Andrey Turchanin

List of Publications by Citations

107 papers	4,485 citations	29 h-index	66 g-index
128 ext. papers	5,168 ext. citations	10 avg, IF	5.51 L-index

#	Paper	IF	Citations
107	Three-dimensional nitrogen and boron co-doped graphene for high-performance all-solid-state supercapacitors. *Advanced Materials*, **2012**, 24, 5130-5	24	1164
106	Nitrogen-doped graphene and its iron-based composite as efficient electrocatalysts for oxygen reduction reaction. *ACS Nano*, **2012**, 6, 9541-50	16.7	578
105	Layer-by-layer assembled heteroatom-doped graphene films with ultrahigh volumetric capacitance and rate capability for micro-supercapacitors. *Advanced Materials*, **2014**, 26, 4552-8	24	260
104	One Nanometer Thin Carbon Nanosheets with Tunable Conductivity and Stiffness. *Advanced Materials*, **2009**, 21, 1233-1237	24	187
103	Production and processing of graphene and related materials. *2D Materials*, **2020**, 7, 022001	5.9	179
102	A universal scheme to convert aromatic molecular monolayers into functional carbon nanomembranes. *ACS Nano*, **2013**, 7, 6489-97	16.7	119
101	Molecular mechanisms of electron-induced cross-linking in aromatic SAMs. *Langmuir*, **2009**, 25, 7342-52	4	118
100	Carbon Nanomembranes. *Advanced Materials*, **2016**, 28, 6075-103	24	105
99	Molecular Self-Assembly, Chemical Lithography, and Biochemical Tweezers: A Path for the Fabrication of Functional Nanometer-Scale Protein Arrays. *Advanced Materials*, **2008**, 20, 471-477	24	92
98	Carbon nanomembranes from self-assembled monolayers: Functional surfaces without bulk. *Progress in Surface Science*, **2012**, 87, 108-162	6.6	88
97	Conversion of self-assembled monolayers into nanocrystalline graphene: structure and electric transport. *ACS Nano*, **2011**, 5, 3896-904	16.7	83
96	On the release of hydrogen from the S-H groups in the formation of self-assembled monolayers of thiols. *Langmuir*, **2009**, 25, 10435-8	4	80
95	Janus nanomembranes: a generic platform for chemistry in two dimensions. *Angewandte Chemie - International Edition*, **2010**, 49, 8493-7	16.4	80
94	Fabrication of molecular nanotemplates in self-assembled monolayers by extreme-ultraviolet-induced chemical lithography. *Small*, **2007**, 3, 2114-9	11	78
93	High thermal stability of cross-linked aromatic self-assembled monolayers: Nanopatterning via selective thermal desorption. *Applied Physics Letters*, **2007**, 90, 053102	3.4	63
92	Functional single-layer graphene sheets from aromatic monolayers. *Advanced Materials*, **2013**, 25, 4146-51	24	52
91	Mechanically stacked 1-nm-thick carbon nanosheets: ultrathin layered materials with tunable optical, chemical, and electrical properties. *Small*, **2011**, 7, 874-83	11	48

90	Structural investigation of 1,1Rbiphenyl-4-thiol self-assembled monolayers on Au(111) by scanning tunneling microscopy and low-energy electron diffraction. *Langmuir*, **2012**, 28, 13905-11	4	47
89	All-carbon vertical van der Waals heterostructures: non-destructive functionalization of graphene for electronic applications. *Advanced Materials*, **2014**, 26, 4831-7	24	45
88	Water-Soluble Polymeric Carbon Nitride Colloidal Nanoparticles for Highly Selective Quasi-Homogeneous Photocatalysis. *Angewandte Chemie - International Edition*, **2020**, 59, 487-495	16.4	45
87	Tailoring Photoluminescence from MoS2 Monolayers by Mie-Resonant Metasurfaces. *ACS Photonics* , **2019**, 6, 1002-1009	6.3	44
86	High optical quality of MoS 2 monolayers grown by chemical vapor deposition. *2D Materials*, **2020**, 7, 015011	5.9	40
85	Stop-Frame Filming and Discovery of Reactions at the Single-Molecule Level by Transmission Electron Microscopy. *ACS Nano*, **2017**, 11, 2509-2520	16.7	38
84	An atomically thin matter-wave beamsplitter. *Nature Nanotechnology*, **2015**, 10, 845-8	28.7	36
83	Controlling interlayer excitons in MoS layers grown by chemical vapor deposition. *Nature Communications*, **2020**, 11, 2391	17.4	36
82	Poly(1,4-Diethynylbenzene) Gradient Homojunction with Enhanced Charge Carrier Separation for Photoelectrochemical Water Reduction. *Advanced Materials*, **2019**, 31, e1900961	24	35
81	Surface freezing in liquid GaBi alloys: optical second harmonic and plasma generation study. *Physical Chemistry Chemical Physics*, **2002**, 4, 647-654	3.6	34
80	Layered material platform for surface plasmon resonance biosensing. *Scientific Reports*, **2019**, 9, 20286	4.9	33
79	Chemically functionalized carbon nanosieves with 1-nm thickness. *Small*, **2009**, 5, 2651-5	11	32
78	Proton and Li-Ion Permeation through Graphene with Eight-Atom-Ring Defects. *ACS Nano*, **2020**, 14, 7280-7286	16.7	27
77	Energy-filtered transmission electron microscopy of biological samples on highly transparent carbon nanomembranes. *Ultramicroscopy*, **2011**, 111, 342-9	3.1	26
76	Controlled growth of transition metal dichalcogenide monolayers using Knudsen-type effusion cells for the precursors. *JPhys Materials*, **2019**, 2, 016001	4.2	25
75	Molecular Engineering of Conjugated Acetylenic Polymers for Efficient Cocatalyst-free Photoelectrochemical Water Reduction. *Angewandte Chemie - International Edition*, **2019**, 58, 10368-10374	16.4	24
74	Electron beam controlled covalent attachment of small organic molecules to graphene. *Nanoscale*, **2016**, 8, 2711-9	7.7	24
73	Hybrid van der Waals heterostructures of zero-dimensional and two-dimensional materials. *Nanoscale*, **2015**, 7, 13393-7	7.7	22

72	Atmospheric Pressure, Temperature-Induced Conversion of Organic Monolayers into Nanocrystalline Graphene. *Journal of Physical Chemistry C*, **2012**, 116, 12295-12303	3.8	19
71	Direct e-beam writing of 1nm thin carbon nanoribbons. *Journal of Vacuum Science & Technology B*, **2009**, 27, 3059		19
70	Bottom-Up Synthesis of Graphene Monolayers with Tunable Crystallinity and Porosity. *ACS Nano*, **2019**, 13, 7310-7322	16.7	18
69	Threshold and efficiency for perforation of 1 nm thick carbon nanomembranes with slow highly charged ions. *2D Materials*, **2015**, 2, 035009	5.9	18
68	Lateral heterostructures of two-dimensional materials by electron-beam induced stitching. *Carbon*, **2018**, 128, 106-116	10.4	17
67	Freestanding carbon nanomembranes and graphene monolayers nanopatterned via EUV interference lithography. *2D Materials*, **2019**, 6, 021002	5.9	16
66	Fabrication of metal patterns on freestanding graphenoid nanomembranes. *Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics*, **2010**, 28, C6D5-C6D10	1.3	16
65	Oscillatory wetting instability induced by liquid-liquid decomposition in a Ga--Pb alloy. *Journal of Chemical Physics*, **2004**, 120, 11171-82	3.9	16
64	Inhibition of Lithium Dendrite Formation in Lithium Metal Batteries via Regulated Cation Transport through Ultrathin Sub-Nanometer Porous Carbon Nanomembranes. *Advanced Energy Materials*, **2021**, 11, 2100666	21.8	15
63	Direct Growth of Patterned Graphene. *Small*, **2016**, 12, 1440-5	11	14
62	Low-energy electron irradiation induced synthesis of molecular nanosheets: influence of the electron beam energy. *Faraday Discussions*, **2021**, 227, 61-79	3.6	14
61	On the influence of bandstructure on transport properties of magnetic tunnel junctions with Co2Mn1FexSi single and multilayer electrode. *Journal of Applied Physics*, **2008**, 104, 043918	2.5	13
60	Metallization of Organic Monolayers: Electroless Deposition of Cu onto Cross-Linked Aromatic Self-Assembled Monolayers. *Zeitschrift Fur Physikalische Chemie*, **2008**, 222, 917-926	3.1	13
59	Surface freezing and wetting in GaPb alloy: Second harmonic and plasma generation study. *Physical Chemistry Chemical Physics*, **2003**, 5, 5285-5290	3.6	13
58	Controlling second-harmonic diffraction by nano-patterning MoS monolayers. *Optics Express*, **2019**, 27, 35475-35484	3.3	13
57	Giant persistent photoconductivity in monolayer MoS2 field-effect transistors. *Npj 2D Materials and Applications*, **2021**, 5,	8.8	13
56	Polymer Brushes on Hexagonal Boron Nitride. *Small*, **2019**, 15, e1805228	11	12
55	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, 133701	3.4	12

54	Water-Soluble Polymeric Carbon Nitride Colloidal Nanoparticles for Highly Selective Quasi-Homogeneous Photocatalysis. *Angewandte Chemie*, **2020**, 132, 495-503	3.6	12
53	All-optical polarization and amplitude modulation of second-harmonic generation in atomically thin semiconductors. *Nature Photonics*,	33.9	12
52	Janus-Nanomembranen: eine allgemein einsetzbare Basis f□ Chemie in zwei Dimensionen. *Angewandte Chemie*, **2010**, 122, 8671-8675	3.6	11
51	Scalable Functionalization of Optical Fibers Using Atomically Thin Semiconductors. *Advanced Materials*, **2020**, 32, e2003826	24	11
50	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	13	10
49	Preparation of Carbon Nanomembranes without Chemically Active Groups. *ACS Applied Materials & Interfaces*, **2019**, 11, 31176-31181	9.5	10
48	Hybrid Dielectric Metasurfaces for Enhancing Second-Harmonic Generation in Chemical Vapor Deposition Grown MoS2 Monolayers. *ACS Photonics*, **2021**, 8, 218-227	6.3	9
47	Synergy of Photoinduced Force Microscopy and Tip-Enhanced Raman Spectroscopy□ Correlative Study on MoS2. *ACS Photonics*, **2019**, 6, 1191-1198	6.3	8
46	Copper Thiophosphate (Cu3PS4) as Electrode for Sodium-Ion Batteries with Ether Electrolyte. *Advanced Functional Materials*, **2020**, 30, 1910583	15.6	8
45	Optically Triggered Control of the Charge Carrier Density in Chemically Functionalized Graphene Field Effect Transistors. *Chemistry - A European Journal*, **2020**, 26, 6473-6478	4.8	8
44	Vanishing influence of the band gap on the charge exchange of slow highly charged ions in freestanding single-layer MoS2. *Physical Review B*, **2020**, 102,	3.3	8
43	Smart Molecular Nanosheets for Advanced Preparation of Biological Samples in Electron Cryo-Microscopy. *ACS Nano*, **2020**, 14, 9972-9978	16.7	8
42	Synthesis of Molecular 2D Materials via Low-energy Electron Induced Chemical Reactions. *Chimia*, **2019**, 73, 473-479	1.3	8
41	2D van der Waals Heterojunction of Organic and Inorganic Monolayers for High Responsivity Phototransistors. *Advanced Functional Materials*,2105444	15.6	8
40	Graphene Growth by Conversion of Aromatic Self-Assembled Monolayers. *Annalen Der Physik*, **2017** , 529, 1700168	2.6	7
39	1D p□ Junction Electronic and Optoelectronic Devices from Transition Metal Dichalcogenide Lateral Heterostructures Grown by One-Pot Chemical Vapor Deposition Synthesis. *Advanced Functional Materials*, **2021**, 31, 2101086	15.6	7
38	Thiophene-Based Conjugated Acetylenic Polymers with Dual Active Sites for Efficient Co-Catalyst-Free Photoelectrochemical Water Reduction in Alkaline Medium. *Angewandte Chemie - International Edition*, **2021**, 60, 18876-18881	16.4	7
37	Vapor Phase Exchange of Self-Assembled Monolayers for Engineering of Biofunctional Surfaces. *Langmuir*, **2017**, 33, 3847-3854	4	6

36	Transferable Organic Semiconductor Nanosheets for Application in Electronic Devices. *Advanced Materials*, **2017**, 29, 1606283	24	6
35	Plasmonic Metasurfaces Situated on Ultrathin Carbon Nanomembranes. *ACS Photonics*, **2020**, 7, 1060-1066	6.9	6
34	Molecular Engineering of Conjugated Acetylenic Polymers for Efficient Cocatalyst-free Photoelectrochemical Water Reduction. *Angewandte Chemie*, **2019**, 131, 10476-10482	3.6	5
33	Polyampholytic Poly(dehydroalanine) Graft Copolymers as Smart Templates for pH-Controlled Formation of Alloy Nanoparticles. *Macromolecules*, **2020**, 53, 4511-4523	5.5	5
32	Cobaloxime Complex Salts: Synthesis, Patterning on Carbon Nanomembranes and Heterogeneous Hydrogen Evolution Studies. *Chemistry - A European Journal*, **2021**, 27, 16896-16903	4.8	5
31	Sol-Gel Processing of Water-Soluble Carbon Nitride Enables High-Performance Photoanodes*. *ChemSusChem*, **2021**, 14, 2170-2179	8.3	5
30	Electrochemical delamination assisted transfer of molecular nanosheets. *Nanoscale*, **2020**, 12, 8656-8663	7.7	5
29	Facile Resist-Free Nanopatterning of Monolayers of MoS2 by Focused Ion-Beam Milling. *Advanced Materials Interfaces*, **2020**, 7, 2000858	4.6	4
28	pH sensors based on amino-terminated carbon nanomembrane and single-layer graphene van der Waals heterostructures. *Applied Physics Reviews*, **2021**, 8, 031410	17.3	4
27	Photocatalytically active block copolymer hybrid micelles from double hydrophilic block copolymers. *European Polymer Journal*, **2020**, 140, 110037	5.2	3
26	Towards Covalent Photosensitizer-Polyoxometalate Dyads-Bipyridyl-Functionalized Polyoxometalates and Their Transition Metal Complexes. *Molecules*, **2019**, 24,	4.8	3
25	Tracking down the origin of peculiar vibrational spectra of aromatic self-assembled thiolate monolayers. *Physical Chemistry Chemical Physics*, **2018**, 20, 29918-29930	3.6	3
24	Molecularly Engineered Black Phosphorus Heterostructures with Improved Ambient Stability and Enhanced Charge Carrier Mobility. *Advanced Materials*, **2021**, 33, e2105694	24	3
23	Polymer Brushes: Polymer Brushes on Hexagonal Boron Nitride (Small 19/2019). *Small*, **2019**, 15, 1970099	11	1
22	Carbon Nanomembranes: Carbon Nanomembranes (Adv. Mater. 29/2016). *Advanced Materials*, **2016**, 28, 6263	24	1
21	Photoactive ultrathin molecular nanosheets with reversible lanthanide binding terpyridine centers. *Nanoscale*, **2021**,	7.7	1
20	Towards synthetic unimolecular Fe2S2-photocatalysts sensitized by perylene dyes. *Dyes and Pigments*, **2021**, 109940	4.6	1
19	Polyampholytic Graft Copolymers as Matrix for TiO /Eosin Y/[Mo S] Hybrid Materials and Light-Driven Catalysis. *Chemistry - A European Journal*, **2021**, 27, 16924-16929	4.8	1

18	Synthesis of Wet-Chemically Prepared Porous-Graphene Single Layers on Si/SiO2 Substrate Increasing the Photoluminescence of MoS2 in Heterostructures. *Advanced Materials Interfaces*, **2021**, 8, 2100783	4.6	1
17	A Study in Red: The Overlooked Role of Azo-Moieties in Polymeric Carbon Nitride Photocatalysts with Strongly Extended Optical Absorption. *Chemistry - A European Journal*, **2021**, 27, 17188-17202	4.8	1
16	Wet-chemical synthesis of solution-processible porous graphene via defect-driven etching. *Carbon*, **2021**, 185, 568-577	10.4	1
15	Scalable one-step production of electrochemically exfoliated graphene decorated with transition metal oxides for high-performance supercapacitors. *Nanoscale*, **2021**, 13, 15859-15868	7.7	1
14	Solution-Based Self-Assembly and Stability of Ruthenium(II) Tris-bipyridyl Monolayers on Gold. *ACS Applied Materials & Interfaces*, **2021**,	9.5	1
13	Scanning-Probe-Induced Assembling of Gold Striations on Mono- and Bi-Layered MoS2 on SiO2. *MRS Advances*, **2020**, 5, 2201-2207	0.7	0
12	Rhodium-Complex-Functionalized and Polydopamine-Coated CdSe@CdS Nanorods for Photocatalytic NAD Reduction.. *ACS Applied Nano Materials*, **2021**, 4, 12913-12919	5.6	0
11	A Molecular Photosensitizer in a Porous Block Copolymer Matrix-Implications for the Design of Photocatalytically Active Membranes. *Chemistry - A European Journal*, **2021**, 27, 17049-17058	4.8	0
10	Tuning exciton recombination rates in doped transition metal dichalcogenides. *Optical Materials: X*, **2021**, 12, 100097	1.7	0
9	Odd–Even Effect in Electron Beam Irradiation of Hybrid Aromatic–Aliphatic Self-Assembled Monolayers of Fatty Acid. *Journal of Physical Chemistry C*, **2021**, 125, 9310-9318	3.8	0
8	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	3.8	0
7	Thiophen-basierte konjugierte acetylenische Polymere mit dualen aktiven Zentren für effiziente Cokatalysator-freie photoelektrochemische Wasserreduktion im alkalischen Medium. *Angewandte Chemie*, **2021**, 133, 19025-19031	3.6	0
6	Functional Single-Layer Graphene Sheets from Aromatic Monolayers (Adv. Mater. 30/2013). *Advanced Materials*, **2013**, 25, 4145-4145	24	
5	Effect of vertical temperature variation on the oscillatory wetting instability in a fluid Ga-Pb alloy. *Physical Chemistry Chemical Physics*, **2005**, 7, 4146-9	3.6	
4	Integrated Photonics: Scalable Functionalization of Optical Fibers Using Atomically Thin Semiconductors (Adv. Mater. 47/2020). *Advanced Materials*, **2020**, 32, 2070354	24	
3	Lateral Heterostructures: 1D pn Junction Electronic and Optoelectronic Devices from Transition Metal Dichalcogenide Lateral Heterostructures Grown by One-Pot Chemical Vapor Deposition Synthesis (Adv. Funct. Mater. 27/2021). *Advanced Functional Materials*, **2021**, 31, 2170198	15.6	
2	Synthesis of Wet-Chemically Prepared Porous-Graphene Single Layers on Si/SiO2 Substrate Increasing the Photoluminescence of MoS2 in Heterostructures (Adv. Mater. Interfaces 17/2021). *Advanced Materials Interfaces*, **2021**, 8, 2170095	4.6	
1	Synthesis and Nanoscale Characterization of Hierarchically Assembled Molecular Nanosheets. *Advanced Materials Interfaces*,2102389	4.6	