Barbaros Oezyilmaz

List of Publications by Citations

104 papers	23,494 citations	55 h-index	107 g-index
107 ext. papers	25,475 ext. citations	10.7 avg, IF	6.67 L-index

#	Paper	IF	Citations
104	Roll-to-roll production of 30-inch graphene films for transparent electrodes. *Nature Nanotechnology*, **2010**, 5, 574-8	28.7	6507
103	Energy band-gap engineering of graphene nanoribbons. *Physical Review Letters*, **2007**, 98, 206805	7.4	4124
102	Current saturation in zero-bandgap, top-gated graphene field-effect transistors. *Nature Nanotechnology*, **2008**, 3, 654-9	28.7	1223
101	Electric field effect in ultrathin black phosphorus. *Applied Physics Letters*, **2014**, 104, 103106	3.4	1026
100	Graphene for controlled and accelerated osteogenic differentiation of human mesenchymal stem cells. *ACS Nano*, **2011**, 5, 4670-8	16.7	724
99	Length-dependent thermal conductivity in suspended single-layer graphene. *Nature Communications*, **2014**, 5, 3689	17.4	603
98	Interface engineering of layer-by-layer stacked graphene anodes for high-performance organic solar cells. *Advanced Materials*, **2011**, 23, 1514-8	24	437
97	Electronic transport and quantum hall effect in bipolar graphene p-n-p junctions. *Physical Review Letters*, **2007**, 99, 166804	7.4	403
96	Transport properties of pristine few-layer black phosphorus by van der Waals passivation in an inert atmosphere. *Nature Communications*, **2015**, 6, 6647	17.4	394
95	Air-stable transport in graphene-contacted, fully encapsulated ultrathin black phosphorus-based field-effect transistors. *ACS Nano*, **2015**, 9, 4138-45	16.7	393
94	Transport properties of monolayer MoS2 grown by chemical vapor deposition. *Nano Letters*, **2014**, 14, 1909-13	11.5	376
93	Colossal enhancement of spin–orbit coupling in weakly hydrogenated graphene. *Nature Physics*, **2013**, 9, 284-287	16.2	328
92	Spin-orbit proximity effect in graphene. *Nature Communications*, **2014**, 5, 4875	17.4	321
91	Controlling many-body states by the electric-field effect in a two-dimensional material. *Nature*, **2016**, 529, 185-9	50.4	301
90	Surface transfer doping induced effective modulation on ambipolar characteristics of few-layer black phosphorus. *Nature Communications*, **2015**, 6, 6485	17.4	285
89	Creating a Stable Oxide at the Surface of Black Phosphorus. *ACS Applied Materials & Interfaces*, **2015**, 7, 14557-62	9.5	258
88	Ultrafast optical switching of infrared plasmon polaritons in high-mobility graphene. *Nature Photonics*, **2016**, 10, 244-247	33.9	252

87	Spin-transfer-induced precessional magnetization reversal. *Applied Physics Letters*, **2004**, 84, 3897-3899	3.4	220
86	Gate-controlled nonvolatile graphene-ferroelectric memory. *Applied Physics Letters*, **2009**, 94, 163505	3.4	219
85	Observation of long spin-relaxation times in bilayer graphene at room temperature. *Physical Review Letters*, **2011**, 107, 047206	7.4	200
84	Graphene-P(VDF-TrFE) multilayer film for flexible applications. *ACS Nano*, **2013**, 7, 3130-8	16.7	194
83	Toward wafer scale fabrication of graphene based spin valve devices. *Nano Letters*, **2011**, 11, 2363-8	11.5	189
82	Colossal Ultraviolet Photoresponsivity of Few-Layer Black Phosphorus. *ACS Nano*, **2015**, 9, 8070-7	16.7	175
81	Graphene field-effect transistors with ferroelectric gating. *Physical Review Letters*, **2010**, 105, 166602	7.4	175
80	Large thermoelectricity via variable range hopping in chemical vapor deposition grown single-layer MoS2. *Nano Letters*, **2014**, 14, 2730-4	11.5	171
79	Electron Doping of Ultrathin Black Phosphorus with Cu Adatoms. *Nano Letters*, **2016**, 16, 2145-51	11.5	165
78	Graphene-ferroelectric hybrid structure for flexible transparent electrodes. *ACS Nano*, **2012**, 6, 3935-42	16.7	156
77	Electronic transport in locally gated graphene nanoconstrictions. *Applied Physics Letters*, **2007**, 91, 192107	3.4	156
76	Giant spin Hall effect in graphene grown by chemical vapour deposition. *Nature Communications*, **2014**, 5, 4748	17.4	143
75	An innovative way of etching MoS2: Characterization and mechanistic investigation. *Nano Research*, **2013**, 6, 200-207	10	128
74	A bioelectronic platform using a graphene-lipid bilayer interface. *ACS Nano*, **2010**, 4, 7387-94	16.7	118
73	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. *Applied Physics Letters*, **2011**, 98, 193113	3.4	115
72	Current-induced magnetization reversal in high magnetic fields in Co/Cu/Co nanopillars. *Physical Review Letters*, **2003**, 91, 067203	7.4	112
71	Quasi-periodic nanoripples in graphene grown by chemical vapor deposition and its impact on charge transport. *ACS Nano*, **2012**, 6, 1158-64	16.7	111
70	Plasmons in graphene moiré superlattices. *Nature Materials*, **2015**, 14, 1217-22	27	108

69	Synthesis and properties of free-standing monolayer amorphous carbon. *Nature*, **2020**, 577, 199-203	50.4	104
68	Bandgap Engineering of Phosphorene by Laser Oxidation toward Functional 2D Materials. *ACS Nano*, **2015**, 9, 10411-21	16.7	102
67	Toward high throughput interconvertible graphane-to-graphene growth and patterning. *ACS Nano*, **2010**, 4, 6146-52	16.7	100
66	Controlled hydrogenation of graphene sheets and nanoribbons. *ACS Nano*, **2011**, 5, 888-96	16.7	94
65	Gate-tunable black phosphorus spin valve with nanosecond spin lifetimes. *Nature Physics*, **2017**, 13, 888-893	19.2	91
64	Large Frequency Change with Thickness in Interlayer Breathing Mode--Significant Interlayer Interactions in Few Layer Black Phosphorus. *Nano Letters*, **2015**, 15, 3931-8	11.5	85
63	Ultrathin organic solar cells with graphene doped by ferroelectric polarization. *ACS Applied Materials & Interfaces*, **2014**, 6, 3299-304	9.5	79
62	Transport properties of ultrathin black phosphorus on hexagonal boron nitride. *Applied Physics Letters*, **2015**, 106, 083505	3.4	77
61	Tuning optical conductivity of large-scale CVD graphene by strain engineering. *Advanced Materials*, **2014**, 26, 1081-6	24	74
60	'Bubble-free' electrochemical delamination of CVD graphene films. *Small*, **2015**, 11, 189-94	11	73
59	Direct dry transfer of chemical vapor deposition graphene to polymeric substrates. *Carbon*, **2015**, 83, 224-231	10.4	69
58	Wafer-scale graphene/ferroelectric hybrid devices for low-voltage electronics. *Europhysics Letters*, **2011**, 93, 17002	1.6	67
57	Conductance oscillations induced by ballistic snake states in a graphene heterojunction. *Nature Communications*, **2015**, 6, 6093	17.4	66
56	Current-induced excitations in single cobalt ferromagnetic layer nanopillars. *Physical Review Letters* , **2004**, 93, 176604	7.4	65
55	Polymer-Enriched 3D Graphene Foams for Biomedical Applications. *ACS Applied Materials & Interfaces*, **2015**, 7, 8275-83	9.5	61
54	Graphene transport at high carrier densities using a polymer electrolyte gate. *Europhysics Letters*, **2010**, 92, 27001	1.6	61
53	Electronic transport in graphene-based heterostructures. *Applied Physics Letters*, **2014**, 104, 183504	3.4	58
52	Current-induced effective magnetic fields in Co□u□o nanopillars. *Physical Review B*, **2004**, 70,	3.3	58

51	Flexible graphene-PZT ferroelectric nonvolatile memory. *Nanotechnology*, **2013**, 24, 475202	3.4	57
50	Optospintronics in Graphene via Proximity Coupling. *ACS Nano*, **2017**, 11, 11678-11686	16.7	55
49	Charge transport in ion-gated mono-, bi-, and trilayer MoS2 field effect transistors. *Scientific Reports*, **2014**, 4, 7293	4.9	52
48	Scrolling graphene into nanofluidic channels. *Lab on A Chip*, **2013**, 13, 2874-8	7.2	51
47	Van der Waals force: a dominant factor for reactivity of graphene. *Nano Letters*, **2015**, 15, 319-25	11.5	49
46	Quantum Transport and Observation of Dyakonov-Perel Spin-Orbit Scattering in Monolayer MoS_{2}. *Physical Review Letters*, **2016**, 116, 046803	7.4	47
45	A new route to graphene layers by selective laser ablation. *AIP Advances*, **2011**, 1, 022109	1.5	47
44	Transport properties of graphene with one-dimensional charge defects. *Europhysics Letters*, **2011**, 94, 28003	1.6	45
43	Enhanced spin□orbit coupling in dilute fluorinated graphene. *2D Materials*, **2015**, 2, 044009	5.9	44
42	Electronic properties of nanodiamond decorated graphene. *ACS Nano*, **2012**, 6, 1018-25	16.7	43
41	Spin-torque transfer in batch-fabricated spin-valve magnetic nanojunctions (invited). *Journal of Applied Physics*, **2003**, 93, 6859-6863	2.5	42
40	Scattering theory of spin-orbit active adatoms on graphene. *Physical Review B*, **2014**, 90,	3.3	38
39	Property Control of Graphene by Employing Semi-Ionic□Liquid Fluorination. *Advanced Functional Materials*, **2013**, 23, 3329-3334	15.6	38
38	van der Waals Bonded Co/h-BN Contacts to Ultrathin Black Phosphorus Devices. *Nano Letters*, **2017**, 17, 5361-5367	11.5	37
37	Dynamic spin injection into chemical vapor deposited graphene. *Applied Physics Letters*, **2012**, 101, 162407	3.4	37
36	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. *Applied Physics Letters*, **2011**, 99, 012112	3.4	35
35	Enhanced Photoresponse from Phosphorene-Phosphorene-Suboxide Junction Fashioned by Focused Laser Micromachining. *Advanced Materials*, **2016**, 28, 4090-6	24	35
34	Growth and magnetotransport study of thin ferromagnetic CrO2films. *Journal of Physics Condensed Matter*, **2002**, 14, 7-20	1.8	32

33	Exploiting the IR Transparency of Graphene for Fast Pyroelectric Infrared Detection. *Advanced Optical Materials*, **2015**, 3, 34-38	8.1	31
32	Electronic transport measurements in graphene nanoribbons. *Physica Status Solidi (B): Basic Research*, **2007**, 244, 4134-4137	1.3	30
31	Electronic spin transport in dual-gated bilayer graphene. *NPG Asia Materials*, **2016**, 8, e274-e274	10.3	28
30	Tuning and Persistent Switching of Graphene Plasmons on a Ferroelectric Substrate. *Nano Letters*, **2015**, 15, 4859-64	11.5	27
29	Proton and Li-Ion Permeation through Graphene with Eight-Atom-Ring Defects. *ACS Nano*, **2020**, 14, 7280-7286	16.7	27
28	Nanometer thick elastic graphene engine. *Nano Letters*, **2014**, 14, 2677-80	11.5	27
27	Localized insulator-conductor transformation of graphene oxide thin films via focused laser beam irradiation. *Applied Physics A: Materials Science and Processing*, **2012**, 106, 523-531	2.6	27
26	Spontaneous and specific myogenic differentiation of human mesenchymal stem cells on polyethylene glycol-linked multi-walled carbon nanotube films for skeletal muscle engineering. *Nanoscale*, **2015**, 7, 18239-49	7.7	25
25	Dependence of quantum-Hall conductance on the edge-state equilibration position in a bipolar graphene sheet. *Physical Review B*, **2010**, 81,	3.3	24
24	Selective Defect Formation in Hexagonal Boron Nitride. *Advanced Optical Materials*, **2019**, 7, 1900397	8.1	23
23	A wafer-scale graphene and ferroelectric multilayer for flexible and fast-switched modulation applications. *Nanoscale*, **2015**, 7, 14730-7	7.7	22
22	Unconventional transport through graphene on SrTiO□a plausible effect of SrTiO□ phase-transitions. *Scientific Reports*, **2014**, 4, 6173	4.9	22
21	Extrinsic and intrinsic magnetoresistance contributions of CrO2 thin films. *Journal of Applied Physics*, **2001**, 89, 7699-7701	2.5	22
20	Bipolar high-field excitations in Co□u□o nanopillars. *Physical Review B*, **2005**, 71,	3.3	19
19	Current-induced switching in single ferromagenetic layer nanopillar junctions. *Applied Physics Letters*, **2006**, 88, 162506	3.4	17
18	Quantum Transport Detected by Strong Proximity Interaction at a Graphene-WS2 van der Waals Interface. *Nano Letters*, **2015**, 15, 5682-8	11.5	16
17	Brillouin scattering study of low-frequency bulk acoustic phonons in multilayer graphene. *Carbon*, **2008**, 46, 2133-2136	10.4	15
16	Dynamical spin injection at a quasi-one-dimensional ferromagnet-graphene interface. *Applied Physics Letters*, **2015**, 106, 032411	3.4	12

15	Observation of the screening signature in the lateral photovoltage of electrons in the quantum Hall regime. *Physical Review B*, **2001**, 64,	3.3	10
14	Shape-dependent magnetization reversal processes and flux-closure configurations of microstructured epitaxial Fe(110) elements. *Applied Physics Letters*, **2001**, 79, 3648-3650	3.4	10
13	Gate controlled valley polarizer in bilayer graphene. *Nature Communications*, **2020**, 11, 1202	17.4	9
12	Spin Pumping in Permalloy/Graphene and Permalloy/Graphite Interfaces. *IEEE Transactions on Magnetics*, **2013**, 49, 3147-3150	2	9
11	Assembly of suspended graphene on carbon nanotube scaffolds with improved functionalities. *Nano Research*, **2012**, 5, 783-795	10	9
10	Spin-transfer-induced magnetic excitation: The role of spin-pumping induced damping. *Journal of Applied Physics*, **2005**, 97, 10C714	2.5	8
9	Rashba Interaction and Local Magnetic Moments in a Graphene-BN Heterostructure Intercalated with Au. *Physical Review Letters*, **2016**, 117, 076603	7.4	7
8	Anomalous spectral features of a neutral bilayer graphene. *Scientific Reports*, **2015**, 5, 10025	4.9	6
7	Geometrical control of the magnetization direction in high aspect-ratio PdNi ferromagnetic nanoelectrodes. *Physical Review B*, **2008**, 78,	3.3	5
6	Focused-ion-beam milling based nanostencil mask fabrication for spin transfer torque studies. *Journal of Applied Physics*, **2007**, 101, 063920	2.5	5
5	Heteromoir Engineering on Magnetic Bloch Transport in Twisted Graphene Superlattices. *Nano Letters*, **2020**, 20, 7572-7579	11.5	5
4	Multiple virtual tunneling of Dirac fermions in granular graphene. *Scientific Reports*, **2013**, 3, 3404	4.9	4
3	Phosphorene: Enhanced Photoresponse from Phosphorene-Phosphorene-Suboxide Junction Fashioned by Focused Laser Micromachining (Adv. Mater. 21/2016). *Advanced Materials*, **2016**, 28, 4164	24	3
2	IR Sensing: Exploiting the IR Transparency of Graphene for Fast Pyroelectric Infrared Detection (Advanced Optical Materials 1/2015). *Advanced Optical Materials*, **2015**, 3, 33-33	8.1	
1	Charge screening in the quantum Hall regime probed by the lateral photoelectric effect. *Physica B: Condensed Matter*, **2001**, 298, 60-64	2.8	