Rahim Munir

List of Publications by Citations

40 papers	3,651 citations	26 h-index	49 g-index
49 ext. papers	4,286 ext. citations	15.7 avg, IF	5.28 L-index

#	Paper	IF	Citations
40	Stable High-Performance Perovskite Solar Cells via Grain Boundary Passivation. *Advanced Materials*, **2018**, 30, e1706576	24	505
39	Stable high efficiency two-dimensional perovskite solar cells via cesium doping. *Energy and Environmental Science*, **2017**, 10, 2095-2102	35.4	496
38	Hybrid organic-inorganic inks flatten the energy landscape in colloidal quantum dot solids. *Nature Materials*, **2017**, 16, 258-263	27	432
37	Compositional and orientational control in metal halide perovskites of reduced dimensionality. *Nature Materials*, **2018**, 17, 900-907	27	252
36	2D matrix engineering for homogeneous quantum dot coupling in photovoltaic solids. *Nature Nanotechnology*, **2018**, 13, 456-462	28.7	196
35	Phase Transition Control for High Performance Ruddlesden-Popper Perovskite Solar Cells. *Advanced Materials*, **2018**, 30, e1707166	24	192
34	Lattice anchoring stabilizes solution-processed semiconductors. *Nature*, **2019**, 570, 96-101	50.4	149
33	Multi-inch single-crystalline perovskite membrane for high-detectivity flexible photosensors. *Nature Communications*, **2018**, 9, 5302	17.4	136
32	Blade-Coated Hybrid Perovskite Solar Cells with Efficiency > 17%: An In Situ Investigation. *ACS Energy Letters*, **2018**, 3, 1078-1085	20.1	132
31	Phase Transition Control for High-Performance Blade-Coated Perovskite Solar Cells. *Joule*, **2018**, 2, 1313-1330	39	125
30	Hybrid Perovskite Thin-Film Photovoltaics: In Situ Diagnostics and Importance of the Precursor Solvate Phases. *Advanced Materials*, **2017**, 29, 1604113	24	120
29	Enhanced Electrical Conductivity of Molecularly p-Doped Poly(3-hexylthiophene) through Understanding the Correlation with Solid-State Order. *Macromolecules*, **2017**, 50, 8140-8148	5.5	107
28	Efficient near-infrared light-emitting diodes based on quantum dots in layered perovskite. *Nature Photonics*, **2020**, 14, 227-233	33.9	91
27	Organic Gelators as Growth Control Agents for Stable and Reproducible Hybrid Perovskite-Based Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1602600	21.8	65
26	Kinetic Stabilization of the Sol-Gel State in Perovskites Enables Facile Processing of High-Efficiency Solar Cells. *Advanced Materials*, **2019**, 31, e1808357	24	57
25	Effects of High Temperature and Thermal Cycling on the Performance of Perovskite Solar Cells: Acceleration of Charge Recombination and Deterioration of Charge Extraction. *ACS Applied Materials & Interfaces*, **2017**, 9, 35018-35029	9.5	52
24	20.8% Slot-Die Coated MAPbI3 Perovskite Solar Cells by Optimal DMSO-Content and Age of 2-ME Based Precursor Inks. *Advanced Energy Materials*, **2021**, 11, 2003460	21.8	52

23	Conducting and Stretchable PEDOT:PSS Electrodes: Role of Additives on Self-Assembly, Morphology, and Transport. *ACS Applied Materials & Interfaces*, **2019**, 11, 17570-17582	9.5	41
22	Improved Morphology and Efficiency of n□ Planar Perovskite Solar Cells by Processing with Glycol Ether Additives. *ACS Energy Letters*, **2017**, 2, 1960-1968	20.1	39
21	The Roles of Structural Order and Intermolecular Interactions in Determining Ionization Energies and Charge-Transfer State Energies in Organic Semiconductors. *Advanced Energy Materials*, **2016**, 6, 1601211	21.8	37
20	Mesostructured Fullerene Electrodes for Highly Efficient n□ Perovskite Solar Cells. *ACS Energy Letters*, **2016**, 1, 1049-1056	20.1	35
19	Alkali Salts as Interface Modifiers in n-i-p Hybrid Perovskite Solar Cells. *Solar Rrl*, **2019**, 3, 1900088	7.1	32
18	Compositional and Interfacial Engineering Yield High-Performance and Stable p-i-n Perovskite Solar Cells and Mini-Modules. *ACS Applied Materials & Interfaces*, **2021**, 13, 13022-13033	9.5	31
17	Controlled Steric Hindrance Enables Efficient Ligand Exchange for Stable, Infrared-Bandgap Quantum Dot Inks. *ACS Energy Letters*, **2019**, 4, 1225-1230	20.1	30
16	Bismuth-Based Perovskite-Inspired Solar Cells: In Situ Diagnostics Reveal Similarities and Differences in the Film Formation of Bismuth- and Lead-Based Films. *Solar Rrl*, **2019**, 3, 1800305	7.1	30
15	Programmable and coherent crystallization of semiconductors. *Science Advances*, **2017**, 3, e1602462	14.3	27
14	An open-access database and analysis tool for perovskite solar cells based on the FAIR data principles. *Nature Energy*, **2022**, 7, 107-115	62.3	26
13	In situ study of the film formation mechanism of organic□norganic hybrid perovskite solar cells: controlling the solvate phase using an additive system. *Journal of Materials Chemistry A*, **2020**, 8, 7695-7703	13	25
12	Hybrid perovskite solar cells: In situ investigation of solution-processed PbI2 reveals metastable precursors and a pathway to producing porous thin films. *Journal of Materials Research*, **2017**, 32, 1899-1907	2.5	24
11	Solution-processable MoOx nanocrystals enable highly efficient reflective and semitransparent polymer solar cells. *Nano Energy*, **2016**, 28, 277-287	17.1	23
10	Facile Doping and Work-Function Modification of Few-Layer Graphene Using Molecular Oxidants and Reductants. *Advanced Functional Materials*, **2017**, 27, 1602004	15.6	22
9	Study on the enhanced and stable field emission behavior of a novel electrosprayed Al-doped ZnO bilayer film. *RSC Advances*, **2014**, 4, 9072	3.7	18
8	Hybrid perovskite crystallization from binary solvent mixtures: interplay of evaporation rate and binding strength of solvents. *Materials Advances*, **2020**, 1, 3314-3321	3.3	17
7	Wide and Tunable Bandgap MAPbBr3□Clx Hybrid Perovskites with Enhanced Phase Stability: In Situ Investigation and Photovoltaic Devices. *Solar Rrl*, **2021**, 5, 2000718	7.1	10
6	Zinc Oxide-Perylene Diimide Hybrid Electron Transport Layers for Air-Processed Inverted Organic Photovoltaic Devices. *ACS Applied Materials & Interfaces*, **2021**, 13, 49096-49103	9.5	8

5	Characterization of Cu2ZnSnSe4Thin Films Selenized with Cu2-xSe/SnSe2/ZnSe and Cu/SnSe2/ZnSe Stacks. *Korean Journal of Materials Research*, **2013**, 23, 183-189	0.2	4
4	Facile and noninvasive passivation, doping and chemical tuning of macroscopic hybrid perovskite crystals. *PLoS ONE*, **2020**, 15, e0230540	3.7	3
3	Ultra-low p-doping of poly(3-hexylthiophene) and its impact on polymer aggregation and photovoltaic performance. *Organic Photonics and Photovoltaics*, **2016**, 4,	5	3
2	Air-Processed Organic Photovoltaics for Outdoor and Indoor Use Based upon a Tin Oxide-Perylene Diimide Electron Transporting Bilayer. *Advanced Materials Interfaces*, **2022**, 9, 2101918	4.6	3
1	Perovskite Photovoltaics: Hybrid Perovskite Thin-Film Photovoltaics: In Situ Diagnostics and Importance of the Precursor Solvate Phases (Adv. Mater. 2/2017). *Advanced Materials*, **2017**, 29,	24	1