Barbaros Oezyilmaz

List of Publications by Year
in descending order

105	27,107	23567 58	29157 104
papers	citations	h-index	g-index

107	107	107	30249
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Roll-to-roll production of 30-inch graphene films for transparent electrodes. Nature Nanotechnology, 2010, 5, 574-578.	31.5	7,294
2	Energy Band-Gap Engineering of Graphene Nanoribbons. Physical Review Letters, 2007, 98, 206805.	7.8	4,635
3	Current saturation in zero-bandgap, top-gated graphene field-effect transistors. Nature Nanotechnology, 2008, 3, 654-659.	31.5	1,426
4	Electric field effect in ultrathin black phosphorus. Applied Physics Letters, 2014, 104, .	3.3	1,137
5	Graphene for Controlled and Accelerated Osteogenic Differentiation of Human Mesenchymal Stem Cells. ACS Nano, 2011, 5, 4670-4678.	14.6	819
6	Length-dependent thermal conductivity in suspended single-layer graphene. Nature Communications, 2014, 5, 3689.	12.8	735
7	Interface Engineering of Layerâ€byâ€Layer Stacked Graphene Anodes for Highâ€Performance Organic Solar Cells. Advanced Materials, 2011, 23, 1514-1518.	21.0	489
8	Transport properties of pristine few-layer black phosphorus by van der Waals passivation in an inert atmosphere. Nature Communications, 2015, 6, 6647.	12.8	460
9	Air-Stable Transport in Graphene-Contacted, Fully Encapsulated Ultrathin Black Phosphorus-Based Field-Effect Transistors. ACS Nano, 2015, 9, 4138-4145.	14.6	455
10	Electronic Transport and Quantum Hall Effect in Bipolar Graphene<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>n</mml:mi><mml:mtext mathvariant="normal">â^'</mml:mtext><mml:mi>p</mml:mi></mml:math>Junctions. Physical Review Letters, 2007, 99, 166804.	7.8	434
11	Spinâ€“orbit proximity effect in graphene. Nature Communications, 2014, 5, 4875.	12.8	431
12	Transport Properties of Monolayer MoS₂ Grown by Chemical Vapor Deposition. Nano Letters, 2014, 14, 1909-1913.	9.1	431
13	Controlling many-body states by the electric-field effect in a two-dimensional material. Nature, 2016, 529, 185-189.	27.8	385
14	Colossal enhancement of spinâ€“orbit coupling in weakly hydrogenated graphene. Nature Physics, 2013, 9, 284-287.	16.7	384
15	Surface transfer doping induced effective modulation on ambipolar characteristics of few-layer black phosphorus. Nature Communications, 2015, 6, 6485.	12.8	335
16	Creating a Stable Oxide at the Surface of Black Phosphorus. ACS Applied Materials & Interfaces, 2015, 7, 14557-14562.	8.0	318
17	Ultrafast optical switching of infrared plasmon polaritons in high-mobility graphene. Nature Photonics, 2016, 10, 244-247.	31.4	312
18	Synthesis and properties of free-standing monolayer amorphous carbon. Nature, 2020, 577, 199-203.	27.8	250

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19	Spin-transfer-induced precessional magnetization reversal. Applied Physics Letters, 2004, 84, 3897-3899.	3.3	244
20	Observation of Long Spin-Relaxation Times in Bilayer Graphene at Room Temperature. Physical Review Letters, 2011, 107, 047206.	7.8	235
21	Gate-controlled nonvolatile graphene-ferroelectric memory. Applied Physics Letters, 2009, 94, .	3.3	234
22	Graphene-P(VDF-TrFE) Multilayer Film for Flexible Applications. ACS Nano, 2013, 7, 3130-3138.	14.6	220
23	Toward Wafer Scale Fabrication of Graphene Based Spin Valve Devices. Nano Letters, 2011, 11, 2363-2368.	9.1	214
24	Large Thermoelectricity via Variable Range Hopping in Chemical Vapor Deposition Grown Single-Layer MoS₂. Nano Letters, 2014, 14, 2730-2734.	9.1	210
25	Colossal Ultraviolet Photoresponsivity of Few-Layer Black Phosphorus. ACS Nano, 2015, 9, 8070-8077.	14.6	204
26	Graphene Field-Effect Transistors with Ferroelectric Gating. Physical Review Letters, 2010, 105, 166602.	7.8	202
27	Electron Doping of Ultrathin Black Phosphorus with Cu Adatoms. Nano Letters, 2016, 16, 2145-2151.	9.1	196
28	Giant spin Hall effect in graphene grown by chemical vapour deposition. Nature Communications, 2014, 5, 4748.	12.8	179
29	Electronic transport in locally gated graphene nanoconstrictions. Applied Physics Letters, 2007, 91, .	3.3	171
30	Grapheneâ€“Ferroelectric Hybrid Structure for Flexible Transparent Electrodes. ACS Nano, 2012, 6, 3935-3942.	14.6	167
31	Plasmons in graphene moirÃ© superlattices. Nature Materials, 2015, 14, 1217-1222.	27.5	141
32	An innovative way of etching MoS2: Characterization and mechanistic investigation. Nano Research, 2013, 6, 200-207.	10.4	140
33	A Bioelectronic Platform Using a Grapheneâ"Lipid Bilayer Interface. ACS Nano, 2010, 4, 7387-7394.	14.6	132
34	Quasi-Periodic Nanoripples in Graphene Grown by Chemical Vapor Deposition and Its Impact on Charge Transport. ACS Nano, 2012, 6, 1158-1164.	14.6	129
35	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. Applied Physics Letters, 2011, 98, .	3.3	126
36	Bandgap Engineering of Phosphorene by Laser Oxidation toward Functional 2D Materials. ACS Nano, 2015, 9, 10411-10421.	14.6	126

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37	Current-Induced Magnetization Reversal in High Magnetic Fields inCo/Cu/CoNanopillars. Physical Review Letters, 2003, 91, 067203.	7.8	122
38	Gate-tunable black phosphorus spin valve with nanosecond spin lifetimes. Nature Physics, 2017, 13, 888-893.	16.7	119
39	Toward High Throughput Interconvertible Graphane-to-Graphene Growth and Patterning. ACS Nano, 2010, 4, 6146-6152.	14.6	109
40	Controlled Hydrogenation of Graphene Sheets and Nanoribbons. ACS Nano, 2011, 5, 888-896.	14.6	105
41	Large Frequency Change with Thickness in Interlayer Breathing Modeâ€"Significant Interlayer Interactions in Few Layer Black Phosphorus. Nano Letters, 2015, 15, 3931-3938.	9.1	100
42	Ultrathin Organic Solar Cells with Graphene Doped by Ferroelectric Polarization. ACS Applied Materials & Interfaces, 2014, 6, 3299-3304.	8.0	91
43	Transport properties of ultrathin black phosphorus on hexagonal boron nitride. Applied Physics Letters, 2015, 106, .	3.3	89
44	Tuning Optical Conductivity of Largeâ€Scale CVD Graphene by Strain Engineering. Advanced Materials, 2014, 26, 1081-1086.	21.0	86
45	â€˜Bubble-Freeâ€™ Electrochemical Delamination of CVD Graphene Films. Small, 2015, 11, 189-194.	10.0	85
46	Direct dry transfer of chemical vapor deposition graphene to polymeric substrates. Carbon, 2015, 83, 224-231.	10.3	82
47	Current-Induced Excitations in Single Cobalt Ferromagnetic Layer Nanopillars. Physical Review Letters, 2004, 93, 176604.	7.8	75
48	Conductance oscillations induced by ballistic snake states in a graphene heterojunction. Nature Communications, 2015, 6, 6093.	12.8	75
49	Wafer-scale graphene/ferroelectric hybrid devices for low-voltage electronics. Europhysics Letters, 2011, 93, 17002.	2.0	74
50	Graphene transport at high carrier densities using a polymer electrolyte gate. Europhysics Letters, 2010, 92, 27001.	2.0	73
51	Polymer-Enriched 3D Graphene Foams for Biomedical Applications. ACS Applied Materials & Interfaces, 2015, 7, 8275-8283.	8.0	73
52	Optospintronics in Graphene via Proximity Coupling. ACS Nano, 2017, 11, 11678-11686.	14.6	73
53	Current-induced effective magnetic fields inCoâ•Cuâ•Conanopillars. Physical Review B, 2004, 70, .	3.2	65
54	van der Waals Force: A Dominant Factor for Reactivity of Graphene. Nano Letters, 2015, 15, 319-325.	9.1	65

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55	Charge transport in ion-gated mono-, bi- and trilayer MoS2 field effect transistors. Scientific Reports, 2014, 4, 7293.	3.3	64
56	Transport properties of graphene with one-dimensional charge defects. Europhysics Letters, 2011, 94, 28003.	2.0	63
57	Flexible grapheneâ€“PZT ferroelectric nonvolatile memory. Nanotechnology, 2013, 24, 475202.	2.6	62
58	Electronic transport in graphene-based heterostructures. Applied Physics Letters, 2014, 104, .	3.3	61
59	Scrolling graphene into nanofluidic channels. Lab on A Chip, 2013, 13, 2874.	6.0	60
60	Enhanced spinâ€“orbit coupling in dilute fluorinated graphene. 2D Materials, 2015, 2, 044009.	4.4	60
61	Quantum Transport and Observation of Dyakonov-Perel Spin-Orbit Scattering in Monolayer<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>MoS</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow> Physical Review Letters, 2016, 116, 046803.	7.8	59
62	Electronic Properties of Nanodiamond Decorated Graphene. ACS Nano, 2012, 6, 1018-1025.	14.6	57
63	A new route to graphene layers by selective laser ablation. AIP Advances, 2011, 1, .	1.3	56
64	Proton and Li-Ion Permeation through Graphene with Eight-Atom-Ring Defects. ACS Nano, 2020, 14, 7280-7286.	14.6	55
65	Spin-torque transfer in batch-fabricated spin-valve magnetic nanojunctions (invited). Journal of Applied Physics, 2003, 93, 6859-6863.	2.5	49
66	Property Control of Graphene by Employing â€œSemiâ€•ionicâ€•Liquid Fluorination. Advanced Functional Materials, 2013, 23, 3329-3334.	14.9	49
67	Scattering theory of spin-orbit active adatoms on graphene. Physical Review B, 2014, 90, .	3.2	48
68	van der Waals Bonded Co/h-BN Contacts to Ultrathin Black Phosphorus Devices. Nano Letters, 2017, 17, 5361-5367.	9.1	48
69	Dynamic spin injection into chemical vapor deposited graphene. Applied Physics Letters, 2012, 101, .	3.3	43
70	Electronic spin transport in dual-gated bilayer graphene. NPG Asia Materials, 2016, 8, e274-e274.	7.9	39
71	Selective Defect Formation in Hexagonal Boron Nitride. Advanced Optical Materials, 2019, 7, 1900397.	7.3	39
72	Enhanced Photoresponse from Phosphoreneâ€“Phosphoreneâ€•Suboxide Junction Fashioned by Focused Laser Micromachining. Advanced Materials, 2016, 28, 4090-4096.	21.0	38

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73	Exploiting the IR Transparency of Graphene for Fast Pyroelectric Infrared Detection. Advanced Optical Materials, 2015, 3, 34-38.	7.3	37
74	Growth and magnetotransport study of thin ferromagnetic CrO2films. Journal of Physics Condensed Matter, 2002, 14, 7-20.	1.8	36
75	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. Applied Physics Letters, 2011, 99, .	3.3	36
76	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.	2.3	34
77	Nanometer Thick Elastic Graphene Engine. Nano Letters, 2014, 14, 2677-2680.	9.1	34
78	Electronic transport measurements in graphene nanoribbons. Physica Status Solidi (B): Basic Research, 2007, 244, 4134-4137.	1.5	32
79	Tuning and Persistent Switching of Graphene Plasmons on a Ferroelectric Substrate. Nano Letters, 2015, 15, 4859-4864.	9.1	29
80	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, 18239-18249.	5.6	29
81	Unconventional Transport through Graphene on SrTiO3: A Plausible Effect of SrTiO3 Phase-Transitions. Scientific Reports, 2014, 4, 6173.	3.3	27
82	Extrinsic and intrinsic magnetoresistance contributions of CrO2 thin films. Journal of Applied Physics, 2001, 89, 7699-7701.	2.5	26
83	A wafer-scale graphene and ferroelectric multilayer for flexible and fast-switched modulation applications. Nanoscale, 2015, 7, 14730-14737.	5.6	26
84	Dependence of quantum-Hall conductance on the edge-state equilibration position in a bipolar graphene sheet. Physical Review B, 2010, 81, .	3.2	24
85	Gate controlled valley polarizer in bilayer graphene. Nature Communications, 2020, 11, 1202.	12.8	21
86	Bipolar high-field excitations inCoâˆ•Cuâˆ•Conanopillars. Physical Review B, 2005, 71, .	3.2	20
87	Brillouin scattering study of low-frequency bulk acoustic phonons in multilayer graphene. Carbon, 2008, 46, 2133-2136.	10.3	20
88	Current-induced switching in single ferromagenetic layer nanopillar junctions. Applied Physics Letters, 2006, 88, 162506.	3.3	19
89	Quantum Transport Detected by Strong Proximity Interaction at a Grapheneâ€“WS2 van der Waals Interface. Nano Letters, 2015, 15, 5682-5688.	9.1	18
90	Rashba Interaction and Local Magnetic Moments in a Graphene-BN Heterostructure Intercalated with Au. Physical Review Letters, 2016, 117, 076603.	7.8	16

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91	Observation of the screening signature in the lateral photovoltage of electrons in the quantum Hall regime. Physical Review B, 2001, 64, .	3.2	12
92	Dynamical spin injection at a quasi-one-dimensional ferromagnet-graphene interface. Applied Physics Letters, 2015, 106, .	3.3	12
93	Shape-dependent magnetization reversal processes and flux-closure configurations of microstructured epitaxial Fe(110) elements. Applied Physics Letters, 2001, 79, 3648-3650.	3.3	11
94	HeteromoirÃ© Engineering on Magnetic Bloch Transport in Twisted Graphene Superlattices. Nano Letters, 2020, 20, 7572-7579.	9.1	10
95	Spin-transfer-induced magnetic excitation: The role of spin-pumping induced damping. Journal of Applied Physics, 2005, 97, 10C714.	2.5	9
96	Assembly of suspended graphene on carbon nanotube scaffolds with improved functionalities. Nano Research, 2012, 5, 783-795.	10.4	9
97	Spin Pumping in Permalloy/Graphene and Permalloy/Graphite Interfaces. IEEE Transactions on Magnetics, 2013, 49, 3147-3150.	2.1	9
98	Anomalous Spectral Features of a Neutral Bilayer Graphene. Scientific Reports, 2015, 5, 10025.	3.3	9
99	Focused-ion-beam milling based nanostencil mask fabrication for spin transfer torque studies. Journal of Applied Physics, 2007, 101, 063920.	2.5	5
100	Geometrical control of the magnetization direction in high aspect-ratio PdNi ferromagnetic nanoelectrodes. Physical Review B, 2008, 78, .	3.2	5
101	Multiple Virtual Tunneling of Dirac Fermions in Granular Graphene. Scientific Reports, 2013, 3, 3404.	3.3	4
102	Phosphorene: Enhanced Photoresponse from Phosphoreneâ€“Phosphoreneâ€“Suboxide Junction Fashioned by Focused Laser Micromachining (Adv. Mater. 21/2016). Advanced Materials, 2016, 28, 4164-4164.	21.0	4
103	Charge screening in the quantum Hall regime probed by the lateral photoelectric effect. Physica B: Condensed Matter, 2001, 298, 60-64.	2.7	0
104	Spin pumping at Permalloy/graphene interface. , 2013, , .		0
105	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.	7.3	0