

Bernd Beschoten

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90
papers

6,872
citations

30
h-index

82
g-index

99
ext. papers

7,440^o
ext. citations

5
avg, IF

5.25
L-index

#	Paper	IF	Citations
90	Electrical spin injection in a ferromagnetic semiconductor heterostructure. <i>Nature</i> , 1999 , 402, 790-792	50.4	2126
89	Ultrahigh-mobility graphene devices from chemical vapor deposition on reusable copper. <i>Science Advances</i> , 2015 , 1, e1500222	14.3	491
88	Domain state model for exchange bias. I. Theory. <i>Physical Review B</i> , 2002 , 66,	3.3	387
87	Diluted antiferromagnets in exchange bias: proof of the domain state model. <i>Physical Review Letters</i> , 2000 , 84, 4224-7	7.4	361
86	Raman spectroscopy as probe of nanometre-scale strain variations in graphene. <i>Nature Communications</i> , 2015 , 6, 8429	17.4	253
85	Magnetic Circular Dichroism Studies of Carrier-Induced Ferromagnetism in (Ga _{1-x} Mn _x)As. <i>Physical Review Letters</i> , 1999 , 83, 3073-3076	7.4	248
84	Domain state model for exchange bias. II. Experiments. <i>Physical Review B</i> , 2002 , 66,	3.3	226
83	Observation of long spin-relaxation times in bilayer graphene at room temperature. <i>Physical Review Letters</i> , 2011 , 107, 047206	7.4	200
82	Graphene spintronics: the European Flagship perspective. <i>2D Materials</i> , 2015 , 2, 030202	5.9	198
81	Ballistic Transport Exceeding 28 \hbar in CVD Grown Graphene. <i>Nano Letters</i> , 2016 , 16, 1387-91	11.5	191
80	Toward wafer scale fabrication of graphene based spin valve devices. <i>Nano Letters</i> , 2011 , 11, 2363-8	11.5	189
79	Origin of high-temperature ferromagnetism in (Ga,Mn)N layers grown on 4H β -SiC(0001) by reactive molecular-beam epitaxy. <i>Applied Physics Letters</i> , 2003 , 82, 2077-2079	3.4	184
78	Spin coherence and dephasing in GaN. <i>Physical Review B</i> , 2001 , 63,	3.3	171
77	Spin Lifetimes Exceeding 12 ns in Graphene Nonlocal Spin Valve Devices. <i>Nano Letters</i> , 2016 , 16, 3533-9	11.5	165
76	Nanosecond spin lifetimes in single- and few-layer graphene-hBN heterostructures at room temperature. <i>Nano Letters</i> , 2014 , 14, 6050-5	11.5	127
75	Gd-doped GaN: A very dilute ferromagnetic semiconductor with a Curie temperature above 300 K. <i>Physical Review B</i> , 2005 , 72,	3.3	123
74	Scaling behavior at the insulator-metal transition in Bi ₂ Sr ₂ (Ca _z R _{1-z})Cu ₂ O _{8+y} where R is a rare-earth element. <i>Physical Review B</i> , 1992 , 46, 11813-11825	3.3	104

73	Role of MgO barriers for spin and charge transport in Co/MgO/graphene nonlocal spin-valve devices. <i>Physical Review B</i> , 2013 , 88,	3-3	69
72	Perpendicular exchange bias in antiferromagnetic-ferromagnetic nanostructures. <i>Applied Physics Letters</i> , 2004 , 84, 3696-3698	3-4	61
71	Identifying suitable substrates for high-quality graphene-based heterostructures. <i>2D Materials</i> , 2017 , 4, 025030	5-9	60
70	Limitations to carrier mobility and phase-coherent transport in bilayer graphene. <i>Physical Review Letters</i> , 2014 , 113, 126801	7-4	43
69	Electric field-driven coherent spin reorientation of optically generated electron spin packets in InGaAs. <i>Physical Review Letters</i> , 2012 , 109, 146603	7-4	41
68	Electrical spin injection in ferromagnetic/nonmagnetic semiconductor heterostructures. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2001 , 10, 489-492	3	41
67	Intervalley dark trion states with spin lifetimes of 150 ns in WSe ₂ . <i>Physical Review B</i> , 2017 , 95,	3-3	33
66	Magneto-optical study of magnetization reversal asymmetry in exchange bias. <i>Applied Physics Letters</i> , 2006 , 89, 202512	3-4	33
65	Coexistence of Superconductivity and Localization in Bi ₂ Sr ₂ (Ca _z ,Pr _{1-z})Cu ₂ O _{8+y} . <i>Physical Review Letters</i> , 1996 , 77, 1837-1840	7-4	32
64	Suppression of contact-induced spin dephasing in graphene/MgO/Co spin-valve devices by successive oxygen treatments. <i>Physical Review B</i> , 2014 , 90,	3-3	31
63	Training effect of the exchange bias in Co/CoO bilayers originates from the irreversible thermoremanent magnetization of the magnetically diluted antiferromagnet. <i>Physical Review B</i> , 2012 , 85,	3-3	31
62	Growth, characterization, and transport properties of ternary (Bi Sb)Te topological insulator layers. <i>Journal of Physics Condensed Matter</i> , 2016 , 28, 495501	1-8	30
61	Exchange bias in epitaxial CoO bilayers with different crystallographic symmetries. <i>Physical Review B</i> , 2007 , 75,	3-3	30
60	High mobility dry-transferred CVD bilayer graphene. <i>Applied Physics Letters</i> , 2017 , 110, 263110	3-4	29
59	Zinc oxide from dilute magnetic doping to spin transport. <i>Physica Status Solidi (B): Basic Research</i> , 2014 , 251, 1700-1709	1-3	26
58	Angular dependence and origin of asymmetric magnetization reversal in exchange-biased Fe/FeF ₂ (110). <i>Physical Review B</i> , 2008 , 78,	3-3	26
57	Role of structural defects on exchange bias in the epitaxial CoO bilayer system. <i>Applied Physics Letters</i> , 2005 , 87, 261903	3-4	26
56	Contact-induced charge contributions to non-local spin transport measurements in Co/MgO/graphene devices. <i>2D Materials</i> , 2015 , 2, 024001	5-9	25

55	Crystalline phases in the GeSb ₂ Te ₄ alloy system: Phase transitions and elastic properties. <i>Journal of Applied Physics</i> , 2007 , 102, 093519	2.5	25
54	Low B field magneto-phonon resonances in single-layer and bilayer graphene. <i>Nano Letters</i> , 2015 , 15, 1547-52	11.5	24
53	Interlayer coupling in Pb-substituted Bi ₂ Sr ₂ CaCu ₂ O _{8+y} single crystals. <i>Physica C: Superconductivity and Its Applications</i> , 1996 , 265, 194-200	1.3	21
52	Spin States Protected from Intrinsic Electron-Phonon Coupling Reaching 100 ns Lifetime at Room Temperature in MoSe. <i>Nano Letters</i> , 2019 , 19, 4083-4090	11.5	20
51	Observation of the Spin-Orbit Gap in Bilayer Graphene by One-Dimensional Ballistic Transport. <i>Physical Review Letters</i> , 2020 , 124, 177701	7.4	20
50	Interlayer coupling and the metal-insulator transition in Pr-substituted Bi ₂ Sr ₂ CaCu ₂ O _{8+y} . <i>Physical Review B</i> , 1995 , 51, 11647-11655	3.3	19
49	Electrically conducting nanopatterns formed by chemical e-beam lithography via gold nanoparticle seeds. <i>Langmuir</i> , 2012 , 28, 2448-54	4	17
48	Structural and Magnetic Properties of Ni/NiOxide- and Co/CoOxide Core/Shell Nanoparticles and their possible Use for Ferrofluids. <i>Zeitschrift Fur Physikalische Chemie</i> , 2006 , 220, 173-187	3.1	17
47	Spatial Control of Laser-Induced Doping Profiles in Graphene on Hexagonal Boron Nitride. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 9377-83	9.5	16
46	Unveiling Valley Lifetimes of Free Charge Carriers in Monolayer WSe. <i>Nano Letters</i> , 2020 , 20, 3147-3154	11.5	14
45	Quantum transport through MoS constrictions defined by photodoping. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 205001	1.8	13
44	Energy-resolved electron spin dynamics at surfaces of p-doped GaAs. <i>Physical Review B</i> , 2006 , 73,	3.3	13
43	Dry-transferred CVD graphene for inverted spin valve devices. <i>Applied Physics Letters</i> , 2017 , 111, 152402	3.4	12
42	Impact of Many-Body Effects on Landau Levels in Graphene. <i>Physical Review Letters</i> , 2018 , 120, 187701	7.4	12
41	From Diffusive to Ballistic Transport in Etched Graphene Constrictions and Nanoribbons. <i>Annalen Der Physik</i> , 2017 , 529, 1700082	2.6	12
40	All-electrical time-resolved spin generation and spin manipulation in n-InGaAs. <i>Applied Physics Letters</i> , 2014 , 104, 062406	3.4	12
39	Phase-coherent transport in catalyst-free vapor phase deposited Bi ₂ Se ₃ crystals. <i>Physical Review B</i> , 2015 , 92,	3.3	11
38	Unambiguous determination of spin dephasing times in ZnO by time-resolved magneto-optical pump-probe experiments. <i>Physica Status Solidi (B): Basic Research</i> , 2014 , 251, 1861-1871	1.3	11

37	Epitaxial growth of Fe on GaN(0001): structural and magnetic properties. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005 , 202, 754-757	1.6	11
36	Spin lifetime of (In,Ga)As/GaAs (110) quantum wells. <i>Physica Status Solidi (B): Basic Research</i> , 2007 , 244, 2960-2970	1.3	10
35	Anisotropic electron spin lifetime in (In,Ga)As/GaAs (110) quantum wells. <i>Physical Review B</i> , 2007 , 75,	3.3	10
34	Domain state model for exchange bias: thickness dependence of diluted antiferromagnetic Co _{1-x} O on exchange bias in Co/CoO. <i>Journal of Magnetism and Magnetic Materials</i> , 2002 , 240, 248-250	2.8	10
33	Spin and charge transport in graphene-based spin transport devices with Co/MgO spin injection and spin detection electrodes. <i>Synthetic Metals</i> , 2015 , 210, 42-55	3.6	9
32	Line shape of the Raman 2D peak of graphene in van der Waals heterostructures. <i>Physica Status Solidi (B): Basic Research</i> , 2016 , 253, 2326-2330	1.3	9
31	Two-dimensional optical control of electron spin orientation by linearly polarized light in InGaAs. <i>Physical Review Letters</i> , 2010 , 105, 246603	7.4	9
30	Domain state model for exchange bias: training effect of diluted Co/sub 1-y/O on exchange bias in Co-CoO. <i>IEEE Transactions on Magnetics</i> , 2002 , 38, 2744-2746	2	9
29	Influence of growth temperature on GaN:Cr incorporation and structural properties in MOVPE. <i>Journal of Crystal Growth</i> , 2009 , 312, 1-9	1.6	8
28	Proximity-induced spin-orbit coupling in graphene/Bi _{1.5} Sb _{0.5} Te _{1.7} Se _{1.3} heterostructures. <i>Physical Review B</i> , 2018 , 98,	3.3	8
27	Hall mobility in DC-sputtered Bi ₂ Sr ₂ CaCu ₂ O _{8-x} films as a function of in-situ controlled oxygen content. <i>Physica C: Superconductivity and Its Applications</i> , 1994 , 235-240, 1373-1374	1.3	6
26	Fractional quantum Hall effect in CVD-grown graphene. <i>2D Materials</i> , 2020 , 7, 041007	5.9	6
25	Domain State Model for Exchange Bias: Influence of Structural Defects on Exchange Bias in Co/CoO 2002 , 419-431		6
24	Dry transfer of CVD graphene using MoS ₂ -based stamps. <i>Physica Status Solidi - Rapid Research Letters</i> , 2017 , 11, 1700136	2.5	5
23	Simulations on the Influence of Spatially Varying Spin Transport Parameters on the Measured Spin Lifetime in Graphene Non-Local Spin Valves. <i>Physica Status Solidi (B): Basic Research</i> , 2017 , 254, 1700293	1.3	5
22	Focused-ion-beam milling based nanostencil mask fabrication for spin transfer torque studies. <i>Journal of Applied Physics</i> , 2007 , 101, 063920	2.5	5
21	Fermion-Fermion scattering in the Hall mobility of La-214 HTSC. <i>Physica B: Condensed Matter</i> , 1994 , 194-196, 1519-1520	2.8	5
20	Zitterbewegung of Spin Split Electrons. <i>JETP Letters</i> , 2018 , 108, 326-328	1.2	5

19	Probing electronic lifetimes and phonon anharmonicities in high-quality chemical vapor deposited graphene by magneto-Raman spectroscopy. <i>Applied Physics Letters</i> , 2015 , 107, 233105	3.4	4
18	Anderson-like insulator - metal transition in rare earth doped $\text{Bi}_2\text{Sr}_2(\text{Ca}_z\text{RE}_1-x)\text{Cu}_2\text{O}_8 + y$. <i>Journal of Alloys and Compounds</i> , 1993 , 195, 375-378	5.7	4
17	How to solve problems in micro- and nanofabrication caused by the emission of electrons and charged metal atoms during e-beam evaporation. <i>Journal Physics D: Applied Physics</i> , 2021 , 54, 225304	3	4
16	Nanosecond spin lifetimes in bottom-up fabricated bilayer graphene spin-valves with atomic layer deposited AlO spin injection and detection barriers. <i>Physica Status Solidi (B): Basic Research</i> , 2015 , 252, 2395-2400	1.3	3
15	Current-induced magnetization dynamics in single and double layer magnetic nanopillars grown by molecular beam epitaxy. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 164011	3	3
14	The growth of Cr-doped GaN by MOVPE towards spintronic applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2007 , 204, 72-77	1.6	3
13	Specific heat measurements across the metal-insulator transition in $\text{Bi}_2\text{Sr}_2(\text{Ca}_z\text{RE}_1-x)\text{Cu}_2\text{O}_8$ with RE=Y,Pr,Nd and Gd. <i>Physica B: Condensed Matter</i> , 1994 , 194-196, 467-468	2.8	3
12	Radially polarized light beams from spin-forbidden dark excitons and trions in monolayer WSe ₂ . <i>Optical Materials Express</i> , 2020 , 10, 1273	2.6	3
11	How Photoinduced Gate Screening and Leakage Currents Dynamically Change the Fermi Level in 2D Materials. <i>Physica Status Solidi - Rapid Research Letters</i> , 2020 , 14, 2000298	2.5	2
10	Reducing the Impact of Bulk Doping on Transport Properties of Bi-Based 3D Topological Insulators. <i>Physica Status Solidi (B): Basic Research</i> , 2021 , 258, 2000021	1.3	2
9	Time-resolved lateral spin-caloric transport of optically generated spin packets in n-GaAs. <i>Journal Physics D: Applied Physics</i> , 2018 , 51, 214003	3	1
8	Electrical Control over Phonon Polarization in Strained Graphene. <i>Nano Letters</i> , 2021 , 21, 2898-2904	11.5	1
7	Graphen auf dem Weg zur Anwendung. <i>Physik in Unserer Zeit</i> , 2015 , 46, 269-270	0.1	
6	Rare-earth-Cu interaction in high-temperature superconductors. <i>Physica B: Condensed Matter</i> , 1997 , 230-232, 853-855	2.8	
5	Magnetismus auf Knopfdruck. <i>Physik Journal</i> , 2001 , 57, 19-21		
4	Electronic band structure of DC-sputtered $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8+x$. <i>Solid State Communications</i> , 1995 , 95, 85-89	1.6	
3	Metal-insulator transition and electronic structure in Pr-doped $\text{Bi}_2\text{Sr}_2(\text{Ca}_z, \text{Pr}_1-x)\text{Cu}_2\text{O}_8 + y$. <i>Physica B: Condensed Matter</i> , 1996 , 223-224, 519-521	2.8	
2	Magnetic field dependence of the Josephson coupling energy along the c-axis in $\text{Bi}_2\text{Sr}_2\text{CaCu}_2\text{O}_8+y$. <i>Journal of Low Temperature Physics</i> , 1996 , 105, 1219-1224	1.3	

1 Schmalbuch et al. Reply. *Physical Review Letters*, **2016**, 117, 139702

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