Alexandr V Talyzin

List of Publications by Year
in descending order

95	3,578	126907	149698
papers	citations	33 h-index	56 g-index

98	98	98	4418
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Random interstratification in hydrated graphene oxide membranes and implications for seawater desalination. Nature Nanotechnology, 2022, 17, 131-133.	31.5	17
2	High Surface Area â€œ3D Graphene Oxideâ€•for Enhanced Sorption of Radionuclides. Advanced Materials Interfaces, 2022, 9, .	3.7	7
3	Carboxyl groups do not play the major role in binding metal cations by graphene oxide. Physical Chemistry Chemical Physics, 2021, 23, 17430-17439.	2.8	14
4	Facile fabrication of graphene-based high-performance microsupercapacitors operating at a high temperature of 150 Â°C. Nanoscale Advances, 2021, 3, 4674-4679.	4.6	4
5	Ball-milling-enhanced capacitive charge storage of activated graphene in aqueous, organic and ionic liquid electrolytes. Electrochimica Acta, 2021, 370, 137738.	5.2	16
6	Intercalation of Dyes in Graphene Oxide Thin Films and Membranes. Journal of Physical Chemistry C, 2021, 125, 6877-6885.	3.1	10
7	Critical Role of Functional Groups Containing N, S, and O on Graphene Surface for Stable and Fast Charging Liâ€S Batteries. Small, 2021, 17, e2007242.	10.0	23
8	Spray Deposition of Supercapacitor Electrodes using Environmentally Friendly Aqueous Activated Graphene and Activated Carbon Dispersions for Industrial Implementation. ChemElectroChem, 2021, 8, 1349-1361.	3.4	7
9	Swelling Pressures of Graphite Oxide and Graphene Oxide Membranes in Water and Ethanol. Advanced Materials Interfaces, 2021, 8, 2100552.	3.7	22
10	Defective graphene nanosheets for drinking water purification: Adsorption mechanism, performance, and recovery. FlatChem, 2021, 29, 100283.	5.6	23
11	Covalent Organic Framework (COFâ€1) under High Pressure. Angewandte Chemie, 2020, 132, 1103-1108.	2.0	3
12	New insights into the mechanism of graphene oxide and radionuclide interaction. Carbon, 2020, 158, 291-302.	10.3	37
13	Covalent Organic Framework (COFâ€1) under High Pressure. Angewandte Chemie - International Edition, 2020, 59, 1087-1092.	13.8	34
14	Swollen Structures of Brodie Graphite Oxide as Solid Solvates. Journal of Physical Chemistry C, 2020, 124, 23410-23418.	3.1	9
15	Acetylation of graphite oxide. Physical Chemistry Chemical Physics, 2020, 22, 21059-21067.	2.8	2
16	Enhanced Sorption of Radionuclides by Defect-Rich Graphene Oxide. ACS Applied Materials & Interfaces, 2020, 12, 45122-45135.	8.0	50
17	Swelling properties of graphite oxides and graphene oxide multilayered materials. Nanoscale, 2020, 12, 21060-21093.	5.6	66
18	Aqueous Activated Graphene Dispersions for Deposition of High-Surface Area Supercapacitor Electrodes. Journal of Physical Chemistry Letters, 2020, 11, 3032-3038.	4.6	30

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19	Thermally reduced pillared GO with precisely defined slit pore size. RSC Advances, 2020, 10, 6831-6839.	3.6	7
20	Activated graphene as a material for supercapacitor electrodes: effects of surface area, pore size distribution and hydrophilicity. Physical Chemistry Chemical Physics, 2019, 21, 17901-17912.	2.8	43
21	Evaluation of fluorine and sulfonic acid co-functionalized graphene oxide membranes under hydrogen proton exchange membrane fuel cell conditions. Sustainable Energy and Fuels, 2019, 3, 1790-1798.	4.9	13
22	Swelling of graphene oxide membranes in alcohols: effects of molecule size and air ageing. Journal of Materials Chemistry A, 2019, 7, 11331-11337.	10.3	38
23	A Molecular Pillar Approach To Grow Vertical Covalent Organic Framework Nanosheets on Graphene: Hybrid Materials for Energy Storage. Angewandte Chemie - International Edition, 2018, 57, 1034-1038.	13.8	198
24	A Molecular Pillar Approach To Grow Vertical Covalent Organic Framework Nanosheets on Graphene: Hybrid Materials for Energy Storage. Angewandte Chemie, 2018, 130, 1046-1050.	2.0	40
25	Gravimetric tank method to evaluate material-enhanced hydrogen storage by physisorbing materials. Physical Chemistry Chemical Physics, 2018, 20, 27983-27991.	2.8	7
26	Exactly matched pore size for the intercalation of electrolyte ions determined using the tunable swelling of graphite oxide in supercapacitor electrodes. Nanoscale, 2018, 10, 21386-21395.	5.6	23
27	Properties of Graphite Oxide Powders and Membranes as Revealed by Electron Paramagnetic Resonance Spectroscopy. Journal of Physical Chemistry C, 2018, 122, 22750-22759.	3.1	18
28	Swelling of Thin Graphene Oxide Films Studied by in Situ Neutron Reflectivity. Journal of Physical Chemistry C, 2018, 122, 13106-13116.	3.1	19
29	Graphite oxide swelling in molten sugar alcohols and their aqueous solutions. Carbon, 2018, 140, 157-163.	10.3	15
30	Porous graphite oxide pillared with tetrapod-shaped molecules. Carbon, 2017, 120, 145-156.	10.3	29
31	Graphene decorated with metal nanoparticles: Hydrogen sorption and related artefacts. Microporous and Mesoporous Materials, 2017, 250, 27-34.	4.4	22
32	Multilayered intercalation of 1-octanol into Brodie graphite oxide. Nanoscale, 2017, 9, 6929-6936.	5.6	27
33	Systematic evaluation of different types of graphene oxide in respect to variations in their in-plane modulus. Carbon, 2017, 114, 700-705.	10.3	44
34	Brodie vs Hummers graphite oxides for preparation of multi-layered materials. Carbon, 2017, 115, 430-440.	10.3	104
35	Graphene-based lithium ion capacitor with high gravimetric energy and power densities. Journal of Power Sources, 2017, 363, 422-427.	7.8	49
36	Stability and dye inclusion of graphene oxide/polyelectrolyte layer-by-layer self-assembled films in saline, acidic and basic aqueous solutions. Carbon, 2017, 111, 350-357.	10.3	15

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37	Synthesis of graphene nanoribbons inside boron nitride nanotubes. Physica Status Solidi (B): Basic Research, 2016, 253, 2377-2379.	1.5	9
38	Comment on â€œNanohole-Structured and Palladium-Embedded 3D Porous Graphene for Ultrahigh Hydrogen Storage and CO Oxidation Multifunctionalitiesâ€• ACS Nano, 2016, 10, 9055-9056.	14.6	3
39	High-Pressure Study of Mn(BH4)2 Reveals a Stable Polymorph with High Hydrogen Density. Chemistry of Materials, 2016, 28, 274-283.	6.7	17
40	High-temperature transformations of coronene-based graphene nanoribbons encapsulated in SWNTs. Physica Status Solidi (B): Basic Research, 2015, 252, 2491-2495.	1.5	3
41	Hydrogen storage in bulk graphene-related materials. Microporous and Mesoporous Materials, 2015, 210, 46-51.	4.4	96
42	Delamination of graphite oxide in a liquid upon cooling. Nanoscale, 2015, 7, 12625-12630.	5.6	33
43	Hydrogen adsorption by perforated graphene. International Journal of Hydrogen Energy, 2015, 40, 6594-6599.	7.1	59
44	Graphene-based technologies for energy applications, challenges and perspectives. 2D Materials, 2015, 2, 030204.	4.4	74
45	Hydrogen storage in high surface area graphene scaffolds. Chemical Communications, 2015, 51, 15280-15283.	4.1	79
46	Structure of graphene oxide membranes in solvents and solutions. Nanoscale, 2015, 7, 15374-15384.	5.6	98
47	Porous Graphene Oxide/Diboronic Acid Materials: Structure and Hydrogen Sorption. Journal of Physical Chemistry C, 2015, 119, 27179-27191.	3.1	49
48	The structure of graphene oxide membranes in liquid water, ethanol and waterâ€“ethanol mixtures. Nanoscale, 2014, 6, 272-281.	5.6	180
49	Graphene oxide hydration and solvation: an in situ neutron reflectivity study. Nanoscale, 2014, 6, 12151-12156.	5.6	32
50	Coronene Encapsulation in Singleâ€Walled Carbon Nanotubes: Stacked Columns, Peapods, and Nanoribbons. ChemPhysChem, 2014, 15, 1660-1665.	2.1	28
51	Hydrogen-Driven Cage Unzipping of C₆₀ into Nano-Graphenes. Journal of Physical Chemistry C, 2014, 118, 6504-6513.	3.1	21
52	Hydration of Bilayered Graphene Oxide. Nano Letters, 2014, 14, 3993-3998.	9.1	135
53	Effect of synthesis method on solvation and exfoliation of graphite oxide. Carbon, 2013, 52, 171-180.	10.3	148
54	Enormous Lattice Expansion of Hummers Graphite Oxide in Alcohols at Low Temperatures. ACS Nano, 2013, 7, 1395-1399.	14.6	66

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55	Selective Intercalation of Graphite Oxide by Methanol in Water/Methanol Mixtures. Journal of Physical Chemistry C, 2013, 117, 1963-1968.	3.1	51
56	Optical Properties of Graphene Nanoribbons Encapsulated in Single-Walled Carbon Nanotubes. ACS Nano, 2013, 7, 6346-6353.	14.6	82
57	Pressureâ€Induced Water Insertion in Synthetic Clays. Angewandte Chemie - International Edition, 2013, 52, 3891-3895.	13.8	23
58	Effect of Catalysts on the Reaction of C₆₀with Hydrogen. Fullerenes Nanotubes and Carbon Nanostructures, 2012, 20, 319-323.	2.1	3
59	Solvation of graphite oxide in waterâ€“methanol binary polar solvents. Physica Status Solidi (B): Basic Research, 2012, 249, 2568-2571.	1.5	15
60	Phase Transitions in Graphite Oxide Solvates at Temperatures Near Ambient. Journal of Physical Chemistry Letters, 2012, 3, 812-817.	4.6	56
61	Hydrogenâ€Driven Collapse of C₆₀ Inside Singleâ€Walled Carbon Nanotubes. Angewandte Chemie - International Edition, 2012, 51, 4435-4439.	13.8	8
62	Reaction of C60 with Hydrogen Gas: In Situ Monitoring and Pathways. Journal of Physical Chemistry C, 2011, 115, 11484-11492.	3.1	30
63	Low Temperature Phase Diagram of NH3BH3. Materials Research Society Symposia Proceedings, 2011, 1309, 101.	0.1	0
64	Hydration of Graphite Oxide in Electrolyte and Non-Electrolyte Solutions. Journal of Physical Chemistry C, 2011, 115, 24611-24614.	3.1	22
65	Synthesis of Graphene Nanoribbons Encapsulated in Single-Walled Carbon Nanotubes. Nano Letters, 2011, 11, 4352-4356.	9.1	174
66	Hydrogenation, Purification, and Unzipping of Carbon Nanotubes by Reaction with Molecular Hydrogen: Road to Graphane Nanoribbons. ACS Nano, 2011, 5, 5132-5140.	14.6	106
67	Comment to the â€œResponse to â€œHydrogen adsorption in Pt catalyst/MOF-5 materialsâ€â€• by Li et al.. Microporous and Mesoporous Materials, 2011, 139, 216-218.	4.4	16
68	Phase coexistence and hysteresis effects in the pressure-temperature phase diagram of NH<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn></mml:mrow></mml:msub></mml:mrow></mml:math>BH<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow /><mml:mrow><mml:mn>3</mml:mn></mml:mro	3.2	19
69	Pressure-Induced Insertion of Liquid Acetone into the Graphite Oxide Structure. Journal of Physical Chemistry C, 2010, 114, 7004-7006.	3.1	26
70	Hydrogen adsorption in Pt catalyst/MOF-5 materials. Microporous and Mesoporous Materials, 2010, 135, 201-205.	4.4	62
71	High-temperature reactions of C60 with polycyclic aromatic hydrocarbons. Chemical Physics, 2010, 368, 49-57.	1.9	2
72	Cation Size and Anion Anisotropy in Structural Chemistry of Metal Borohydrides. The Peculiar Pressure Evolution of RbBH₄. Inorganic Chemistry, 2010, 49, 5285-5292.	4.0	16

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73	Fulleranes by Direct Reaction with Hydrogen Gas at Elevated Conditions. Carbon Materials, 2010, , 85-103.	1.2	5
74	Hydrogenation of C₆₀in Peapods: Physical Chemistry in Nano Vessels. Journal of Physical Chemistry C, 2009, 113, 8583-8587.	3.1	29
75	Pressure-Induced Insertion of Liquid Alcohols into Graphite Oxide Structure. Journal of the American Chemical Society, 2009, 131, 18445-18449.	13.7	74
76	Nanocarbons by High-Temperature Decomposition of Graphite Oxide at Various Pressures. Journal of Physical Chemistry C, 2009, 113, 11279-11284.	3.1	37
77	Thermal Decomposition of C60H18. Journal of Physical Chemistry C, 2009, 113, 13133-13138.	3.1	14
78	Synthesis and Structural Characterization of C₇₀H₃₈. Angewandte Chemie - International Edition, 2008, 47, 2796-2799.	13.8	16
79	Colossal Pressureâ€Induced Lattice Expansion of Graphite Oxide in the Presence of Water. Angewandte Chemie - International Edition, 2008, 47, 8268-8271.	13.8	109
80	Feasibility of H2H2â€“THFâ€“H2OH2O clathrate hydrates for hydrogen storage applications. International Journal of Hydrogen Energy, 2008, 33, 111-115.	7.1	44
81	High-pressure phase ofNaBH4: Crystal structure from synchrotron powder diffraction data. Physical Review B, 2007, 76, .	3.2	62
82	Formation of palladium fullerides and their thermal decomposition into palladium nanoparticles. Carbon, 2007, 45, 2564-2569.	10.3	18
83	Phase transitions in hydrogen storage compounds under pressure. Journal of Physics Condensed Matter, 2007, 19, 425201.	1.8	8
84	Reaction of Hydrogen Gas with C60at Elevated Pressure and Temperature:Â Hydrogenation and Cage Fragmentationâ€. Journal of Physical Chemistry A, 2006, 110, 8528-8534.	2.5	48
85	High-pressure study of NaAlH4by Raman spectroscopy up to 17ÂGPa. High Pressure Research, 2006, 26, 165-173.	1.2	15
86	Temperature dependence of C60 Raman spectra up to 840ÂK. Solid State Communications, 2006, 140, 178-181.	1.9	10
87	Complex Hydrides Studied by Raman Spectroscopy and Thermal Conductivity Measurements under High Pressure. Materials Research Society Symposia Proceedings, 2006, 971, 1.	0.1	1
88	Composition of Hydrofullerene Mixtures Produced by C60 Reaction with Hydrogen Gas Revealed by High-Resolution Mass Spectrometry. Journal of Physical Chemistry B, 2005, 109, 12742-12747.	2.6	37
89	Synthesis of C59Hxand C58HxFullerenes Stabilized by Hydrogen. Journal of Physical Chemistry B, 2005, 109, 5403-5405.	2.6	32
90	Selective Synthesis of theC3vIsomer of C60H18. Organic Letters, 2005, 7, 5557-5560.	4.6	28

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91	Hydrogen adsorption in C60 at pressures up to 2000 atm. Chemical Physics Letters, 2004, 397, 77-81.	2.6	9
92	Pressure-induced phase transformations in tetragonal and rhombohedral C60 polymers. High Temperatures - High Pressures, 2003, 35/36, 47-53.	0.3	2
93	Deposition and characterisation of NbxC60 films. Thin Solid Films, 2002, 405, 42-49.	1.8	17
94	Preparation and characterization of C60S16 and C70S48 thin films. Thin Solid Films, 1999, 350, 113-118.	1.8	13
95	Phase Transition C60â^'C60*4C6H6in Liquid Benzene. Journal of Physical Chemistry B, 1997, 101, 9679-9681.	2.6	18