Xavier Roy

List of Publications by Year
in descending order

86 papers	3,956 citations	116194 36 h-index	145109 60 g-index
94 all docs	94 docs citations	94 times ranked	5083 citing authors

#	Article	IF	Citations
1	Quantitative Intramolecular Singlet Fission in Bipentacenes. Journal of the American Chemical Society, 2015, 137, 8965-8972.	6.6	324
2	Nanoscale Atoms in Solid-State Chemistry. Science, 2013, 341, 157-160.	6.0	199
3	The Magnetic Genome of Two-Dimensional van der Waals Materials. ACS Nano, 2022, 16, 6960-7079.	7.3	149
4	Magnetic Order and Symmetry in the 2D Semiconductor CrSBr. Nano Letters, 2021, 21, 3511-3517.	4.5	141
5	Molecular Clusters: Nanoscale Building Blocks for Solid-State Materials. Accounts of Chemical Research, 2018, 51, 919-929.	7.6	126
6	Layered Antiferromagnetism Induces Large Negative Magnetoresistance in the van der Waals Semiconductor CrSBr. Advanced Materials, 2020, 32, e2003240.	11.1	116
7	Superatoms in materials science. Nature Reviews Materials, 2020, 5, 371-387.	23.3	105
8	High-performance organic pseudocapacitors via molecular contortion. Nature Materials, 2021, 20, 1136-1141.	13.3	103
9	Distinct properties of the triplet pair state from singlet fission. Science Advances, 2017, 3, e1700241.	4.7	102
10	Unbalanced Hole and Electron Diffusion in Lead Bromide Perovskites. Nano Letters, 2017, 17, 1727-1732.	4.5	100
11	Phonon Speed, Not Scattering, Differentiates Thermal Transport in Lead Halide Perovskites. Nano Letters, 2017, 17, 5734-5739.	4.5	94
12	Orientational order controls crystalline andÂamorphous thermal transport in superatomicÂcrystals. Nature Materials, 2017, 16, 83-88.	13.3	94
13	Interlayer electronic coupling on demand in a 2D magnetic semiconductor. Nature Materials, 2021, 20, 1657-1662.	13.3	94
14	Reversible strain-induced magnetic phase transition in a van der Waals magnet. Nature Nanotechnology, 2022, 17, 256-261.	15.6	93
15	Limits of Carrier Diffusion in <i>n</i>-Type and <i>p</i>-Type CH₃NH₃PbI₃ Perovskite Single Crystals. Journal of Physical Chemistry Letters, 2016, 7, 3510-3518.	2.1	86
16	Prussian Blue Nanocontainers: Selectively Permeable Hollow Metalâ€“Organic Capsules from Block Ionomer Emulsion-Induced Assembly. Journal of the American Chemical Society, 2011, 133, 8420-8423.	6.6	80
17	Designing Three-Dimensional Architectures for High-Performance Electron Accepting Pseudocapacitors. Journal of the American Chemical Society, 2018, 140, 10960-10964.	6.6	78
18	Modulating the hierarchicalÂfibrous assembly of Au nanoparticles with atomic precision. Nature Communications, 2018, 9, 3871.	5.8	77

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19	Electronically Transparent Auâ€"N Bonds for Molecular Junctions. Journal of the American Chemical Society, 2017, 139, 14845-14848.	6.6	76
20	Room-temperature current blockade in atomically defined single-cluster junctions. Nature Nanotechnology, 2017, 12, 1050-1054.	15.6	75
21	Electrical and thermal generation of spin currents by magnetic bilayer graphene. Nature Nanotechnology, 2021, 16, 788-794.	15.6	71
22	Mesostructured Prussian Blue Analogues. Angewandte Chemie - International Edition, 2008, 47, 511-514.	7.2	68
23	Building Diatomic and Triatomic Superatom Molecules. Nano Letters, 2016, 16, 5273-5277.	4.5	65
24	Determination of the structure and geometry of N-heterocyclic carbenes on Au(111) using high-resolution spectroscopy. Chemical Science, 2019, 10, 930-935.	3.7	64
25	Coupling between magnetic order and charge transport in a two-dimensional magnetic semiconductor. Nature Materials, 2022, 21, 754-760.	13.3	60
26	Ferromagnetic Ordering in Superatomic Solids. Journal of the American Chemical Society, 2014, 136, 16926-16931.	6.6	58
27	Assembling Hierarchical Cluster Solids with Atomic Precision. Journal of the American Chemical Society, 2014, 136, 15873-15876.	6.6	56
28	van der Waals Solids from Self-Assembled Nanoscale Building Blocks. Nano Letters, 2016, 16, 1445-1449.	4.5	56
29	Single-crystal-to-single-crystal intercalation of a low-bandgap superatomic crystal. Nature Chemistry, 2017, 9, 1170-1174.	6.6	56
30	In Situ Formation of N-Heterocyclic Carbene-Bound Single-Molecule Junctions. Journal of the American Chemical Society, 2018, 140, 8944-8949.	6.6	54
31	Mechanically Tunable Quantum Interference in Ferrocene-Based Single-Molecule Junctions. Nano Letters, 2020, 20, 6381-6386.	4.5	52
32	Controlled Electrochemical Intercalation of Graphene/<i>h-</i>BN van der Waals Heterostructures. Nano Letters, 2018, 18, 460-466.	4.5	49
33	Patterning Superatom Dopants on Transition Metal Dichalcogenides. Nano Letters, 2016, 16, 3385-3389.	4.5	47
34	Coordination Chemistry: New Routes to Mesostructured Materials. Chemistry - A European Journal, 2009, 15, 6552-6559.	1.7	42
35	Soluble Prussian Blue Nanoworms from the Assembly of Metalâ€"Organic Block Ionomers. Angewandte Chemie - International Edition, 2011, 50, 1597-1602.	7.2	41
36	High Oxidation State Iridium Mono-Î¼-oxo Dimers Related to Water Oxidation Catalysis. Journal of the American Chemical Society, 2016, 138, 15917-15926.	6.6	41

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37	Superatomic Two-Dimensional Semiconductor. Nano Letters, 2018, 18, 1483-1488.	4.5	41
38	Two-Dimensional Nanosheets from Redox-Active Superatoms. ACS Central Science, 2017, 3, 1050-1055.	5.3	38
39	Quantum Soldering of Individual Quantum Dots. Angewandte Chemie - International Edition, 2012, 51, 12473-12476.	7.2	37
40	Solvent-dependent conductance decay constants in single cluster junctions. Chemical Science, 2016, 7, 2701-2705.	3.7	31
41	Goldâ€“Carbon Contacts from Oxidative Addition of Aryl Iodides. Journal of the American Chemical Society, 2020, 142, 7128-7133.	6.6	31
42	Molecular Scaffolding of Prussian Blue Analogues Using a Phenanthroline-Extended Triptycene Ligand. Crystal Growth and Design, 2011, 11, 4551-4558.	1.4	28
43	Ligand Control of Manganese Telluride Molecular Cluster Core Nuclearity. Inorganic Chemistry, 2015, 54, 8348-8355.	1.9	28
44	Doping-Induced Superconductivity in the van der Waals Superatomic Crystal Re₆Se₈Cl₂. Nano Letters, 2020, 20, 1718-1724.	4.5	28
45	Electron Cartography in Clusters. Angewandte Chemie - International Edition, 2018, 57, 13815-13820.	7.2	24
46	Tuning the electronic properties of hexanuclear cobalt sulfide superatoms <i>via</i> ligand substitution. Chemical Science, 2019, 10, 1760-1766.	3.7	24
47	A single-molecule blueprint for synthesis. Nature Reviews Chemistry, 2021, 5, 695-710.	13.8	24
48	Multifunctional Vesicles from a Self-assembled Cluster-Containing Diblock Copolymer. Journal of the American Chemical Society, 2018, 140, 5607-5611.	6.6	23
49	In Situ Coupling of Single Molecules Driven by Goldâ€Catalyzed Electrooxidation. Angewandte Chemie - International Edition, 2019, 58, 16008-16012.	7.2	23
50	Two-Dimensional Hierarchical Semiconductor with Addressable Surfaces. Journal of the American Chemical Society, 2018, 140, 9369-9373.	6.6	22
51	Visualizing Atomically Layered Magnetism in CrSBr. Advanced Materials, 2022, 34, e2201000.	11.1	22
52	Spin Waves and Magnetic Exchange Hamiltonian in CrSBr. Advanced Science, 2022, 9, .	5.6	20
53	Dimensional Control of Assembling Metal Chalcogenide Clusters. European Journal of Inorganic Chemistry, 2020, 2020, 1245-1254.	1.0	19
54	Twoâ€Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. Angewandte Chemie - International Edition, 2018, 57, 6125-6129.	7.2	18

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55	Spontaneous Electronic Band Formation and Switchable Behaviors in a Phase-Rich Superatomic Crystal. Journal of the American Chemical Society, 2018, 140, 15601-15605.	6.6	17
56	Single-Electron Currents in Designer Single-Cluster Devices. Journal of the American Chemical Society, 2020, 142, 14924-14932.	6.6	16
57	Superatomic solid solutions. Nature Chemistry, 2021, 13, 607-613.	6.6	15
58	Dimerization of Endohedral Fullerene in a Superatomic Crystal. Chemistry - A European Journal, 2017, 23, 13305-13308.	1.7	13
59	Ligand Effect on the Electronic Structure of Cobalt Sulfide Clusters: A Combined Experimental and Theoretical Study. Journal of Physical Chemistry C, 2019, 123, 25121-25127.	1.5	13
60	FeOF/TiO₂ Hetero-Nanostructures for High-Areal-Capacity Fluoride Cathodes. ACS Applied Materials & Interfaces, 2020, 12, 33803-33809.	4.0	12
61	Solution-Processable Superatomic Thin-Films. Journal of the American Chemical Society, 2019, 141, 10967-10971.	6.6	11
62	Cyclopropenylidenes as Strong Carbene Anchoring Groups on Au Surfaces. Journal of the American Chemical Society, 2020, 142, 19902-19906.	6.6	11
63	Shape Matching in Superatom Chemistry and Assembly. Journal of the American Chemical Society, 2020, 142, 11993-11998.	6.6	11
64	From atom-precise nanoclusters to superatom materials. Journal of Chemical Physics, 2022, 156, 170401.	1.2	11
65	Mo 6 S 3 Br 6 : An Anisotropic 2D Superatomic Semiconductor. Advanced Functional Materials, 2019, 29, 1902951.	7.8	10
66	Site-Selective Surface Modification of 2D Superatomic Re₆Se₈. Journal of the American Chemical Society, 2022, 144, 74-79.	6.6	10
67	Controlling Ligand Coordination Spheres and Cluster Fusion in Superatoms. Journal of the American Chemical Society, 2022, 144, 306-313.	6.6	10
68	Hierarchical Coherent Phonons in a Superatomic Semiconductor. Advanced Materials, 2019, 31, e1903209.	11.1	9
69	Increased Molecular Conductance in Oligo[<i>n</i>]phenylene Wires by Thermally Enhanced Dihedral Planarization. Nano Letters, 2022, 22, 4919-4924.	4.5	9
70	Nickel Phosphinidene Molecular Clusters from Organocyclophosphine Precursors. Chemistry - A European Journal, 2019, 25, 10840-10844.	1.7	8
71	Microporous Battery Electrodes from Molecular Cluster Precursors. ACS Applied Materials & Interfaces, 2019, 11, 11292-11297.	4.0	8
72	Strong polaronic effect in a superatomic two-dimensional semiconductor. Journal of Chemical Physics, 2020, 152, 171101.	1.2	8

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73	High-Spin Superatom Stabilized by Dual Subshell Filling. Journal of the American Chemical Society, 2022, 144, 5172-5179.	6.6	8
74	Twoâ€Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. Angewandte Chemie, 2018, 130, 6233-6237.	1.6	6
75	Superatom Regiochemistry Dictates the Assembly and Surface Reactivity of a Two-Dimensional Material. Journal of the American Chemical Society, 2022, 144, 1119-1124.	6.6	6
76	Spin injection by spinâ€“charge coupling in proximity induced magnetic graphene. 2D Materials, 2022, 9, 045003.	2.0	6
77	Electron Cartography in Clusters. Angewandte Chemie, 2018, 130, 14011-14016.	1.6	4
78	Polytypism, Anisotropic Transport, and Weyl Nodes in the van der Waals Metal TaFeTe4. Journal of the American Chemical Society, 2021, 143, 109-113.	6.6	4
79	In Situ Coupling of Single Molecules Driven by Goldâ€Catalyzed Electrooxidation. Angewandte Chemie, 2019, 131, 16154-16158.	1.6	3
80	Intermolecular Resonance Correlates Electron Pairs Down a Supermolecular Chain: Antiferromagnetism in K-Doped p-Terphenyl. Journal of the American Chemical Society, 2020, 142, 20624-20630.	6.6	3
81	Broad-band Chiral Absorbance of Visible Light. Journal of the American Chemical Society, 2022, 144, 5263-5267.	6.6	3
82	Charge carrier scattering and ultrafast Auger dynamics in two-dimensional superatomic semiconductors. Applied Physics Letters, 2020, 116, 201109.	1.5	1
83	Exchange Bias from Frustrated Spins. ACS Central Science, 2021, 7, 1295-1297.	5.3	1
84	Cover Picture: Mesostructured Prussian Blue Analogues (Angew. Chem. Int. Ed. 3/2008). Angewandte Chemie - International Edition, 2007, 47, 419-419.	7.2	0
85	InnenrÃ¼cktitelbild: Quantum Soldering of Individual Quantum Dots (Angew. Chem. 50/2012). Angewandte Chemie, 2012, 124, 12797-12797.	1.6	0
86	Dimensional Control of Assembling Metal Chalcogenide Clusters. European Journal of Inorganic Chemistry, 2020, 2020, 1243-1243.	1.0	0