Osman M Bakr

List of Publications by Citations

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282 papers	29,487 citations	85 h-index	168 g-index
297 ext. papers	35,226 ext. citations	13.4 avg, IF	7.46 L-index

#	Paper	IF	Citations
282	Solar cells. Low trap-state density and long carrier diffusion in organolead trihalide perovskite single crystals. *Science*, **2015**, 347, 519-22	33.3	3307
281	High-quality bulk hybrid perovskite single crystals within minutes by inverse temperature crystallization. *Nature Communications*, **2015**, 6, 7586	17.4	1164
280	Colloidal Quantum Dot Solar Cells. *Chemical Reviews*, **2015**, 115, 12732-63	68.1	812
279	All-inorganic perovskite nanocrystal scintillators. *Nature*, **2018**, 561, 88-93	50.4	773
278	Highly Efficient Perovskite-Quantum-Dot Light-Emitting Diodes by Surface Engineering. *Advanced Materials*, **2016**, 28, 8718-8725	24	700
277	Managing grains and interfaces via ligand anchoring enables 22.3%-efficiency inverted perovskite solar cells. *Nature Energy*, **2020**, 5, 131-140	62.3	552
276	Formamidinium Lead Halide Perovskite Crystals with Unprecedented Long Carrier Dynamics and Diffusion Length. *ACS Energy Letters*, **2016**, 1, 32-37	20.1	551
275	Bidentate Ligand-Passivated CsPbI Perovskite Nanocrystals for Stable Near-Unity Photoluminescence Quantum Yield and Efficient Red Light-Emitting Diodes. *Journal of the American Chemical Society*, **2018**, 140, 562-565	16.4	537
274	CH3NH3PbCl3 Single Crystals: Inverse Temperature Crystallization and Visible-Blind UV-Photodetector. *Journal of Physical Chemistry Letters*, **2015**, 6, 3781-6	6.4	507
273	Planar-integrated single-crystalline perovskite photodetectors. *Nature Communications*, **2015**, 6, 8724	17.4	497
272	Making and Breaking of Lead Halide Perovskites. *Accounts of Chemical Research*, **2016**, 49, 330-8	24.3	491
271	A Study of the Surface Plasmon Resonance of Silver Nanoparticles by the Discrete Dipole Approximation Method: Effect of Shape, Size, Structure, and Assembly. *Plasmonics*, **2010**, 5, 85-97	2.4	470
270	Air-stable n-type colloidal quantum dot solids. *Nature Materials*, **2014**, 13, 822-8	27	466
269	Air-Stable Surface-Passivated Perovskite Quantum Dots for Ultra-Robust, Single- and Two-Photon-Induced Amplified Spontaneous Emission. *Journal of Physical Chemistry Letters*, **2015**, 6, 5027-33	6.4	398
268	[Ag25(SR)18](-): The "Golden" Silver Nanoparticle. *Journal of the American Chemical Society*, **2015**, 137, 11578-81	16.4	387
267	17% Efficient Organic Solar Cells Based on Liquid Exfoliated WS as a Replacement for PEDOT:PSS. *Advanced Materials*, **2019**, 31, e1902965	24	384
266	Doping-Enhanced Short-Range Order of Perovskite Nanocrystals for Near-Unity Violet Luminescence Quantum Yield. *Journal of the American Chemical Society*, **2018**, 140, 9942-9951	16.4	380

265	Pure Cs4PbBr6: Highly Luminescent Zero-Dimensional Perovskite Solids. *ACS Energy Letters*, **2016**, 1, 840-845	20.1	367
264	Metal-Doped Lead Halide Perovskites: Synthesis, Properties, and Optoelectronic Applications. *Chemistry of Materials*, **2018**, 30, 6589-6613	9.6	324
263	Engineering Interfacial Charge Transfer in CsPbBr Perovskite Nanocrystals by Heterovalent Doping. *Journal of the American Chemical Society*, **2017**, 139, 731-737	16.4	323
262	A general mechanism for intracellular toxicity of metal-containing nanoparticles. *Nanoscale*, **2014**, 6, 7052-61	7.7	320
261	Tailoring the Energy Landscape in Quasi-2D Halide Perovskites Enables Efficient Green-Light Emission. *Nano Letters*, **2017**, 17, 3701-3709	11.5	309
260	Single-Crystal MAPbI3 Perovskite Solar Cells Exceeding 21% Power Conversion Efficiency. *ACS Energy Letters*, **2019**, 4, 1258-1259	20.1	291
259	Low-Dimensional-Networked Metal Halide Perovskites: The Next Big Thing. *ACS Energy Letters*, **2017**, 2, 889-896	20.1	288
258	Ag29(BDT)12(TPP)4: A Tetravalent Nanocluster. *Journal of the American Chemical Society*, **2015**, 137, 11970-5	16.4	284
257	Inorganic Lead Halide Perovskite Single Crystals: Phase-Selective Low-Temperature Growth, Carrier Transport Properties, and Self-Powered Photodetection. *Advanced Optical Materials*, **2017**, 5, 1600704	8.1	277
256	Heterovalent Dopant Incorporation for Bandgap and Type Engineering of Perovskite Crystals. *Journal of Physical Chemistry Letters*, **2016**, 7, 295-301	6.4	268
255	Retrograde solubility of formamidinium and methylammonium lead halide perovskites enabling rapid single crystal growth. *Chemical Communications*, **2015**, 51, 17658-61	5.8	266
254	Amine-Free Synthesis of Cesium Lead Halide Perovskite Quantum Dots for Efficient Light-Emitting Diodes. *Advanced Functional Materials*, **2016**, 26, 8757-8763	15.6	265
253	Templated Atom-Precise Galvanic Synthesis and Structure Elucidation of a [Ag24Au(SR)18](-) Nanocluster. *Angewandte Chemie - International Edition*, **2016**, 55, 922-6	16.4	252
252	Self-Assembled Monolayer Enables Hole Transport Layer-Free Organic Solar Cells with 18% Efficiency and Improved Operational Stability. *ACS Energy Letters*, **2020**, 5, 2935-2944	20.1	244
251	Solution-Grown Monocrystalline Hybrid Perovskite Films for Hole-Transporter-Free Solar Cells. *Advanced Materials*, **2016**, 28, 3383-90	24	238
250	Zero-Dimensional CsPbBr Perovskite Nanocrystals. *Journal of Physical Chemistry Letters*, **2017**, 8, 961-965	6.4	229
249	Silver nanoparticles with broad multiband linear optical absorption. *Angewandte Chemie - International Edition*, **2009**, 48, 5921-6	16.4	223
248	High-Yield Synthesis of Multi-Branched Urchin-Like Gold Nanoparticles. *Chemistry of Materials*, **2006**, 18, 3297-3301	9.6	223

247	State of the Art and Prospects for Halide Perovskite Nanocrystals. *ACS Nano*, **2021**, 15, 10775-10981	16.7	222
246	Metal Halide Perovskite Nanosheet for X-ray High-Resolution Scintillation Imaging Screens. *ACS Nano*, **2019**, 13, 2520-2525	16.7	218
245	Gold Doping of Silver Nanoclusters: A 26-Fold Enhancement in the Luminescence Quantum Yield. *Angewandte Chemie - International Edition*, **2016**, 55, 5749-53	16.4	218
244	Two-Photon Absorption in Organometallic Bromide Perovskites. *ACS Nano*, **2015**, 9, 9340-6	16.7	208
243	Perovskite Photodetectors Operating in Both Narrowband and Broadband Regimes. *Advanced Materials*, **2016**, 28, 8144-8149	24	206
242	Ultralow Self-Doping in Two-dimensional Hybrid Perovskite Single Crystals. *Nano Letters*, **2017**, 17, 4759-4767	11.5	202
241	Fast and Sensitive Solution-Processed Visible-Blind Perovskite UV Photodetectors. *Advanced Materials*, **2016**, 28, 7264-8	24	192
240	Giant Photoluminescence Enhancement in CsPbCl3 Perovskite Nanocrystals by Simultaneous Dual-Surface Passivation. *ACS Energy Letters*, **2018**, 3, 2301-2307	20.1	189
239	Atomic-Level Doping of Metal Clusters. *Accounts of Chemical Research*, **2018**, 51, 3094-3103	24.3	185
238	Determination of nanoparticle size distribution together with density or molecular weight by 2D analytical ultracentrifugation. *Nature Communications*, **2011**, 2, 335	17.4	182
237	A Simple n-Dopant Derived from Diquat Boosts the Efficiency of Organic Solar Cells to 18.3%. *ACS Energy Letters*, **2020**, 5, 3663-3671	20.1	175
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235	Inside Perovskites: Quantum Luminescence from Bulk Cs4PbBr6 Single Crystals. *Chemistry of Materials*, **2017**, 29, 7108-7113	9.6	160
234	Quantum Dots Supply Bulk- and Surface-Passivation Agents for Efficient and Stable Perovskite Solar Cells. *Joule*, **2019**, 3, 1963-1976	27.8	154
233	The In-Gap Electronic State Spectrum of Methylammonium Lead Iodide Single-Crystal Perovskites. *Advanced Materials*, **2016**, 28, 3406-10	24	151
232	Tuning Properties in Silver Clusters. *Journal of Physical Chemistry Letters*, **2015**, 6, 3023-35	6.4	150
231	Bright high-colour-purity deep-blue carbon dot light-emitting diodes via efficient edge amination. *Nature Photonics*, **2020**, 14, 171-176	33.9	144
230	Pure crystal orientation and anisotropic charge transport in large-area hybrid perovskite films. *Nature Communications*, **2016**, 7, 13407	17.4	140

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228	[Ag(SPhMe)(PPh)]: Synthesis, Total Structure, and Optical Properties of a Large Box-Shaped Silver Nanocluster. *Journal of the American Chemical Society*, **2016**, 138, 14727-14732	16.4	138
227	Ag44(SR)30(4-): a silver-thiolate superatom complex. *Nanoscale*, **2012**, 4, 4269-74	7.7	138
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155	The complete in-gap electronic structure of colloidal quantum dot solids and its correlation with electronic transport and photovoltaic performance. *Advanced Materials*, **2014**, 26, 937-42	24	51
154	Double peak emission in lead halide perovskites by self-absorption. *Journal of Materials Chemistry C*, **2020**, 8, 2289-2300	7.1	51
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150	Direct versus ligand-exchange synthesis of [PtAg(BDT)(TPP)] nanoclusters: effect of a single-atom dopant on the optoelectronic and chemical properties. *Nanoscale*, **2017**, 9, 9529-9536	7.7	47
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131	Modulation of Broadband Emissions in Two-Dimensional <100>-Oriented Ruddlesden–Popper Hybrid Perovskites. *ACS Energy Letters*, **2020**, 5, 2149-2155	20.1	33
130	Temperature-Induced Lattice Relaxation of Perovskite Crystal Enhances Optoelectronic Properties and Solar Cell Performance. *Journal of Physical Chemistry Letters*, **2017**, 8, 137-143	6.4	32
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