Alexander Sinitskii

List of Publications by Year
in descending order

149 papers	21,952 citations	71102 41 h-index	9861 141 g-index
154 all docs	154 docs citations	154 times ranked	27677 citing authors

#	Article	IF	Citations
1	Improved Synthesis of Graphene Oxide. ACS Nano, 2010, 4, 4806-4814.	14.6	10,035
2	Longitudinal unzipping of carbon nanotubes to form graphene nanoribbons. Nature, 2009, 458, 872-876.	27.8	3,246
3	Effect of Synthesis on Quality, Electronic Properties and Environmental Stability of Individual Monolayer Ti₃C₂ MXene Flakes. Advanced Electronic Materials, 2016, 2, 1600255.	5.1	1,160
4	Elastic properties of 2D Ti ₃ C ₂ T _x MXene monolayers and bilayers. Science Advances, 2018, 4, eaat0491.	10.3	637
5	Lower-Defect Graphene Oxide Nanoribbons from Multiwalled Carbon Nanotubes. ACS Nano, 2010, 4, 2059-2069.	14.6	539
6	Spontaneous high-concentration dispersions and liquid crystals of graphene. Nature Nanotechnology, 2010, 5, 406-411.	31.5	532
7	Kinetics of Diazonium Functionalization of Chemically Converted Graphene Nanoribbons. ACS Nano, 2010, 4, 1949-1954.	14.6	333
8	Large-scale solution synthesis of narrow graphene nanoribbons. Nature Communications, 2014, 5, 3189.	12.8	271
9	Highly selective gas sensor arrays based on thermally reduced graphene oxide. Nanoscale, 2013, 5, 5426.	5.6	270
10	Layer-by-Layer Removal of Graphene for Device Patterning. Science, 2011, 331, 1168-1172.	12.6	221
11	Highly Conductive Graphene Nanoribbons by Longitudinal Splitting of Carbon Nanotubes Using Potassium Vapor. ACS Nano, 2011, 5, 968-974.	14.6	204
12	Optoelectrical Molybdenum Disulfide (MoS₂)â€”Ferroelectric Memories. ACS Nano, 2015, 9, 8089-8098.	14.6	193
13	Patterning Graphene through the Self-Assembled Templates: Toward Periodic Two-Dimensional Graphene Nanostructures with Semiconductor Properties. Journal of the American Chemical Society, 2010, 132, 14730-14732.	13.7	165
14	Effects of Synthesis and Processing on Optoelectronic Properties of Titanium Carbonitride MXene. Chemistry of Materials, 2019, 31, 2941-2951.	6.7	160
15	Electronic two-terminal bistable graphitic memories. Nature Materials, 2008, 7, 966-971.	27.5	137
16	Bottom-up solution synthesis of narrow nitrogen-doped graphene nanoribbons. Chemical Communications, 2014, 50, 4172-4174.	4.1	136
17	Electrical and Elastic Properties of Individual Singleâ€Layer Nb₄C₃T_x MXene Flakes. Advanced Electronic Materials, 2020, 6, 1901382.	5.1	134
18	Graphene Nanoribbon Devices Produced by Oxidative Unzipping of Carbon Nanotubes. ACS Nano, 2010, 4, 5405-5413.	14.6	130

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19	Longitudinal Splitting of Boron Nitride Nanotubes for the Facile Synthesis of High Quality Boron Nitride Nanoribbons. Nano Letters, 2011, 11, 3221-3226.	9.1	122
20	Few-layered titanium trisulfide (TiS₃) field-effect transistors. Nanoscale, 2015, 7, 12291-12296.	5.6	122
21	Optical control of polarization in ferroelectric heterostructures. Nature Communications, 2018, 9, 3344.	12.8	119
22	Laterally extended atomically precise graphene nanoribbons with improved electrical conductivity for efficient gas sensing. Nature Communications, 2017, 8, 820.	12.8	113
23	Ferroelectric tunnel junctions with graphene electrodes. Nature Communications, 2014, 5, 5518.	12.8	107
24	High electrical conductivity and breakdown current density of individual monolayer Ti3C2T MXene flakes. Matter, 2021, 4, 1413-1427.	10.0	100
25	Nitrogen-Doping Induced Self-Assembly of Graphene Nanoribbon-Based Two-Dimensional and Three-Dimensional Metamaterials. Nano Letters, 2015, 15, 5770-5777.	9.1	80
26	Quasi-1D TiS₃ Nanoribbons: Mechanical Exfoliation and Thickness-Dependent Raman Spectroscopy. ACS Nano, 2018, 12, 12713-12720.	14.6	77
27	Polarization-Mediated Modulation of Electronic and Transport Properties of Hybrid MoS₂â€“BaTiO₃â€“SrRuO₃ Tunnel Junctions. Nano Letters, 2017, 17, 922-927.	9.1	75
28	Electronic transport in monolayer graphene nanoribbons produced by chemical unzipping of carbon nanotubes. Applied Physics Letters, 2009, 95, .	3.3	74
29	Partially Oxidized Ti₃C₂T_x MXenes for Fast and Selective Detection of Organic Vapors at Part-per-Million Concentrations. ACS Applied Nano Materials, 2020, 3, 3195-3204.	5.0	66
30	Statics and Dynamics of Ferroelectric Domains in Diisopropylammonium Bromide. Advanced Materials, 2015, 27, 7832-7838.	21.0	60
31	Polarizationâ€Đependent Electronic Transport in Graphene/Pb(Zr,Ti)O₃ Ferroelectric Fieldâ€Effect Transistors. Advanced Electronic Materials, 2017, 3, 1700020.	5.1	60
32	Highly Selective Gas Sensors Based on Graphene Nanoribbons Grown by Chemical Vapor Deposition. ACS Applied Materials & Interfaces, 2020, 12, 7392-7402.	8.0	59
33	Graphene substrate for inducing neurite outgrowth. Biochemical and Biophysical Research Communications, 2015, 460, 267-273.	2.1	57
34	Double Stacking Faults in Convectively Assembled Crystals of Colloidal Spheres. Langmuir, 2009, 25, 10408-10412.	3.5	54
35	Gate-Controlled Metalâ€“Insulator Transition in TiS₃ Nanowire Field-Effect Transistors. ACS Nano, 2019, 13, 803-811.	14.6	54
36	Lithographic Graphitic Memories. ACS Nano, 2009, 3, 2760-2766.	14.6	52

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37	Synthesis of Cesium Lead Halide Perovskite Quantum Dots. Journal of Chemical Education, 2017, 94, 1150-1156.	2.3	51
38	Nanodomain Engineering for Programmable Ferroelectric Devices. Nano Letters, 2019, 19, 3194-3198.	9.1	50
39	Solution-Synthesized Chevron Graphene Nanoribbons Exfoliated onto H:Si(100). Nano Letters, 2017, 17, 170-178.	9.1	49
40	Phenyl Functionalization of Atomically Precise Graphene Nanoribbons for Engineering Inter-ribbon Interactions and Graphene Nanopores. ACS Nano, 2018, 12, 8662-8669.	14.6	49
41	Low-Voltage Domain-Wall LiNbO₃ Memristors. Nano Letters, 2020, 20, 5873-5878.	9.1	45
42	Corrugation of Chemically Converted Graphene Monolayers on SiO₂. ACS Nano, 2010, 4, 3095-3102.	14.6	42
43	Chemical vapour deposition and characterization of uniform bilayer and trilayer MoS₂crystals. Journal of Materials Chemistry C, 2016, 4, 11081-11087.	5.5	42
44	Low-temperature thermal reduction of graphene oxide: In situ correlative structural, thermal desorption, and electrical transport measurements. Applied Physics Letters, 2018, 112, .	3.3	42
45	Nanodomain Engineering in Ferroelectric Capacitors with Graphene Electrodes. Nano Letters, 2016, 16, 6460-6466.	9.1	41
46	Directional emission from rare earth ions in inverse photonic crystals. Applied Physics B: Lasers and Optics, 2007, 89, 251-255.	2.2	39
47	The band structure of the quasi-one-dimensional layered semiconductor TiS3(001). Applied Physics Letters, 2018, 112, .	3.3	38
48	Epitaxial growth of aligned atomically precise chevron graphene nanoribbons on Cu(111). Chemical Communications, 2017, 53, 8463-8466.	4.1	36
49	Spin Dynamics and Relaxation in Graphene Nanoribbons: Electron Spin Resonance Probing. ACS Nano, 2012, 6, 7615-7623.	14.6	35
50	Time-Resolved Measurements of Photocarrier Dynamics in TiS₃ Nanoribbons. ACS Applied Materials & Interfaces, 2016, 8, 18334-18338.	8.0	35
51	Three-dimensional periodic graphene nanostructures. Journal of Materials Chemistry C, 2014, 2, 1879.	5.5	34
52	Ordered arrays of silicon pillars with controlled height and aspect ratio. Nanotechnology, 2007, 18, 305307.	2.6	33
53	Chevron-based graphene nanoribbon heterojunctions: Localized effects of lateral extension and structural defects on electronic properties. Carbon, 2018, 134, 310-315.	10.3	31
54	Intrinsic device-to-device variation in graphene field-effect transistors on a Si/SiO2 substrate as a platform for discriminative gas sensing. Applied Physics Letters, 2014, 104, .	3.3	30

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55	The electronic properties of Au and Pt metal contacts on quasi-one-dimensional layered TiS3(001). Applied Physics Letters, 2019, 114, 101604.	3.3	30
56	Direct observation of ferroelectricity in two-dimensional MoS2. Npj 2D Materials and Applications, 2022, 6, .	7.9	30
57	Silica photonic crystals: synthesis and optical properties. Solid State Ionics, 2004, 172, 477-479.	2.7	28
58	Domain mapping of inverse photonic crystals by laser diffraction. Physics Letters, Section A: General, Atomic and Solid State Physics, 2007, 366, 516-522.	2.1	27
59	High-Yield Synthesis of Boron Nitride Nanoribbons via Longitudinal Splitting of Boron Nitride Nanotubes by Potassium Vapor. ACS Nano, 2014, 8, 9867-9873.	14.6	27
60	Topology constrained magnetic structure of Ni photonic crystals. Physica B: Condensed Matter, 2007, 397, 23-26.	2.7	26
61	Photonic crystals based on opals and inverse opals: synthesis and structural features. Russian Chemical Reviews, 2011, 80, 1191-1207.	6.5	25
62	Structural and magnetic properties of inverse opal photonic crystals studied by x-ray diffraction, scanning electron microscopy, and small-angle neutron scattering. Physical Review B, 2009, 79, .	3.2	24
63	Patterning graphene nanoribbons using copper oxide nanowires. Applied Physics Letters, 2012, 100, 103106.	3.3	24
64	Phase manipulated multi-beam holographic lithography for tunable optical lattices. Optics Express, 2007, 15, 7032.	3.4	22
65	Effect of anchor and functional groups in functionalized graphene devices. Nano Research, 2013, 6, 138-148.	10.4	22
66	Interfacial Self-Assembly of Atomically Precise Graphene Nanoribbons into Uniform Thin Films for Electronics Applications. ACS Applied Materials & Interfaces, 2017, 9, 693-700.	8.0	22
67	Onâ€Surface Synthesis and Spectroscopic Characterization of Laterally Extended Chevron Graphene Nanoribbons. ChemPhysChem, 2019, 20, 2281-2285.	2.1	22
68	Collective states and charge density waves in the group IV transition metal trichalcogenides. Applied Physics Letters, 2021, 118, .	3.3	22
69	Large-scale ZnO inverse opal films fabricated by a solâ€“gel technique. Superlattices and Microstructures, 2009, 45, 624-629.	3.1	21
70	Bulk properties of solution-synthesized chevron-like graphene nanoribbons. Faraday Discussions, 2014, 173, 105-13.	3.2	21
71	Dense monolayer films of atomically precise graphene nanoribbons on metallic substrates enabled by direct contact transfer of molecular precursors. Nanoscale, 2017, 9, 18835-18844.	5.6	21
72	Synthesis and exfoliation of quasi-1D (Zr,Ti)S3 solid solutions for device measurements. Journal of Alloys and Compounds, 2020, 815, 152316.	5.5	21

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73	Effect of Band Symmetry on Photocurrent Production in Quasi-One-Dimensional Transition-Metal Trichalcogenides. ACS Applied Materials & Interfaces, 2020, 12, 40525-40531.	8.0	21
74	High Breakdown Current Density in Monolayer Nb₄C₃T_x MXene. , 2021, 3, 1088-1094.		19
75	Graphene platform for neural regenerative medicine. Neural Regeneration Research, 2016, 11, 894-5.	3.0	19
76	Currentâ€“voltageâ€“temperature characteristics of DNA origami. Nanotechnology, 2009, 20, 175102.	2.6	18
77	Method to assess the homogeneity of partially crystallized glasses: Application to a photo-thermo-refractive glass. Journal of Non-Crystalline Solids, 2009, 355, 1760-1768.	3.1	18
78	MXene Materials: Effect of Synthesis on Quality, Electronic Properties and Environmental Stability of Individual Monolayer Ti₃C₂ MXene Flakes (Adv. Electron. Mater. 12/2016). Advanced Electronic Materials, 2016, 2, .	5.1	18
79	Chemical vapor deposition and characterization of two-dimensional molybdenum dioxide (MoO₂) nanoplatelets. Nanotechnology, 2018, 29, 505707.	2.6	18
80	Photoswitchable Monolayer and Bilayer Graphene Devices Enabled by In Situ Covalent Functionalization. Advanced Electronic Materials, 2018, 4, 1800021.	5.1	17
81	Surface termination and Schottky-barrier formation of In₄Se₃(001). Semiconductor Science and Technology, 2020, 35, 065009.	2.0	17
82	Optical study of photonic crystal films made of polystyrene microspheres. Mendeleev Communications, 2007, 17, 4-6.	1.6	16
83	Using Light for Better Programming of Ferroelectric Devices: Optoelectronic MoS₂â€Pb(Zr,Ti)O₃ Memories with Improved Onâ€“Off Ratios. Advanced Electronic Materials, 2021, 7, 2001223.	5.1	16
84	Electropolymerization of Poly(phenylene oxide) on Graphene as a Top-Gate Dielectric. Chemistry of Materials, 2015, 27, 157-165.	6.7	14
85	A recipe for nanoporous graphene. Science, 2018, 360, 154-155.	12.6	14
86	Medium-Dependent Antibacterial Properties and Bacterial Filtration Ability of Reduced Graphene Oxide. Nanomaterials, 2019, 9, 1454.	4.1	14
87	Mechanical Stress Modulation of Resistance in MoS₂ Junctions. Nano Letters, 2022, 22, 1047-1052.	9.1	14
88	Synthesis of SiO2 Photonic Crystals via Self-organization of Colloidal Particles. Inorganic Materials, 2005, 41, 1178-1184.	0.8	13
89	Ultrasmall-angle X-ray scattering analysis of photonic crystal structure. Journal of Experimental and Theoretical Physics, 2009, 109, 29-34.	0.9	13
90	Revealing stacking sequences in inverse opals by microradian X-ray diffraction. Europhysics Letters, 2010, 89, 14002.	2.0	13

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91	Inkjet printable-photoactive all inorganic perovskite films with long effective photocarrier lifetimes. Journal of Physics Condensed Matter, 2018, 30, 18LT02.	1.8	13
92	Slot-Die-Printed Two-Dimensional ZrS₃ Charge Transport Layer for Perovskite Light-Emitting Diodes. ACS Applied Materials & Interfaces, 2019, 11, 48021-48028.	8.0	13
93	Electroresistance effect in MoS2-Hf0.5Zr0.5O2 heterojunctions. Applied Physics Letters, 2021, 118, .	3.3	13
94	Synthesis and microstructure of silica photonic crystals. Mendeleev Communications, 2004, 14, 165-167.	1.6	12
95	DNA origami impedance measurement at room temperature. Journal of Chemical Physics, 2009, 130, 171101.	3.0	12
96	Graphene Electronics, Unzipped. IEEE Spectrum, 2010, 47, 28-33.	0.7	12
97	Graphene Signal Mixer for Sensing Applications. Journal of Physical Chemistry C, 2011, 115, 12128-12134.	3.1	12
98	Multilayer Graphitic Coatings for Thermal Stabilization of Metallic Nanostructures. ACS Applied Materials & Interfaces, 2015, 7, 2987-2992.	8.0	12
99	Anisotropy, band-to-band transitions, phonon modes, and oxidation properties of cobalt-oxide core-shell slanted columnar thin films. Applied Physics Letters, 2016, 108, .	3.3	12
100	Chevron-type graphene nanoribbons with a reduced energy band gap: Solution synthesis, scanning tunneling microscopy and electrical characterization. Nano Research, 2020, 13, 1713-1722.	10.4	12
101	Nonuniform Debye Temperatures in Quasi-One-Dimensional Transition-Metal Trichalcogenides. , 2021, 3, 414-419.		12
102	Printed Electronic Devices with Inks of TiS₃ Quasi-One-Dimensional van der Waals Material. ACS Applied Materials & Interfaces, 2021, 13, 47033-47042.	8.0	12
103	The electronic band structure of quasi-one-dimensional van der Waals semiconductors: the effective hole mass of ZrS₃ compared to TiS₃. Journal of Physics Condensed Matter, 2020, 32, 29LT01.	1.8	12
104	Anisotropic Properties of Quasiâ€1D In₄Se₃: Mechanical Exfoliation, Electronic Transport, and Polarizationâ€Dependent Photoresponse. Advanced Functional Materials, 2021, 31, 2106459.	14.9	11
105	Preparation and properties of electrochromic coatings based on nanoparticle tungsten oxide. Mendeleev Communications, 2005, 15, 178-180.	1.6	10
106	Impedance measurements on a DNA junction. Journal of Chemical Physics, 2008, 128, 201103.	3.0	10
107	Synthesis of high-quality inverse opals based on magnetic complex oxides: yttrium iron garnet (Y3Fe5O12) and bismuth ferrite (BiFeO3). Journal of Materials Chemistry C, 2013, 1, 2975.	5.5	10
108	Negative photoresponse in Ti₃C₂T_x MXene monolayers. Nanophotonics, 2022, 11, 3953-3960.	6.0	10

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109	Angle-dependent laser diffraction in inverse opal photonic crystals. Superlattices and Microstructures, 2008, 44, 626-632.	3.1	9
110	Electronic and Mechanical Properties of MXenes Derived from Single-Flake Measurements. , 2019, , 301-325.		9
111	Nanotoxicity of ZrS3 Probed in a Bioluminescence Test on E. coli Bacteria: The Effect of Evolving H2S. Nanomaterials, 2020, 10, 1401.	4.1	9
112	High-electric-field behavior of the metal-insulator transition in TiS₃ nanowire transistors. Applied Physics Letters, 2022, 120, 073102.	3.3	9
113	Structural and optical properties of cobalt slanted nanopillars conformally coated with few-layer graphene. Applied Physics Letters, 2015, 106, 231901.	3.3	8
114	Structure and Proton-Transfer Mechanism in One-Dimensional Chains of Benzimidazoles. Journal of Physical Chemistry C, 2016, 120, 5804-5809.	3.1	8
115	Imaging and Analysis of Encapsulated Objects through Selfâ€Assembled Electron and Optically Transparent Graphene Oxide Membranes. Advanced Materials Interfaces, 2017, 4, 1600734.	3.7	8
116	Seeking Out Heterogeneous Hydrogen Bonding in a Self-Assembled 2D Cocrystal of Croconic Acid and Benzimidazole on Au(111). Journal of Physical Chemistry C, 2021, 125, 2403-2410.	3.1	8
117	Structural and optical properties of titania photonic crystal films prepared by a solâ€“gel method. Mendeleev Communications, 2007, 17, 1-3.	1.6	7
118	Aggregation of atomically precise graphene nanoribbons. RSC Advances, 2017, 7, 54491-54499.	3.6	7
119	Surface and dynamical properties of GeI₂. 2D Materials, 2022, 9, 025001.	4.4	7
120	Effect of Au/HfS₃ interfacial interactions on properties of HfS₃-based devices. Physical Chemistry Chemical Physics, 2022, 24, 14016-14021.	2.8	7
121	Inverse photonic crystals based on silica. Doklady Chemistry, 2006, 408, 61-64.	0.9	6
122	Complexities at the Au/ZrS₃(001) interface probed by x-ray photoemission spectroscopy. Journal of Physics Condensed Matter, 2021, 33, 434001.	1.8	6
123	Chemical Approaches to Produce Graphene Oxide and Related Materials. , 2012, , 205-234.		5
124	Diffusion-controlled on-surface synthesis of graphene nanoribbon heterojunctions. RSC Advances, 2022, 12, 6615-6618.	3.6	5
125	Title is missing!. Inorganic Materials, 2003, 39, 280-284.	0.8	4
126	Oxidative peeling of carbon black nanoparticles. RSC Advances, 2015, 5, 92539-92544.	3.6	4

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127	Atomic-Scale Characterization of Ferro-Electric Domains in Lithium Niobate-revealing the Electronic Properties of Domain Walls. Microscopy and Microanalysis, 2019, 25, 576-577.	0.4	4
128	Preparation-dependent properties of Ca(Cu,Mn)7O12 CMR materials. Solid State Communications, 2006, 139, 380-385.	1.9	3
129	Synthesis and luminescence properties of opal-based photonic crystal with HEuEDTA. , 2006, 6182, 571.		3
130	Synthesis and properties of nanocrystalline CsI. Inorganic Materials, 2011, 47, 1033-1038.	0.8	3
131	Immobilization and Encapsulation of Micro- and Nano- Objects with Electron Transparent Graphene Oxide membranes. Microscopy and Microanalysis, 2014, 20, 1798-1799.	0.4	3
132	Solution-stable anisotropic carbon nanotube/graphene hybrids based on slanted columnar thin films for chemical sensing. RSC Advances, 2016, 6, 63235-63240.	3.6	3
133	7. Solution Synthesis of Atomically Precise Graphene Nanoribbons. , 2017, , .		3
134	Solution Synthesis of Atomically Precise Graphene Nanoribbons. ChemistrySelect, 2017, 2, .	1.5	3
135	Building the Quasi One Dimensional Transistor from 2D Materials. , 2019, , .		3
136	Reply to â€œComment on â€˜Gate-Controlled Metalâ€“Insulator Transition in TiS₃ Nanowire Field-Effect Transistorsâ€™â€• ACS Nano, 2019, 13, 8498-8500.	14.6	3
137	Inkjet Printing All Inorganic Halide Perovskite Inks for Photovoltaic Applications. Journal of Visualized Experiments, 2019, , .	0.3	3
138	Structure Formation and Coupling Reactions of Hexaphenylbenzene and Its Brominated Analog. ChemPhysChem, 2021, 22, 1769-1773.	2.1	3
139	Oxygen Availability in Zn_xCe_{1â€“x}O₂ Nanocrystallites as a Function of Zinc Concentration. Journal of Physical Chemistry C, 2021, 125, 23071-23084.	3.1	3
140	Probing the Dynamics of Electric Double Layer Formation over Wide Time Scales (10â€“9â€“10+5 s) in the Ionic Liquid DEME-TFSI. Journal of Physical Chemistry C, 2022, 126, 1958-1965.	3.1	3
141	Synthesis in gas and liquid phase: general discussion. Faraday Discussions, 2014, 173, 115-135.	3.2	2
142	Nanoporous electrochromic coatings based on tungsten oxide. Doklady Chemistry, 2006, 407, 31-34.	0.9	1
143	Photonic crystals: New ideas and future prospects (SPIE Photonics Europe 2006 Conference). Inorganic Materials, 2006, 42, 1404-1407.	0.8	1
144	Photonic crystals with a specified bandgap width. JETP Letters, 2007, 86, 317-320.	1.4	1

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145	Directional radiation pattern of luminescent photonic crystals at frequencies near the second photonic stop band. JETP Letters, 2008, 87, 672-676.	1.4	1
146	Gate-tunable optical extinction of graphene nanoribbon nanoclusters. APL Materials, 2021, 9, 071101.	5.1	1
147	Study of feasibility to apply the graphene as a sensitive material for chemiresistor-type gas sensors. , 2014, , .		0
148	Encapsulated Object Analysis: Imaging and Analysis of Encapsulated Objects through Selfâ€Assembled Electron and Optically Transparent Graphene Oxide Membranes (Adv. Mater. Interfaces 2/2017). Advanced Materials Interfaces, 2017, 4, .	3.7	0
149	(Invited) Atomically Precise Graphene Nanoribbons: From Synthesis to Applications. ECS Meeting Abstracts, 2019, , .	0.0	0