Kenan Gundogdu

List of Publications by Year in Descending Order

86 papers	4,500 citations	32 h-index	66 g-index
92 ext. papers	5,095 ext. citations	10.1 avg, IF	5.53 L-index

#	Paper	IF	Citations
86	Room-temperature superfluorescence in hybrid perovskites and its origins. *Nature Photonics*, **2022**, 16, 324-329	33.9	5
85	Broadband micro-transient absorption spectroscopy enabled by improved lock-in amplification. *Review of Scientific Instruments*, **2021**, 92, 104706	1.7	1
84	High-temperature superfluorescence in methyl ammonium lead iodide. *Nature Photonics*, **2021**, 15, 676-680	33.9	6
83	Metal Halide Perovskites for Laser Applications. *Advanced Functional Materials*, **2021**, 31, 2010144	15.6	60
82	Enhanced Dielectric Screening and Photoluminescence from Nanopillar-Strained MoS2 Nanosheets: Implications for Strain Funneling in Optoelectronic Applications. *ACS Applied Nano Materials*, **2021**, 4, 8101-8107	5.6	5
81	Thermodynamic Properties and Molecular Packing Explain Performance and Processing Procedures of Three D18:NFA Organic Solar Cells. *Advanced Materials*, **2020**, 32, e2005386	24	67
80	Multi-mode Organic Light-Emitting Diode to Suppress the Viewing Angle Dependence. *ACS Applied Materials & Interfaces*, **2020**, 12, 31667-31676	9.5	1
79	Efficient Energy Funneling in Quasi-2D Perovskites: From Light Emission to Lasing. *Advanced Materials*, **2020**, 32, e1906571	24	68
78	Critical Role of Polymer Aggregation and Miscibility in Nonfullerene-Based Organic Photovoltaics. *Advanced Energy Materials*, **2020**, 10, 1902430	21.8	29
77	Towards radiation detection using Cs2AgBiBr6 double perovskite single crystals. *Materials Letters*, **2020**, 269, 127667	3.3	22
76	Understanding the Role of Ion Migration in the Operation of Perovskite Light-Emitting Diodes by Transient Measurements. *ACS Applied Materials & Interfaces*, **2020**, 12, 48845-48853	9.5	19
75	Observation of carrier concentration dependent spintronic terahertz emission from n-GaN/NiFe heterostructures. *Applied Physics Letters*, **2020**, 117, 093502	3.4	8
74	Room-Temperature Electron-Hole Liquid in Monolayer MoS. *ACS Nano*, **2019**, 13, 10351-10358	16.7	23
73	Reversible Photoluminescence Tuning by Defect Passivation via Laser Irradiation on Aged Monolayer MoS. *ACS Applied Materials & Interfaces*, **2019**, 11, 38240-38246	9.5	25
72	Low temperature cathodoluminescence study of Fe-doped □Ga2O3. *Materials Letters*, **2019**, 257, 126744	3.3	14
71	Near Band-Edge Optical Excitation Leading to Catastrophic Ionization and Electron□Hole Liquid in Room-Temperature Monolayer MoS2. *Physica Status Solidi (B): Basic Research*, **2019**, 256, 1900223	1.3	4
70	Phase-Pure Hybrid Layered Lead Iodide Perovskite Films Based on a Two-Step Melt-Processing Approach. *Chemistry of Materials*, **2019**, 31, 4267-4274	9.6	26

69	Tunable internal quantum well alignment in rationally designed oligomer-based perovskite films deposited by resonant infrared matrix-assisted pulsed laser evaporation. *Materials Horizons*, **2019**, 6, 1707-1716	14.4	34
68	Direct-Bandgap 2D Silver-Bismuth Iodide Double Perovskite: The Structure-Directing Influence of an Oligothiophene Spacer Cation. *Journal of the American Chemical Society*, **2019**, 141, 7955-7964	16.4	100
67	Dense Electron-Hole Plasma Formation and Ultralong Charge Lifetime in Monolayer MoS via Material Tuning. *Nano Letters*, **2019**, 19, 1104-1111	11.5	23
66	Rigid valence band shift due to molecular surface counter-doping of MoS2. *Surface Science*, **2019**, 679, 254-258	1.8	7
65	Every Atom Counts: Elucidating the Fundamental Impact of Structural Change in Conjugated Polymers for Organic Photovoltaics. *Chemistry of Materials*, **2018**, 30, 2995-3009	9.6	33
64	The Role of FRET in Non-Fullerene Organic Solar Cells: Implications for Molecular Design. *Journal of Physical Chemistry A*, **2018**, 122, 3764-3771	2.8	14
63	MAPbI3 Solar Cells with Absorber Deposited by Resonant Infrared Matrix-Assisted Pulsed Laser Evaporation. *ACS Energy Letters*, **2018**, 3, 270-275	20.1	27
62	Aqueous Soluble Fullerene Acceptors for Efficient Eco-Friendly Polymer Solar Cells Processed from Benign Ethanol/Water Mixtures. *Chemistry of Materials*, **2018**, 30, 5663-5672	9.6	26
61	Polymer non-fullerene solar cells of vastly different efficiencies for minor side-chain modification: impact of charge transfer, carrier lifetime, morphology and mobility. *Journal of Materials Chemistry A*, **2018**, 6, 12484-12492	13	31
60	Increased Exciton Delocalization of Polymer upon Blending with Fullerene. *Advanced Materials*, **2018**, 30, e1801392	24	14
59	Charge generation dynamics in polymer nonfullerene solar cells with low energy loss. *Journal of Photonics for Energy*, **2018**, 8, 1	1.2	4
58	Strong polymer molecular weight-dependent material interactions: impact on the formation of the polymer/fullerene bulk heterojunction morphology. *Journal of Materials Chemistry A*, **2017**, 5, 13176-13188	13	38
57	The Impact of Sequential Fluorination of Conjugated Polymers on Charge Generation in All-Polymer Solar Cells. *Advanced Functional Materials*, **2017**, 27, 1701256	15.6	41
56	A near-infrared non-fullerene electron acceptor for high performance polymer solar cells. *Energy and Environmental Science*, **2017**, 10, 1610-1620	35.4	238
55	Efficient Generation of Long-Lived Triplet Excitons in 2D Hybrid Perovskite. *Advanced Materials*, **2017**, 29, 1604278	24	69
54	Impact of the photo-induced degradation of electron acceptors on the photophysics, charge transport and device performance of all-polymer and fullerene polymer solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 22170-22179	13	57
53	Single Component Organic Solar Cells Based on Oligothiophene-Fullerene Conjugate. *Advanced Functional Materials*, **2017**, 27, 1702474	15.6	62
52	Enhancing Multifunctionalities of Transition-Metal Dichalcogenide Monolayers via Cation Intercalation. *ACS Nano*, **2017**, 11, 9390-9396	16.7	30

51	Impact of highly crystalline, isoindigo-based small-molecular additives for enhancing the performance of all-polymer solar cells. *Journal of Materials Chemistry A*, **2017**, 5, 21291-21299	13	12
50	Monitoring Charge Separation Processes in Quasi-One-Dimensional Organic Crystalline Structures. *Nano Letters*, **2017**, 17, 6056-6061	11.5	3
49	Efficient Charge Transfer and Fine-Tuned Energy Level Alignment in a THF-Processed Fullerene-Free Organic Solar Cell with 11.3% Efficiency. *Advanced Materials*, **2017**, 29, 1604241	24	279
48	Controlling Energy Levels and Blend Morphology for All-Polymer Solar Cells via Fluorination of a Naphthalene Diimide-Based Copolymer Acceptor. *Macromolecules*, **2016**, 49, 6374-6383	5.5	62
47	Design and synthesis of BODIPY sensitizers with long alkyl chains tethered to N-carbazole and their application for dye sensitized solar cells. *Materials Chemistry and Physics*, **2016**, 184, 57-63	4.4	9
46	Fundamental limits of exciton-exciton annihilation for light emission in transition metal dichalcogenide monolayers. *Physical Review B*, **2016**, 93,	3.3	97
45	Fast charge separation in a non-fullerene organic solar cell with a small driving force. *Nature Energy*, **2016**, 1,	62.3	967
44	Engineering Substrate Interactions for High Luminescence Efficiency of Transition-Metal Dichalcogenide Monolayers. *Advanced Functional Materials*, **2016**, 26, 4733-4739	15.6	112
43	Effects of Cd Diffusion and Doping in High-Performance Perovskite Solar Cells Using CdS as Electron Transport Layer. *Journal of Physical Chemistry C*, **2016**, 120, 16437-16445	3.8	77
42	Lowest energy Frenkel and charge transfer exciton intermixing in one-dimensional copper phthalocyanine molecular lattice. *Applied Physics Letters*, **2016**, 109, 213302	3.4	10
41	Charge Photogeneration in Organic Photovoltaics: Role of Hot versus Cold Charge-Transfer Excitons. *Advanced Energy Materials*, **2016**, 6, 1301032	21.8	12
40	Organic Photovoltaics: Charge Photogeneration in Organic Photovoltaics: Role of Hot versus Cold Charge-Transfer Excitons (Adv. Energy Mater. 1/2016). *Advanced Energy Materials*, **2016**, 6,	21.8	1
39	A PCBM Electron Transport Layer Containing Small Amounts of Dual Polymer Additives that Enables Enhanced Perovskite Solar Cell Performance. *Advanced Science*, **2016**, 3, 1500353	13.6	52
38	Direct Optical Observation of Stimulated Emission from Hot Charge Transfer Excitons in Bulk Heterojunction Polymer Solar Cells. *Journal of Physical Chemistry C*, **2015**, 119, 19697-19702	3.8	2
37	Charge Generation Dynamics in Efficient All-Polymer Solar Cells: Influence of Polymer Packing and Morphology. *ACS Applied Materials & Interfaces*, **2015**, 7, 27586-91	9.5	22
36	A femtosecond study of the anomaly in electron injection for dye-sensitized solar cells: the influence of isomerization employing Ru(II) sensitizers with anthracene and phenanthrene ancillary ligands. *Physical Chemistry Chemical Physics*, **2015**, 17, 2750-6	3.6	13
35	Many-body effects in valleytronics: direct measurement of valley lifetimes in single-layer MoS2. *Nano Letters*, **2014**, 14, 202-6	11.5	381
34	More stable and more efficient alternatives of Z-907: carbazole-based amphiphilic Ru(II) sensitizers for dye-sensitized solar cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 27078-87	3.6	38

33	Spatial temperature mapping within polymer nanocomposites undergoing ultrafast photothermal heating via gold nanorods. *Nanoscale*, **2014**, 6, 15236-47	7.7	32
32	Influence of mono versus bis-electron-donor ancillary ligands in heteroleptic Ru(II) bipyridyl complexes on electron injection from the first excited singlet and triplet states in dye-sensitized solar cells. *Journal of Materials Chemistry A*, **2014**, 2, 14228-14235	13	27
31	Exciton valley relaxation in a single layer of WS2 measured by ultrafast spectroscopy. *Physical Review B*, **2014**, 90,	3.3	102
30	Intrinsic and extrinsic effects on the electrostatic field at the surface of Bi2Se3. *Journal of Applied Physics*, **2014**, 116, 043519	2.5	3
29	Femtosecond pulse shaping using the geometric phase. *Optics Letters*, **2014**, 39, 1521-4	3	4
28	Control of the oxidation kinetics of H-terminated (111)Si by using the carrier concentration and the strain: a second-harmonic-generation investigation. *Journal of the Korean Physical Society*, **2012**, 60, 1685-1689	0.6	1
27	Effect of p-type doping on the oxidation of H-Si(111) studied by second-harmonic generation. *Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films*, **2012**, 30, 040603	2.9	5
26	Bond-specific reaction kinetics during the oxidation of (111) Si: Effect of n-type doping. *Applied Physics Letters*, **2011**, 98, 021904	3.4	8
25	Effect of strain on bond-specific reaction kinetics during the oxidation of H-terminated (111) Si. *Applied Physics Letters*, **2011**, 98, 121912	3.4	8
24	Invited article: The coherent optical laser beam recombination technique (COLBERT) spectrometer: coherent multidimensional spectroscopy made easier. *Review of Scientific Instruments*, **2011**, 82, 081301	1.7	69
23	Back-reflection Second-harmonic Generation of (111)Si: Theory and Experiment. *Journal of the Korean Physical Society*, **2011**, 58, 1237-1243	0.6	3
22	Measurement and control of in-plane surface chemistry during the oxidation of H-terminated (111) Si. *Proceedings of the National Academy of Sciences of the United States of America*, **2010**, 107, 17503-8	11.5	15
21	Two-quantum 2D FT electronic spectroscopy of biexcitons in GaAs quantum wells. *Science*, **2009**, 324, 1169-73	33.3	225
20	Application of non-linear optical second harmonic generation and X-ray absorption and spectroscopies to defect related properties of Hf silicate and Hf Si oxynitride gate dielectrics. *Microelectronic Engineering*, **2009**, 86, 1654-1657	2.5	
19	Three-dimensional electronic spectroscopy of excitons in GaAs quantum wells. *Journal of Chemical Physics*, **2009**, 131, 144510	3.9	68
18	Efforts toward developing probes of protein dynamics: vibrational dephasing and relaxation of carbon-deuterium stretching modes in deuterated leucine. *Journal of Physical Chemistry B*, **2009**, 113, 7991-4	3.4	23
17	Exciton-exciton correlations revealed by two-quantum, two-dimensional fourier transform optical spectroscopy. *Accounts of Chemical Research*, **2009**, 42, 1452-61	24.3	66
16	Three-Dimensional Electronic Four Wave-Mixing Spectroscopy in GaAs Quantum Wells. *Springer Series in Chemical Physics*, **2009**, 286-288	0.3	1

15	Two-quantum Two-dimensional Fourier Transform Electronic Spectroscopy of Biexcitons in GaAs Quantum Wells. *Springer Series in Chemical Physics*, **2009**, 250-252	0.3	
14	Multidimensional coherent spectroscopy made easy. *Chemical Physics*, **2007**, 341, 89-94	2.3	57
13	Relaxation and anharmonic couplings of the O-H stretching vibration of asymmetric strongly hydrogen-bonded complexes. *Journal of Chemical Physics*, **2007**, 127, 044501	3.9	23
12	Vibrational relaxation of C-D stretching vibrations in CDCl3, CDBr3, and CDI3. *Journal of Chemical Physics*, **2006**, 125, 174503	3.9	14
11	Bias-dependent spin relaxation in a [110]-InAs/AlSb 2DES. *Physica E: Low-Dimensional Systems and Nanostructures*, **2006**, 34, 371-373	3	1
10	Room-temperature electric-field controlled spin dynamics in (110) InAs quantum wells. *Applied Physics Letters*, **2005**, 86, 202114	3.4	30
9	Electron and hole spin dynamics in semiconductor quantum dots. *Applied Physics Letters*, **2005**, 86, 113114	3.4	32
8	Effects of rapid thermal annealing on the optical properties of low-loss 1.3□m GaInNAs/GaAs saturable Bragg reflectors. *Journal of Applied Physics*, **2004**, 96, 1418-1424	2.5	2
7	GaInNAs/GaAs Bragg-mirror-based structures for novel 1.3□m device applications. *Journal of Crystal Growth*, **2004**, 268, 457-465	1.6	22
6	Efficient electron spin detection with positively charged quantum dots. *Applied Physics Letters*, **2004**, 84, 2793-2795	3.4	27
5	Ultrafast electron capture into p-modulation-doped quantum dots. *Applied Physics Letters*, **2004**, 85, 4570-4572	3.4	64
4	Nonmagnetic semiconductor spin transistor. *Applied Physics Letters*, **2003**, 83, 2937-2939	3.4	113
3	Spin relaxation in (110) and (001) InAs/GaSb superlattices. *Physical Review B*, **2003**, 68,	3.3	47
2	Excited-state dynamics and carrier capture in InGaAs/GaAs quantum dots. *Applied Physics Letters*, **2001**, 79, 3320-3322	3.4	25
1	Ultra-High Alignment of Polymer Semiconductor Blends Enabling Photodetectors with Exceptional Polarization Sensitivity. *Advanced Functional Materials*,2105820	15.6	2