the bright future of metal halide perovskites for X-ray detection. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	45
12	Revealing Hidden UV Instabilities in Organic Solar Cells by Correlating Device and Material Stability. <i>Advanced Energy Materials</i> , 2019, 9, 1902124.	19.5	74
13	Electrical-Field-Driven Tunable Spectral Responses in a Broadband-Absorbing Perovskite Photodiode. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 39018-39025.	8.0	8
14	Ionic dipolar switching hinders charge collection in perovskite solar cells with normal and inverted hysteresis. <i>Solar Energy Materials and Solar Cells</i> , 2019, 195, 291-298.	6.2	29
15	Absence of Charge Transfer State Enables Very Low $V_{OC}$ Losses in SWCNT:Fullerene Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1801913.	19.5	25
16	Local Observation of Phase Segregation in Mixed-Halide Perovskite. <i>Nano Letters</i> , 2018, 18, 2172-2178.	9.1	186
17	Assessing Temperature Dependence of Drift Mobility in Methylammonium Lead Iodide Perovskite Single Crystals. <i>Journal of Physical Chemistry C</i> , 2018, 122, 5935-5939.	3.1	47
18	Discerning recombination mechanisms and ideality factors through impedance analysis of high-efficiency perovskite solar cells. <i>Nano Energy</i> , 2018, 48, 63-72.	16.0	103

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19	Revealing Trap States in Lead Sulphide Colloidal Quantum Dots by Photoinduced Absorption Spectroscopy. <i>Advanced Electronic Materials</i> , 2018, 4, 1700348.	5.1	25
20	Structural fluctuations cause spin-split states in tetragonal (CH <sub>3</sub> NH <sub>3</sub> )PbI <sub>3</sub> as evidenced by the circular photogalvanic effect. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 9509-9514.	7.1	106
21	Single molecular precursor ink for AgBiS <sub>2</sub> thin films: synthesis and characterization. <i>Journal of Materials Chemistry C</i> , 2018, 6, 7642-7651.	5.5	20
22	Abnormal strong burn-in degradation of highly efficient polymer solar cells caused by spinodal donor-acceptor demixing. <i>Nature Communications</i> , 2017, 8, 14541.	12.8	298
23	High-performance direct conversion X-ray detectors based on sintered hybrid lead triiodide perovskite wafers. <i>Nature Photonics</i> , 2017, 11, 436-440.	31.4	442
24	Brightly Luminescent and Color-Tunable Formamidinium Lead Halide Perovskite FAPbX <sub>3</sub> (X) Tj ETQq0 0 0 rgBT /Overlock 10	9.1	356
25	Suppression of Hysteresis Effects in Organohalide Perovskite Solar Cells. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700007.	3.7	57
26	Overcoming the Interface Losses in Planar Heterojunction Perovskite-Based Solar Cells. <i>Advanced Materials</i> , 2016, 28, 5112-5120.	21.0	188
27	Exploring the Limiting Open-Circuit Voltage and the Voltage Loss Mechanism in Planar CH <sub>3</sub> NH <sub>3</sub> PbBr <sub>3</sub> Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1600132.	19.5	71
28	Photoinduced degradation of methylammonium lead triiodide perovskite semiconductors. <i>Journal of Materials Chemistry A</i> , 2016, 4, 15896-15903.	10.3	119
29	Inverted, Environmentally Stable Perovskite Solar Cell with a Novel Low-Cost and Water-Free PEDOT Hole-Extraction Layer. <i>Advanced Energy Materials</i> , 2015, 5, 1500543.	19.5	81
30	Detection of X-ray photons by solution-processed lead halide perovskites. <i>Nature Photonics</i> , 2015, 9, 444-449.	31.4	916
31	A Universal Interface Layer Based on an Amine-Functionalized Fullerene Derivative with Dual Functionality for Efficient Solution Processed Organic and Perovskite Solar Cells. <i>Advanced Energy Materials</i> , 2015, 5, 1401692.	19.5	144
32	Spray-Coated Silver Nanowires as Top Electrode Layer in Semitransparent P3HT:PCBM-Based Organic Solar Cell Devices. <i>Advanced Functional Materials</i> , 2013, 23, 1711-1717.	14.9	216
33	ITO-Free and Fully Solution-Processed Semitransparent Organic Solar Cells with High Fill Factors. <i>Advanced Energy Materials</i> , 2013, 3, 1062-1067.	19.5	172
34	Long term Surface and Bulk Currents with Space-Charge Effects in Lead Halide Perovskites. , 0, , .		0