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	Synthesis and properties of free-standing monolayer amorphous carbon. Nature, 2020, 577, 199-203.	27.8	250
2	HeteromoirÃ© Engineering on Magnetic Bloch Transport in Twisted Graphene Superlattices. Nano Letters, 2020, 20, 7572-7579.	9.1	10
3	Proton and Li-Ion Permeation through Graphene with Eight-Atom-Ring Defects. ACS Nano, 2020, 14, 7280-7286.	14.6	55
4	Gate controlled valley polarizer in bilayer graphene. Nature Communications, 2020, 11, 1202.	12.8	21
5	Selective Defect Formation in Hexagonal Boron Nitride. Advanced Optical Materials, 2019, 7, 1900397.	7.3	39
6	Gate-tunable black phosphorus spin valve with nanosecond spin lifetimes. Nature Physics, 2017, 13, 888-893.	16.7	119
7	Optospintronics in Graphene via Proximity Coupling. ACS Nano, 2017, 11, 11678-11686.	14.6	73
8	van der Waals Bonded Co/h-BN Contacts to Ultrathin Black Phosphorus Devices. Nano Letters, 2017, 17, 5361-5367.	9.1	48
9	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
10	Enhanced Photoresponse from Phosphoreneâ€“Phosphoreneâ€Suboxide Junction Fashioned by Focused Laser Micromachining. Advanced Materials, 2016, 28, 4090-4096.	21.0	38
11	Rashba Interaction and Local Magnetic Moments in a Graphene-BN Heterostructure Intercalated with Au. Physical Review Letters, 2016, 117, 076603.	7.8	16
12	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
13	Electronic spin transport in dual-gated bilayer graphene. NPG Asia Materials, 2016, 8, e274-e274.	7.9	39
14	Ultrafast optical switching of infrared plasmon polaritons in high-mobility graphene. Nature Photonics, 2016, 10, 244-247.	31.4	312
15	Electron Doping of Ultrathin Black Phosphorus with Cu Adatoms. Nano Letters, 2016, 16, 2145-2151.	9.1	196
16	Controlling many-body states by the electric-field effect in a two-dimensional material. Nature, 2016, 529, 185-189.	27.8	385
17	Anomalous Spectral Features of a Neutral Bilayer Graphene. Scientific Reports, 2015, 5, 10025.	3.3	9
18	Enhanced spinâ€“orbit coupling in dilute fluorinated graphene. 2D Materials, 2015, 2, 044009.	4.4	60

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19	Conductance oscillations induced by ballistic snake states in a graphene heterojunction. Nature Communications, 2015, 6, 6093.	12.8	75
20	Dynamical spin injection at a quasi-one-dimensional ferromagnet-graphene interface. Applied Physics Letters, 2015, 106, .	3.3	12
21	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
22	Surface transfer doping induced effective modulation on ambipolar characteristics of few-layer black phosphorus. Nature Communications, 2015, 6, 6485.	12.8	335
23	A wafer-scale graphene and ferroelectric multilayer for flexible and fast-switched modulation applications. Nanoscale, 2015, 7, 14730-14737.	5.6	26
24	Colossal Ultraviolet Photoresponsivity of Few-Layer Black Phosphorus. ACS Nano, 2015, 9, 8070-8077.	14.6	204
25	Tuning and Persistent Switching of Graphene Plasmons on a Ferroelectric Substrate. Nano Letters, 2015, 15, 4859-4864.	9.1	29
26	Creating a Stable Oxide at the Surface of Black Phosphorus. ACS Applied Materials & Interfaces, 2015, 7, 14557-14562.	8.0	318
27	Air-Stable Transport in Graphene-Contacted, Fully Encapsulated Ultrathin Black Phosphorus-Based Field-Effect Transistors. ACS Nano, 2015, 9, 4138-4145.	14.6	455
28	Transport properties of ultrathin black phosphorus on hexagonal boron nitride. Applied Physics Letters, 2015, 106, .	3.3	89
29	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
30	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
31	Polymer-Enriched 3D Graphene Foams for Biomedical Applications. ACS Applied Materials & Interfaces, 2015, 7, 8275-8283.	8.0	73
32	Plasmons in graphene moirÃ© superlattices. Nature Materials, 2015, 14, 1217-1222.	27.5	141
33	Quantum Transport Detected by Strong Proximity Interaction at a Grapheneâ€"WS2 van der Waals Interface. Nano Letters, 2015, 15, 5682-5688.	9.1	18
34	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
35	Bandgap Engineering of Phosphorene by Laser Oxidation toward Functional 2D Materials. ACS Nano, 2015, 9, 10411-10421.	14.6	126
36	Direct dry transfer of chemical vapor deposition graphene to polymeric substrates. Carbon, 2015, 83, 224-231.	10.3	82

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37	van der Waals Force: A Dominant Factor for Reactivity of Graphene. Nano Letters, 2015, 15, 319-325.	9.1	65
38	Exploiting the IR Transparency of Graphene for Fast Pyroelectric Infrared Detection. Advanced Optical Materials, 2015, 3, 34-38.	7.3	37
39	â€˜Bubble-Freeâ€™ Electrochemical Delamination of CVD Graphene Films. Small, 2015, 11, 189-194.	10.0	85
40	Tuning Optical Conductivity of Largeâ€Scale CVD Graphene by Strain Engineering. Advanced Materials, 2014, 26, 1081-1086.	21.0	86
41	Nanometer Thick Elastic Graphene Engine. Nano Letters, 2014, 14, 2677-2680.	9.1	34
42	Electric field effect in ultrathin black phosphorus. Applied Physics Letters, 2014, 104, .	3.3	1,137
43	Electronic transport in graphene-based heterostructures. Applied Physics Letters, 2014, 104, .	3.3	61
44	Length-dependent thermal conductivity in suspended single-layer graphene. Nature Communications, 2014, 5, 3689.	12.8	735
45	Scattering theory of spin-orbit active adatoms on graphene. Physical Review B, 2014, 90, .	3.2	48
46	Giant spin Hall effect in graphene grown by chemical vapour deposition. Nature Communications, 2014, 5, 4748.	12.8	179
47	Ultrathin Organic Solar Cells with Graphene Doped by Ferroelectric Polarization. ACS Applied Materials & Interfaces, 2014, 6, 3299-3304.	8.0	91
48	Spinâ€“orbit proximity effect in graphene. Nature Communications, 2014, 5, 4875.	12.8	431
49	Large Thermoelectricity via Variable Range Hopping in Chemical Vapor Deposition Grown Single-Layer MoS₂. Nano Letters, 2014, 14, 2730-2734.	9.1	210
50	Transport Properties of Monolayer MoS₂ Grown by Chemical Vapor Deposition. Nano Letters, 2014, 14, 1909-1913.	9.1	431
51	Charge transport in ion-gated mono-, bi- and trilayer MoS2 field effect transistors. Scientific Reports, 2014, 4, 7293.	3.3	64
52	Unconventional Transport through Graphene on SrTiO3: A Plausible Effect of SrTiO3 Phase-Transitions. Scientific Reports, 2014, 4, 6173.	3.3	27
53	Scrolling graphene into nanofluidic channels. Lab on A Chip, 2013, 13, 2874.	6.0	60
54	Spin Pumping in Permalloy/Graphene and Permalloy/Graphite Interfaces. IEEE Transactions on Magnetics, 2013, 49, 3147-3150.	2.1	9

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55	Property Control of Graphene by Employing â€œSemiâ€•ionicâ€•Liquid Fluorination. Advanced Functional Materials, 2013, 23, 3329-3334.	14.9	49
56	Colossal enhancement of spinâ€“orbit coupling in weakly hydrogenated graphene. Nature Physics, 2013, 9, 284-287.	16.7	384
57	An innovative way of etching MoS2: Characterization and mechanistic investigation. Nano Research, 2013, 6, 200-207.	10.4	140
58	Graphene-P(VDF-TrFE) Multilayer Film for Flexible Applications. ACS Nano, 2013, 7, 3130-3138.	14.6	220
59	Spin pumping at Permalloy/graphene interface. , 2013, , .		0
60	Flexible grapheneâ€“PZT ferroelectric nonvolatile memory. Nanotechnology, 2013, 24, 475202.	2.6	62
61	Multiple Virtual Tunneling of Dirac Fermions in Granular Graphene. Scientific Reports, 2013, 3, 3404.	3.3	4
62	Electronic Properties of Nanodiamond Decorated Graphene. ACS Nano, 2012, 6, 1018-1025.	14.6	57
63	Assembly of suspended graphene on carbon nanotube scaffolds with improved functionalities. Nano Research, 2012, 5, 783-795.	10.4	9
64	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
65	Dynamic spin injection into chemical vapor deposited graphene. Applied Physics Letters, 2012, 101, .	3.3	43
66	Grapheneâ€“Ferroelectric Hybrid Structure for Flexible Transparent Electrodes. ACS Nano, 2012, 6, 3935-3942.	14.6	167
67	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
68	Electrical measurement of non-destructively p-type doped graphene using molybdenum trioxide. Applied Physics Letters, 2011, 99, .	3.3	36
69	Wafer-scale graphene/ferroelectric hybrid devices for low-voltage electronics. Europhysics Letters, 2011, 93, 17002.	2.0	74
70	Observation of Long Spin-Relaxation Times in Bilayer Graphene at Room Temperature. Physical Review Letters, 2011, 107, 047206.	7.8	235
71	Room temperature ferromagnetism in partially hydrogenated epitaxial graphene. Applied Physics Letters, 2011, 98, .	3.3	126
72	Toward Wafer Scale Fabrication of Graphene Based Spin Valve Devices. Nano Letters, 2011, 11, 2363-2368.	9.1	214

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73	Controlled Hydrogenation of Graphene Sheets and Nanoribbons. ACS Nano, 2011, 5, 888-896.	14.6	105
74	Graphene for Controlled and Accelerated Osteogenic Differentiation of Human Mesenchymal Stem Cells. ACS Nano, 2011, 5, 4670-4678.	14.6	819
75	Interface Engineering of Layerâ€byâ€Layer Stacked Graphene Anodes for Highâ€Performance Organic Solar Cells. Advanced Materials, 2011, 23, 1514-1518.	21.0	489
76	A new route to graphene layers by selective laser ablation. AIP Advances, 2011, 1, .	1.3	56
77	Transport properties of graphene with one-dimensional charge defects. Europhysics Letters, 2011, 94, 28003.	2.0	63
78	Roll-to-roll production of 30-inch graphene films for transparent electrodes. Nature Nanotechnology, 2010, 5, 574-578.	31.5	7,294
79	Dependence of quantum-Hall conductance on the edge-state equilibration position in a bipolar graphene sheet. Physical Review B, 2010, 81, .	3.2	24
80	Graphene transport at high carrier densities using a polymer electrolyte gate. Europhysics Letters, 2010, 92, 27001.	2.0	73
81	Graphene Field-Effect Transistors with Ferroelectric Gating. Physical Review Letters, 2010, 105, 166602.	7.8	202
82	A Bioelectronic Platform Using a Grapheneâ˜Lipid Bilayer Interface. ACS Nano, 2010, 4, 7387-7394.	14.6	132
83	Toward High Throughput Interconvertible Graphane-to-Graphene Growth and Patterning. ACS Nano, 2010, 4, 6146-6152.	14.6	109
84	Gate-controlled nonvolatile graphene-ferroelectric memory. Applied Physics Letters, 2009, 94, .	3.3	234
85	Brillouin scattering study of low-frequency bulk acoustic phonons in multilayer graphene. Carbon, 2008, 46, 2133-2136.	10.3	20
86	Current saturation in zero-bandgap, top-gated graphene field-effect transistors. Nature Nanotechnology, 2008, 3, 654-659.	31.5	1,426
87	Geometrical control of the magnetization direction in high aspect-ratio PdNi ferromagnetic nanoelectrodes. Physical Review B, 2008, 78, .	3.2	5
88	Electronic transport in locally gated graphene nanoconstrictions. Applied Physics Letters, 2007, 91, .	3.3	171
89	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
90	Focused-ion-beam milling based nanostencil mask fabrication for spin transfer torque studies. Journal of Applied Physics, 2007, 101, 063920.	2.5	5

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91	Electronic transport measurements in graphene nanoribbons. Physica Status Solidi (B): Basic Research, 2007, 244, 4134-4137.	1.5	32
92	Energy Band-Gap Engineering of Graphene Nanoribbons. Physical Review Letters, 2007, 98, 206805.	7.8	4,635
93	Current-induced switching in single ferromagenetic layer nanopillar junctions. Applied Physics Letters, 2006, 88, 162506.	3.3	19
94	Spin-transfer-induced magnetic excitation: The role of spin-pumping induced damping. Journal of Applied Physics, 2005, 97, 10C714.	2.5	9
95	Bipolar high-field excitations inCoâˆ•Cuâˆ•Conanopillars. Physical Review B, 2005, 71, .	3.2	20
96	Current-Induced Excitations in Single Cobalt Ferromagnetic Layer Nanopillars. Physical Review Letters, 2004, 93, 176604.	7.8	75
97	Spin-transfer-induced precessional magnetization reversal. Applied Physics Letters, 2004, 84, 3897-3899.	3.3	244
98	Current-induced effective magnetic fields inCoâˆ•Cuâˆ•Conanopillars. Physical Review B, 2004, 70, .	3.2	65
99	Current-Induced Magnetization Reversal in High Magnetic Fields inCo/Cu/CoNanopillars. Physical Review Letters, 2003, 91, 067203.	7.8	122
100	Spin-torque transfer in batch-fabricated spin-valve magnetic nanojunctions (invited). Journal of Applied Physics, 2003, 93, 6859-6863.	2.5	49
101	Growth and magnetotransport study of thin ferromagnetic CrO2films. Journal of Physics Condensed Matter, 2002, 14, 7-20.	1.8	36
102	Charge screening in the quantum Hall regime probed by the lateral photoelectric effect. Physica B: Condensed Matter, 2001, 298, 60-64.	2.7	0
103	Extrinsic and intrinsic magnetoresistance contributions of CrO2 thin films. Journal of Applied Physics, 2001, 89, 7699-7701.	2.5	26
104	Observation of the screening signature in the lateral photovoltage of electrons in the quantum Hall regime. Physical Review B, 2001, 64, .	3.2	12
105	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