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Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems

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#	Paper	IF	Citations
2257	Surface plasmon resonance for characterization of large-area atomic-layer graphene film. <b>2016</b> , 3, 151		
2256	Photocurrent Enhancements of TiO <sub>2</sub> Based Nanocomposites with Gold Nanostructures/Reduced Graphene Oxide on Nanobranched Substrate.		
2255	Aqueous Exfoliation of Transition Metal Dichalcogenides Assisted by DNA/RNA Nucleotides: Catalytically Active and Biocompatible Nanosheets Stabilized by AcidBase Interactions.		
2254	Spin-resolved optical conductivity of two-dimensional group-VIB transition-metal dichalcogenides. <b>2014</b> , 90,	29	
2253	Phonon-mediated mid-infrared photoresponse of graphene. <b>2014</b> , 14, 6374-81		49
2252	Photodetectors based on graphene, other two-dimensional materials and hybrid systems. <b>2014</b> , 9, 780-93		2318
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2246	Ultrafast valley relaxation dynamics in monolayer MoS <sub>2</sub> probed by nonequilibrium optical techniques. <b>2015</b> , 92,		71
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1645	Selective and confined growth of transition metal dichalcogenides on transferred graphene. <b>2017</b> , 7, 37310-37314	1
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1642	Reduced and Surface-Modified Graphene Oxide with Nonlinear Resistivity. <b>2017</b> , 38, 1700291	11
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1635	Large-Scale Synthesis of Freestanding Layer-Structured Pbl and MAPbl Nanosheets for High-Performance Photodetection. <b>2017</b> , 29, 1702759	78
1634	Graphene-based masterbatch obtained via modified polyvinyl alcohol liquid-shear exfoliation and its application in enhanced polymer composites. <b>2017</b> , 134, 103-110	15
1633	Space irradiation-induced damage to graphene films. <i>Nanoscale</i> , <b>2017</b> , 9, 13079-13088	7.7 10
1632	Single Crystalline Metal Films as Substrates for Graphene Growth. <b>2017</b> , 529, 1700023	4
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1628	A review of flexible lithium-sulfur and analogous alkali metal-chalcogen rechargeable batteries. <b>2017</b> , 46, 5237-5288	461
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1622	Acousto-electric transport in MgO/ZnO-covered graphene on SiC. <b>2017</b> , 50, 464008	6
1621	Ultra-broadband and polarization-independent planar absorber based on multilayered graphene. <b>2017</b> , 26, 114102	16
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1618	(Invited) Scalable Growth of Two-Dimensional Materials as Prerequisite for Process Integration. <b>2017</b> , 80, 259-270	
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1614	Plasma under control: Advanced solutions and perspectives for plasma flux management in material treatment and nanosynthesis. <b>2017</b> , 4, 041302	60
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1604	Single Crystal, Luminescent Carbon Nitride Nanosheets Formed by Spontaneous Dissolution. <b>2017</b> , 17, 5891-5896	58
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1570	Gate-driven pure spin current in graphene. <b>2017</b> ,	
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1568	The concept of the phases ratio control during the formation of composite filamentary nanocrystals xInSe-(1-x)In2O3 on glass substrates. <b>2017</b> , 917, 032021	4
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1539	High-Thermal-Stability and High-Thermal-Conductivity TiCT MXene/Poly(vinyl alcohol) (PVA) Composites. <b>2018</b> , 3, 2609-2617	152

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1537	Graphene Oxide for DSSC, OPV and Perovskite Stability. <b>2018</b> , 503-531	2
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1532	Reduction and covalent modification of graphene-oxide by nitrogen in glow discharge plasma. <b>2018</b> , 50, 1207-1212	4
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1519	Towards scale-up of graphene production via nonoxidizing liquid exfoliation methods. <b>2018</b> , 64, 3246-3276	23
1518	Excitonic Emission of Monolayer Semiconductors Near-Field Coupled to High-Q Microresonators. <b>2018</b> , 18, 3138-3146	32
1517	Graphene Quantum Dots Electrochemistry and Development of Ultrasensitive Enzymatic Glucose Sensor. <b>2018</b> , 3, 831-847	6
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1513	Graphene Oxide Elicits Membrane Lipid Changes and Neutrophil Extracellular Trap Formation. <b>2018</b> , 4, 334-358	35
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1505	Application of graphene-based flexible antennas in consumer electronic devices. <b>2018</b> , 21, 223-230	92
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1503	2D Layered Material-Based van der Waals Heterostructures for Optoelectronics. <b>2018</b> , 28, 1706587	191

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1500	Tailoring the Surface Chemical Reactivity of Transition-Metal Dichalcogenide PtTe <sub>2</sub> Crystals. <b>2018</b> , 28, 1706504	43
1499	Engineered MoSe <sub>2</sub> -Based Heterostructures for Efficient Electrochemical Hydrogen Evolution Reaction. <b>2018</b> , 8, 1703212	107
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1496	Reversibility and intermediate steps as key tools for the growth of extended ordered polymers via on-surface synthesis. <b>2018</b> , 30, 093001	25
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1494	Raman spectroscopy of graphene-based materials and its applications in related devices. <b>2018</b> , 47, 1822-1873	814
1493	Excitation of solitons in hexagonal lattices and ways of controlling electron transport. <b>2018</b> , 6, 1376-1383	6
1492	Cytokine Profiling of Primary Human Macrophages Exposed to Endotoxin-Free Graphene Oxide: Size-Independent NLRP3 Inflammasome Activation. <b>2018</b> , 7, 1700815	48
1491	Nonlinear Excitations in Graphene and Other Carbon Nano-Polymorphs. <b>2018</b> , 175-195	2
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1489	Chemistry below graphene: decoupling epitaxial graphene from metals by potential-controlled electrochemical oxidation. <b>2018</b> , 129, 837-846	25
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1487	Live Imaging of Label-Free Graphene Oxide Reveals Critical Factors Causing Oxidative-Stress-Mediated Cellular Responses. <b>2018</b> , 12, 1373-1389	54
1486	Adhesion Energies of 2D Graphene and MoS <sub>2</sub> to Silicon and Metal Substrates. <b>2018</b> , 215, 1700512	24
1485	Cogranulation of Low Rates of Graphene and Graphene Oxide with Macronutrient Fertilizers Remarkably Improves Their Physical Properties. <b>2018</b> , 6, 1299-1309	9

1484	Enhanced electrical, mechanical and thermal properties by exfoliating graphene platelets of larger lateral dimensions. <b>2018</b> , 129, 191-198		23
1483	Precision synthesis versus bulk-scale fabrication of graphenes. <b>2018</b> , 2,		134
1482	Graphene/silicon phase modulators with gigahertz bandwidth. <b>2018</b> , 12, 40-44		169
1481	Nanometer Resolution Elemental Mapping in Graphene-Based TEM Liquid Cells. <b>2018</b> , 18, 1168-1174		67
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1479	Bimodal Dielectric Breakdown in Electronic Devices Using Chemical Vapor Deposited Hexagonal Boron Nitride as Dielectric. <b>2018</b> , 4, 1700506		10
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1476	Combining nitrogen substitutional defects and oxygen intercalation to control the graphene corrugation and doping level. <b>2018</b> , 130, 362-368		6
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