Andrey Turchanin

List of Publications by Year
in descending order

122	5,849	109137	76769
papers	citations	35 h-index	74 g-index

128	128	128	8793
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Threeâ€Dimensional Nitrogen and Boron Coâ€doped Graphene for Highâ€Performance Allâ€Solidâ€State Supercapacitors. Advanced Materials, 2012, 24, 5130-5135.	11.1	1,270
2	Nitrogen-Doped Graphene and Its Iron-Based Composite As Efficient Electrocatalysts for Oxygen Reduction Reaction. ACS Nano, 2012, 6, 9541-9550.	7.3	640
3	Production and processing of graphene and related materials. 2D Materials, 2020, 7, 022001.	2.0	333
4	Layerâ€byâ€Layer Assembled Heteroatomâ€Doped Graphene Films with Ultrahigh Volumetric Capacitance and Rate Capability for Microâ€Supercapacitors. Advanced Materials, 2014, 26, 4552-4558.	11.1	289
5	One Nanometer Thin Carbon Nanosheets with Tunable Conductivity and Stiffness. Advanced Materials, 2009, 21, 1233-1237.	11.1	201
6	A Universal Scheme to Convert Aromatic Molecular Monolayers into Functional Carbon Nanomembranes. ACS Nano, 2013, 7, 6489-6497.	7.3	141
7	Carbon Nanomembranes. Advanced Materials, 2016, 28, 6075-6103.	11.1	133
8	Molecular Mechanisms of Electron-Induced Cross-Linking in Aromatic SAMs. Langmuir, 2009, 25, 7342-7352.	1.6	132
9	Waterâ€Soluble Polymeric Carbon Nitride Colloidal Nanoparticles for Highly Selective Quasiâ€Homogeneous Photocatalysis. Angewandte Chemie - International Edition, 2020, 59, 487-495.	7.2	107
10	Conversion of Self-Assembled Monolayers into Nanocrystalline Graphene: Structure and Electric Transport. ACS Nano, 2011, 5, 3896-3904.	7.3	97
11	Carbon nanomembranes from self-assembled monolayers: Functional surfaces without bulk. Progress in Surface Science, 2012, 87, 108-162.	3.8	96
12	Molecular Selfâ€Assembly, Chemical Lithography, and Biochemical Tweezers: A Path for the Fabrication of Functional Nanometerâ€Scale Protein Arrays. Advanced Materials, 2008, 20, 471-477.	11.1	95
13	On the Release of Hydrogen from the Sâ^'H groups in the Formation of Self-Assembled Monolayers of Thiols. Langmuir, 2009, 25, 10435-10438.	1.6	83
14	Janus Nanomembranes: A Generic Platform for Chemistry in Two Dimensions. Angewandte Chemie - International Edition, 2010, 49, 8493-8497.	7.2	83
15	Tailoring Photoluminescence from MoS₂ Monolayers by Mie-Resonant Metasurfaces. ACS Photonics, 2019, 6, 1002-1009.	3.2	82
16	Fabrication of Molecular Nanotemplates in Selfâ€Assembled Monolayers by Extremeâ€Ultravioletâ€Induced Chemical Lithography. Small, 2007, 3, 2114-2119.	5.2	80
17	High optical quality of MoS ₂ monolayers grown by chemical vapor deposition. 2D Materials, 2020, 7, 015011.	2.0	76
18	Controlling interlayer excitons in MoS2 layers grown by chemical vapor deposition. Nature Communications, 2020, 11, 2391.	5.8	73

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19	High thermal stability of cross-linked aromatic self-assembled monolayers: Nanopatterning via selective thermal desorption. Applied Physics Letters, 2007, 90, 053102.	1.5	67
20	All-optical polarization and amplitude modulation of second-harmonic generation in atomically thin semiconductors. Nature Photonics, 2021, 15, 837-842.	15.6	59
21	Functional Singleâ€Layer Graphene Sheets from Aromatic Monolayers. Advanced Materials, 2013, 25, 4146-4151.	11.1	56
22	Giant persistent photoconductivity in monolayer MoS2 field-effect transistors. Npj 2D Materials and Applications, 2021, 5, .	3.9	56
23	Layered material platform for surface plasmon resonance biosensing. Scientific Reports, 2019, 9, 20286.	1.6	55
24	Proton and Li-Ion Permeation through Graphene with Eight-Atom-Ring Defects. ACS Nano, 2020, 14, 7280-7286.	7.3	55
25	Mechanically Stacked 1â€nmâ€Thick Carbon Nanosheets: Ultrathin Layered Materials with Tunable Optical, Chemical, and Electrical Properties. Small, 2011, 7, 874-883.	5.2	54
26	Poly(1,4â€Diethynylbenzene) Gradient Homojunction with Enhanced Charge Carrier Separation for Photoelectrochemical Water Reduction. Advanced Materials, 2019, 31, e1900961.	11.1	53
27	Structural Investigation of 1,1â€²-Biphenyl-4-thiol Self-Assembled Monolayers on Au(111) by Scanning Tunneling Microscopy and Low-Energy Electron Diffraction. Langmuir, 2012, 28, 13905-13911.	1.6	52
28	Allâ€Carbon Vertical van der Waals Heterostructures: Nonâ€destructive Functionalization of Graphene for Electronic Applications. Advanced Materials, 2014, 26, 4831-4837.	11.1	51
29	Controlled growth of transition metal dichalcogenide monolayers using Knudsen-type effusion cells for the precursors. JPhys Materials, 2019, 2, 016001.	1.8	49
30	Stop-Frame Filming and Discovery of Reactions at the Single-Molecule Level by Transmission Electron Microscopy. ACS Nano, 2017, 11, 2509-2520.	7.3	46
31	On the influence of bandstructure on transport properties of magnetic tunnel junctions with Co2Mn1â^'xFexSi single and multilayer electrode. Journal of Applied Physics, 2008, 104, 043918.	1.1	45
32	Inhibition of Lithium Dendrite Formation in Lithium Metal Batteries via Regulated Cation Transport through Ultrathin Subâ€Nanometer Porous Carbon Nanomembranes. Advanced Energy Materials, 2021, 11, 2100666.	10.2	45
33	Molecular Engineering of Conjugated Acetylenic Polymers for Efficient Cocatalystâ€free Photoelectrochemical Water Reduction. Angewandte Chemie - International Edition, 2019, 58, 10368-10374.	7.2	42
34	An atomically thin matter-wave beamsplitter. Nature Nanotechnology, 2015, 10, 845-848.	15.6	41
35	Hybrid Dielectric Metasurfaces for Enhancing Second-Harmonic Generation in Chemical Vapor Deposition Grown MoS₂ Monolayers. ACS Photonics, 2021, 8, 218-227.	3.2	41
36	1D pâ€“n Junction Electronic and Optoelectronic Devices from Transition Metal Dichalcogenide Lateral Heterostructures Grown by Oneâ€Pot Chemical Vapor Deposition Synthesis. Advanced Functional Materials, 2021, 31, 2101086.	7.8	38

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37	Surface freezing in liquid Gaâ€“Bi alloys: optical second harmonic and plasma generation study. Physical Chemistry Chemical Physics, 2002, 4, 647-654.	1.3	37
38	Chemically Functionalized Carbon Nanosieves with 1â€nm Thickness. Small, 2009, 5, 2651-2655.	5.2	32
39	Scalable Functionalization of Optical Fibers Using Atomically Thin Semiconductors. Advanced Materials, 2020, 32, e2003826.	11.1	31
40	Energy-filtered transmission electron microscopy of biological samples on highly transparent carbon nanomembranes. Ultramicroscopy, 2011, 111, 342-349.	0.8	28
41	Electron beam controlled covalent attachment of small organic molecules to graphene. Nanoscale, 2016, 8, 2711-2719.	2.8	28
42	2D van der Waals Heterojunction of Organic and Inorganic Monolayers for High Responsivity Phototransistors. Advanced Functional Materials, 2021, 31, 2105444.	7.8	28
43	Thiopheneâ€Based Conjugated Acetylenic Polymers with Dual Active Sites for Efficient Coâ€Catalystâ€Free Photoelectrochemical Water Reduction in Alkaline Medium. Angewandte Chemie - International Edition, 2021, 60, 18876-18881.	7.2	28
44	Molecular Engineering of Conjugated Acetylenic Polymers for Efficient Cocatalystâ€free Photoelectrochemical Water Reduction. Angewandte Chemie, 2019, 131, 10476-10482.	1.6	27
45	Copper Thiophosphate (Cu₃PS₄) as Electrode for Sodiumâ€Ion Batteries with Ether Electrolyte. Advanced Functional Materials, 2020, 30, 1910583.	7.8	25
46	Hybrid van der Waals heterostructures of zero-dimensional and two-dimensional materials. Nanoscale, 2015, 7, 13393-13397.	2.8	24
47	Bottom-Up Synthesis of Graphene Monolayers with Tunable Crystallinity and Porosity. ACS Nano, 2019, 13, 7310-7322.	7.3	24
48	Freestanding carbon nanomembranes and graphene monolayers nanopatterned via EUV interference lithography. 2D Materials, 2019, 6, 021002.	2.0	23
49	Embedding molecular photosensitizers and catalysts in nanoporous block copolymer membranes for visible-light driven hydrogen evolution. Journal of Materials Chemistry A, 2020, 8, 6238-6244.	5.2	22
50	Cobaloxime Complex Salts: Synthesis, Patterning on Carbon Nanomembranes and Heterogeneous Hydrogen Evolution Studies. Chemistry - A European Journal, 2021, 27, 16896-16903.	1.7	22
51	Threshold and efficiency for perforation of 1 nm thick carbon nanomembranes with slow highly charged ions. 2D Materials, 2015, 2, 035009.	2.0	21
52	Low-energy electron irradiation induced synthesis of molecular nanosheets: influence of the electron beam energy. Faraday Discussions, 2021, 227, 61-79.	1.6	21
53	Lateral heterostructures of two-dimensional materials by electron-beam induced stitching. Carbon, 2018, 128, 106-116.	5.4	20
54	Controlling second-harmonic diffraction by nano-patterning MoS<i/> ₂ monolayers. Optics Express, 2019, 27, 35475.	1.7	20

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55	Direct e-beam writing of 1â€‚nm thin carbon nanoribbons. Journal of Vacuum Science & Technology B, 2009, 27, 3059.	1.3	19
56	Atmospheric Pressure, Temperature-Induced Conversion of Organic Monolayers into Nanocrystalline Graphene. Journal of Physical Chemistry C, 2012, 116, 12295-12303.	1.5	19
57	Polymer Brushes on Hexagonal Boron Nitride. Small, 2019, 15, 1805228.	5.2	18
58	Oscillatory wetting instability induced by liquidâ€“liquid decomposition in a Gaâ€“Pb alloy. Journal of Chemical Physics, 2004, 120, 11171-11182.	1.2	16
59	Fabrication of metal patterns on freestanding graphenoid nanomembranes. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C6D5-C6D10.	0.6	16
60	Solâˆ’Gel Processing of Waterâ€Soluble Carbon Nitride Enables Highâ€Performance Photoanodes**. ChemSusChem, 2021, 14, 2170-2179.	3.6	16
61	Energy-Level Alignment at Interfaces between Transition-Metal Dichalcogenide Monolayers and Metal Electrodes Studied with Kelvin Probe Force Microscopy. Journal of Physical Chemistry C, 2021, 125, 13551-13559.	1.5	16
62	Molecularly Engineered Black Phosphorus Heterostructures with Improved Ambient Stability and Enhanced Charge Carrier Mobility. Advanced Materials, 2021, 33, e2105694.	11.1	16
63	Direct Growth of Patterned Graphene. Small, 2016, 12, 1440-1445.	5.2	15
64	Preparation of Carbon Nanomembranes without Chemically Active Groups. ACS Applied Materials & Interfaces, 2019, 11, 31176-31181.	4.0	15
65	Waterâ€Soluble Polymeric Carbon Nitride Colloidal Nanoparticles for Highly Selective Quasiâ€Homogeneous Photocatalysis. Angewandte Chemie, 2020, 132, 495-503.	1.6	15
66	Vanishing influence of the band gap on the charge exchange of slow highly charged ions in freestanding single-layer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoS</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review B, 2020, 102, .	1.1	15
67	Facile Resistâ€Free Nanopatterning of Monolayers of MoS₂ by Focused Ionâ€Beam Milling. Advanced Materials Interfaces, 2020, 7, 2000858.	1.9	14
68	Polyampholytic Poly(dehydroalanine) Graft Copolymers as Smart Templates for pH-Controlled Formation of Alloy Nanoparticles. Macromolecules, 2020, 53, 4511-4523.	2.2	14
69	Smart Molecular Nanosheets for Advanced Preparation of Biological Samples in Electron Cryo-Microscopy. ACS Nano, 2020, 14, 9972-9978.	7.3	14
70	Surface freezing and wetting in Gaâ€“Pb alloy: Second harmonic and plasma generation study. Physical Chemistry Chemical Physics, 2003, 5, 5285-5290.	1.3	13
71	Metallization of Organic Monolayers: Electroless Deposition of Cu onto Cross-Linked Aromatic Self-Assembled Monolayers. Zeitschrift Fur Physikalische Chemie, 2008, 222, 917-926.	1.4	13
72	Single-walled carbon nanotubes and nanocrystalline graphene reduce beam-induced movements in high-resolution electron cryo-microscopy of ice-embedded biological samples. Applied Physics Letters, 2011, 99, .	1.5	12

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73	Electrochemical delamination assisted transfer of molecular nanosheets. Nanoscale, 2020, 12, 8656-8663.	2.8	11
74	Optically Triggered Control of the Charge Carrier Density in Chemically Functionalized Graphene Field Effect Transistors. Chemistry - A European Journal, 2020, 26, 6473-6478.	1.7	10
75	Synergy of Photoinduced Force Microscopy and Tip-Enhanced Raman Spectroscopyâ€"A Correlative Study on MoS₂. ACS Photonics, 2019, 6, 1191-1198.	3.2	9
76	Photocatalytically active block copolymer hybrid micelles from double hydrophilic block copolymers. European Polymer Journal, 2020, 140, 110037.	2.6	9
77	Polyampholytic Graft Copolymers as Matrix for TiO₂/Eosin Y/[Mo₃S₁₃]^{2â^'} Hybrid Materials and Lightâ€Driven Catalysis. Chemistry - A European Journal, 2021, 27, 16924-16929.	1.7	9
78	Wet-chemical synthesis of solution-processible porous graphene via defect-driven etching. Carbon, 2021, 185, 568-577.	5.4	9
79	Graphene Growth by Conversion of Aromatic Selfâ€Assembled Monolayers. Annalen Der Physik, 2017, 529, 1700168.	0.9	8
80	Synthesis of Molecular 2D Materials via Low-energy Electron Induced Chemical Reactions. Chimia, 2019, 73, 473.	0.3	8
81	Vapor Phase Exchange of Self-Assembled Monolayers for Engineering of Biofunctional Surfaces. Langmuir, 2017, 33, 3847-3854.	1.6	7
82	Transferable Organic Semiconductor Nanosheets for Application in Electronic Devices. Advanced Materials, 2017, 29, 1606283.	11.1	7
83	Plasmonic Metasurfaces Situated on Ultrathin Carbon Nanomembranes. ACS Photonics, 2020, 7, 1060-1066.	3.2	7
84	pH sensors based on amino-terminated carbon nanomembrane and single-layer graphene van der Waals heterostructures. Applied Physics Reviews, 2021, 8, 031410.	5.5	7
85	Towards synthetic unimolecular [Fe2S2]-photocatalysts sensitized by perylene dyes. Dyes and Pigments, 2022, 198, 109940.	2.0	7
86	Pdâ€Modified Deâ€alloyed Auâ^'Niâ€Microelectrodes for In Situ and Operando Mapping of Hydrogen Evolution. ChemElectroChem, 2022, 9, .	1.7	7
87	Tracking down the origin of peculiar vibrational spectra of aromatic self-assembled thiolate monolayers. Physical Chemistry Chemical Physics, 2018, 20, 29918-29930.	1.3	6
88	A Molecular Photosensitizer in a Porous Block Copolymer Matrixâ€Implications for the Design of Photocatalytically Active Membranes. Chemistry - A European Journal, 2021, 27, 17049-17058.	1.7	6
89	Rhodium-Complex-Functionalized and Polydopamine-Coated CdSe@CdS Nanorods for Photocatalytic NAD⁺ Reduction. ACS Applied Nano Materials, 2021, 4, 12913-12919.	2.4	6
90	Tuning exciton recombination rates in doped transition metal dichalcogenides. Optical Materials: X, 2021, 12, 100097.	0.3	5

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91	Wafer scale synthesis of organic semiconductor nanosheets for van der Waals heterojunction devices. Npj 2D Materials and Applications, 2021, 5, .	3.9	5
92	Towards Covalent Photosensitizer-Polyoxometalate Dyads-Bipyridyl-Functionalized Polyoxometalates and Their Transition Metal Complexes. Molecules, 2019, 24, 4446.	1.7	4
93	Oddâ€“Even Effect in Electron Beam Irradiation of Hybrid Aromaticâ€“Aliphatic Self-Assembled Monolayers of Fatty Acid. Journal of Physical Chemistry C, 2021, 125, 9310-9318.	1.5	4
94	A Study in Red: The Overlooked Role of Azoâ€Moieties in Polymeric Carbon Nitride Photocatalysts with Strongly Extended Optical Absorption. Chemistry - A European Journal, 2021, 27, 17188-17202.	1.7	4
95	Scalable one-step production of electrochemically exfoliated graphene decorated with transition metal oxides for high-performance supercapacitors. Nanoscale, 2021, 13, 15859-15868.	2.8	4
96	Synthesis of Wetâ€Chemically Prepared Porousâ€Graphene Single Layers on Si/SiO₂ Substrate Increasing the Photoluminescence of MoS₂ in Heterostructures. Advanced Materials Interfaces, 2021, 8, 2100783.	1.9	3
97	Photoactive ultrathin molecular nanosheets with reversible lanthanide binding terpyridine centers. Nanoscale, 2021, 13, 20583-20591.	2.8	3
98	Solution-Based Self-Assembly and Stability of Ruthenium(II) Tris-bipyridyl Monolayers on Gold. ACS Applied Materials & Interfaces, 2021, 13, 60544-60552.	4.0	3
99	Carbon Nanomembranes: Carbon Nanomembranes (Adv. Mater. 29/2016). Advanced Materials, 2016, 28, 6263-6263.	11.1	2
100	Polymer Brushes: Polymer Brushes on Hexagonal Boron Nitride (Small 19/2019). Small, 2019, 15, 1970099.	5.2	2
101	Thiophenâ€basierte konjugierte acetylenische Polymere mit dualen aktiven Zentren fÃ¼r effiziente Cokatalysatorâ€freie photoelektrochemische Wasserreduktion im alkalischen Medium. Angewandte Chemie, 2021, 133, 19025-19031.	1.6	2
102	Plowing-induced nanoexfoliation of mono- and multilayer MoS2 surfaces. Physical Review Materials, 2020, 4, .	0.9	2
103	Synthesis and Nanoscale Characterization of Hierarchically Assembled Molecular Nanosheets. Advanced Materials Interfaces, 2022, 9, .	1.9	2
104	Tuning nanowire lasers via hybridization with two-dimensional materials. Nanoscale, 2022, 14, 6822-6829.	2.8	2
105	Scanning-Probe-Induced Assembling of Gold Striations on Mono- and Bi-Layered MoS2 on SiO2. MRS Advances, 2020, 5, 2201-2207.	0.5	1
106	Twoâ€Dimensional Photosensitizer Nanosheets via Lowâ€Energy Electron Beam Induced Crossâ€Linking of Selfâ€Assembled Ru(II) Polypyridine Monolayers. Angewandte Chemie - International Edition, 2022, , .	7.2	1
107	Twoâ€Dimensional Photosensitizer Nanosheets via Lowâ€Energy Electron Beam Induced Crossâ€Linking of Selfâ€Assembled Ru(II) Polypyridine Monolayers. Angewandte Chemie, 0, , .	1.6	1
108	Effect of vertical temperature variation on the oscillatory wetting instability in a fluid Gaâ€“Pb alloy. Physical Chemistry Chemical Physics, 2005, 7, 4146.	1.3	0

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109	Functional Single-Layer Graphene Sheets from Aromatic Monolayers (Adv. Mater. 30/2013). Advanced Materials, 2013, 25, 4145-4145.	11.1	0
110	Emission enhancement from MoS₂ monolayers with silicon nanoantennas. , 2017, , .		0
111	Ultra-Thin Plasmonic Metasurfaces Based on Carbon Nanomembranes. , 2019, , .		0
112	Nanostructured MoS2 Monolayers for Spatial Control of Second-Harmonic Generation. , 2019, , .		0
113	Comparative Study of High Order Harmonic Generation in Monolayer-Thick Semiconductors. , 2019, , .		0
114	Integrated Photonics: Scalable Functionalization of Optical Fibers Using Atomically Thin Semiconductors (Adv. Mater. 47/2020). Advanced Materials, 2020, 32, 2070354.	11.1	0
115	Second Harmonic Generation in monolayer WS2 with double resonant Bragg-Cavities. , 2021, , .		0
116	Scalable Integrated Waveguide with CVD-Grown MoS2 and WS2 Monolayers on Exposed-Core Fibers. , 2021, , .		0
117	Lateral Heterostructures: 1D pâ€“n Junction Electronic and Optoelectronic Devices from Transition Metal Dichalcogenide Lateral Heterostructures Grown by Oneâ€Pot Chemical Vapor Deposition Synthesis (Adv. Funct. Mater. 27/2021). Advanced Functional Materials, 2021, 31, 2170198.	7.8	0
118	Synthesis of Wetâ€Chemically Prepared Porousâ€Graphene Single Layers on Si/SiO₂ Substrate Increasing the Photoluminescence of MoS₂ in Heterostructures (Adv. Mater. Interfaces) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	1	0
119	Experimental Investigation of the Nature of Chiral Light Emission at the K/KÂ´Valleys of Monolayer Molybdenum Disulfide Using its Interaction with Gold Nanoparticles. , 2021, , .		0
120	Valley-selective directional emission enabled by a plasmonic nanoantenna. , 2021, , .		0
121	Frontispiz: Twoâ€Dimensional Photosensitizer Nanosheets via Lowâ€Energy Electron Beam Induced Crossâ€Linking of Selfâ€Assembled Ru^{II} Polypyridine Monolayers. Angewandte Chemie, 2022, 134, .	1.6	0
122	Frontispiece: Twoâ€Dimensional Photosensitizer Nanosheets via Lowâ€Energy Electron Beam Induced Crossâ€Linking of Selfâ€Assembled Ru^{II} Polypyridine Monolayers. Angewandte Chemie - International Edition, 2022, 61, .	7.2	0