

# Murad J Y Tayebjee

## List of Publications by Year in descending order

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52  
papers

2,256  
citations

304701

22  
h-index

254170

43  
g-index

59  
all docs

59  
docs citations

59  
times ranked

2355  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the efficiency limit of triplet-triplet annihilation for photochemical upconversion. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 66-71.	2.8	342
2	Kinetic Analysis of Photochemical Upconversion by Triplet-Triplet Annihilation: Beyond Any Spin Statistical Limit. <i>Journal of Physical Chemistry Letters</i> , 2010, 1, 1795-1799.	4.6	248
3	Quintet multiexciton dynamics in singlet fission. <i>Nature Physics</i> , 2017, 13, 182-188.	16.7	220
4	Tuning Singlet Fission in $\pi$ -Bridge $\pi$ -Chromophores. <i>Journal of the American Chemical Society</i> , 2017, 139, 12488-12494.	13.7	147
5	Beyond Shockley-Queisser: Molecular Approaches to High-Efficiency Photovoltaics. <i>Journal of Physical Chemistry Letters</i> , 2015, 6, 2367-2378.	4.6	142
6	The exciton dynamics in tetracene thin films. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 14797.	2.8	106
7	Thermodynamic Limit of Exciton Fission Solar Cell Efficiency. <i>Journal of Physical Chemistry Letters</i> , 2012, 3, 2749-2754.	4.6	95
8	Crystalline silicon solar cells with tetracene interlayers: the path to silicon-singlet fission heterojunction devices. <i>Materials Horizons</i> , 2018, 5, 1065-1075.	12.2	92
9	Photochemical Upconversion Enhanced Solar Cells: Effect of a Back Reflector. <i>Australian Journal of Chemistry</i> , 2012, 65, 480.	0.9	85
10	Ultra-fast intramolecular singlet fission to persistent multiexcitons by molecular design. <i>Nature Chemistry</i> , 2019, 11, 821-828.	13.6	85
11	Hot carrier solar cell absorber prerequisites and candidate material systems. <i>Solar Energy Materials and Solar Cells</i> , 2015, 135, 124-129.	6.2	76
12	Morphological Evolution and Singlet Fission in Aqueous Suspensions of TIPS-Pentacene Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016, 120, 157-165.	3.1	71
13	Interplay between the hot phonon effect and intervalley scattering on the cooling rate of hot carriers in GaAs and InP. <i>Progress in Photovoltaics: Research and Applications</i> , 2012, 20, 82-92.	8.1	61
14	Lessons Learnt from Spatially Resolved Electro- and Photoluminescence Imaging: Interfacial Delamination in $\text{CH}_3\text{NH}_3\text{PbI}_3$ Planar Perovskite Solar Cells upon Illumination. <i>Advanced Energy Materials</i> , 2017, 7, 1602111.	19.5	50
15	Intramolecular Versus Intermolecular Triplet Fusion in Multichromophoric Photochemical Upconversion. <i>Journal of Physical Chemistry C</i> , 2019, 123, 20181-20187.	3.1	42
16	Fluctuating exchange interactions enable quintet multiexciton formation in singlet fission. <i>Journal of Chemical Physics</i> , 2019, 151, 164104.	3.0	33
17	Elucidation of Excitation Energy Dependent Correlated Triplet Pair Formation Pathways in an Endothermic Singlet Fission System. <i>Journal of the American Chemical Society</i> , 2018, 140, 4613-4622.	13.7	32
18	Effect of Blend Composition on Bulk Heterojunction Organic Solar Cells: A Review. <i>Solar Rrl</i> , 2017, 1, 1700035.	5.8	29

#	ARTICLE	IF	CITATIONS
19	Electro- and photoluminescence imaging as fast screening technique of the layer uniformity and device degradation in planar perovskite solar cells. <i>Journal of Applied Physics</i> , 2016, 120, .	2.5	27
20	InGaAs/GaAsP quantum wells for hot carrier solar cells. <i>Proceedings of SPIE</i> , 2012, , .	0.8	25
21	Singlet fission photovoltaics: Progress and promising pathways. <i>Chemical Physics Reviews</i> , 2022, 3, .	5.7	24
22	The efficiency limit of solar cells with molecular absorbers: A master equation approach. <i>Journal of Applied Physics</i> , 2010, 108, 124506.	2.5	22
23	Extended hot carrier lifetimes observed in bulk In <sub>0.265</sub> As <sub>0.02</sub> Ga <sub>0.735</sub> N under high-density photoexcitation. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	22
24	Singlet Fission in Concentrated TIPS-Pentacene Solutions: The Role of Excimers and Aggregates. <i>Journal of the American Chemical Society</i> , 2021, 143, 13749-13758.	13.7	22
25	Semi-Empirical Limiting Efficiency of Singlet-Fission-Capable Polyacene/Inorganic Hybrid Solar Cells. <i>Journal of Physical Chemistry C</i> , 2014, 118, 2298-2305.	3.1	18
26	Hot carrier dynamics in InGaAs/GaAsP quantum well solar cells. , 2011, , .		16
27	Limitations and design considerations for donor-acceptor systems in luminescent solar concentrators: the effect of coupling-induced red-edge absorption. <i>Journal of Optics (United Kingdom)</i> 11 078431		10
28	Singlet fission and tandem solar cells reduce thermal degradation and enhance lifespan. <i>Progress in Photovoltaics: Research and Applications</i> , 2021, 29, 899-906.	8.1	12
29	All-optical augmentation of solar cells using a combination of up- and downconversion. <i>Journal of Photonics for Energy</i> , 2018, 8, 1.	1.3	11
30	Effects of blend composition on the morphology of Si-PCPDTBT:PC <sub>71</sub> BM bulk heterojunction organic solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 1931-1940.	1.8	8
31	Atmospheric oxidation intermediates: Laser spectroscopy of resonance-stabilized radicals from p-cymene. <i>Chemical Physics Letters</i> , 2015, 620, 129-133.	2.6	8
32	Hot carrier solar cells: Challenges and recent progress. , 2010, , .		7
33	Hot Carrier Cooling in In <sub>0.17</sub> Ga <sub>0.83</sub> As/GaAs <sub>0.80</sub> P <sub>0.20</sub> Multiple Quantum Wells: The Effect of Barrier Thickness. <i>IEEE Journal of Photovoltaics</i> , 2016, 6, 166-171.	2.5	7
34	Pentacene-bridge Interactions in an Axially Chiral Binaphthyl Pentacene Dimer. <i>Journal of Physical Chemistry A</i> , 2021, 125, 7226-7234.	2.5	7
35	Molecular approaches to third generation photovoltaics: photochemical up-conversion. , 2010, , .		5
36	Influence of bridging atom on the vertical phase separation of low band gap bulk heterojunction solar cells. <i>Physica Status Solidi - Rapid Research Letters</i> , 2014, 8, 904-907.	2.4	5

#	ARTICLE	IF	CITATIONS
37	Effect of blend composition on ternary blend organic solar cells using a low band gap polymer. Synthetic Metals, 2016, 212, 142-153.	3.9	5
38	Upconversion. , 2012, , 533-548.		4
39	A medium-energy photoemission and ab-initio investigation of cubic yttria-stabilised zirconia. Journal of Applied Physics, 2014, 115, 143502.	2.5	4
40	Hot carrier solar cell absorbers: materials, mechanisms and nanostructures. Proceedings of SPIE, 2014, , .	0.8	4
41	Dark carrier dynamics and electrical characteristics of organic solar cells integrated with Ag-SiO <sub>2</sub> core-shell nanoparticles. Synthetic Metals, 2017, 223, 34-42.	3.9	4
42	Microscopic reversibility demands lower open circuit voltage in multiple exciton generation solar cells. Applied Physics Letters, 2021, 118, .	3.3	4
43	Scalable ways to break the efficiency limit of single-junction solar cells. Applied Physics Letters, 2022, 120, .	3.3	4
44	Singlet and Triplet Exciton Dynamics of Violanthrone. Journal of Physical Chemistry C, 2021, 125, 22464-22471.	3.1	3
45	Improving the light-harvesting of second generation solar cells with photochemical upconversion. Proceedings of SPIE, 2012, , .	0.8	2
46	Constraints imposed by the sparse solar photon flux on upconversion and hot carrier solar cells. Solar Energy, 2022, 237, 44-51.	6.1	2
47	Two-photon triplet-triplet annihilation upconversion for photovoltaics. , 2011, , .		1
48	Downconversion. , 2012, , 549-561.		1
49	Effect of Blend Composition on Binary Organic Solar Cells Using a Low Band Gap Polymer. Journal of Nanoscience and Nanotechnology, 2015, 15, 2204-2211.	0.9	1
50	Slowed hot carrier cooling in multiple quantum wells for application to hot carrier solar cells. , 2019, , .		1
51	CHAPTER 15. Tripletâ€”triplet Annihilation Up-conversion. RSC Energy and Environment Series, 0, , 489-505.	0.5	0
52	Special Section Guest Editorial: Spectral Management for Renewable Energy Conversion. Journal of Photonics for Energy, 2018, 8, 1.	1.3	0