

Xavier Roy

List of Publications by Year in descending order

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86
papers

3,956
citations

94433

37
h-index

128289

60
g-index

94
all docs

94
docs citations

94
times ranked

4440
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative Intramolecular Singlet Fission in Bipentacenes. <i>Journal of the American Chemical Society</i> , 2015, 137, 8965-8972.	13.7	324
2	Nanoscale Atoms in Solid-State Chemistry. <i>Science</i> , 2013, 341, 157-160.	12.6	199
3	The Magnetic Genome of Two-Dimensional van der Waals Materials. <i>ACS Nano</i> , 2022, 16, 6960-7079.	14.6	149
4	Magnetic Order and Symmetry in the 2D Semiconductor CrSBr. <i>Nano Letters</i> , 2021, 21, 3511-3517.	9.1	141
5	Molecular Clusters: Nanoscale Building Blocks for Solid-State Materials. <i>Accounts of Chemical Research</i> , 2018, 51, 919-929.	15.6	126
6	Layered Antiferromagnetism Induces Large Negative Magnetoresistance in the van der Waals Semiconductor CrSBr. <i>Advanced Materials</i> , 2020, 32, e2003240.	21.0	116
7	Superatoms in materials science. <i>Nature Reviews Materials</i> , 2020, 5, 371-387.	48.7	105
8	High-performance organic pseudocapacitors via molecular contortion. <i>Nature Materials</i> , 2021, 20, 1136-1141.	27.5	103
9	Distinct properties of the triplet pair state from singlet fission. <i>Science Advances</i> , 2017, 3, e1700241.	10.3	102
10	Unbalanced Hole and Electron Diffusion in Lead Bromide Perovskites. <i>Nano Letters</i> , 2017, 17, 1727-1732.	9.1	100
11	Phonon Speed, Not Scattering, Differentiates Thermal Transport in Lead Halide Perovskites. <i>Nano Letters</i> , 2017, 17, 5734-5739.	9.1	94
12	Orientalional order controls crystalline and amorphous thermal transport in superatomic crystals. <i>Nature Materials</i> , 2017, 16, 83-88.	27.5	94
13	Interlayer electronic coupling on demand in a 2D magnetic semiconductor. <i>Nature Materials</i> , 2021, 20, 1657-1662.	27.5	94
14	Reversible strain-induced magnetic phase transition in a van der Waals magnet. <i>Nature Nanotechnology</i> , 2022, 17, 256-261.	31.5	93
15	Limits of Carrier Diffusion in <i>n</i> -Type and <i>p</i> -Type CH ₃ NH ₃ Pb ₃ Perovskite Single Crystals. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 3510-3518.	4.6	86
16	Prussian Blue Nanocontainers: Selectively Permeable Hollow Metal-Organic Capsules from Block Ionomer Emulsion-Induced Assembly. <i>Journal of the American Chemical Society</i> , 2011, 133, 8420-8423.	13.7	80
17	Designing Three-Dimensional Architectures for High-Performance Electron Accepting Pseudocapacitors. <i>Journal of the American Chemical Society</i> , 2018, 140, 10960-10964.	13.7	78
18	Modulating the hierarchical fibrous assembly of Au nanoparticles with atomic precision. <i>Nature Communications</i> , 2018, 9, 3871.	12.8	77

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19	Electronically Transparent Au–N Bonds for Molecular Junctions. <i>Journal of the American Chemical Society</i> , 2017, 139, 14845-14848.	13.7	76
20	Room-temperature current blockade in atomically defined single-cluster junctions. <i>Nature Nanotechnology</i> , 2017, 12, 1050-1054.	31.5	75
21	Electrical and thermal generation of spin currents by magnetic bilayer graphene. <i>Nature Nanotechnology</i> , 2021, 16, 788-794.	31.5	71
22	Mesostructured Prussian Blue Analogues. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 511-514.	13.8	68
23	Building Diatomic and Triatomic Superatom Molecules. <i>Nano Letters</i> , 2016, 16, 5273-5277.	9.1	65
24	Determination of the structure and geometry of N-heterocyclic carbenes on Au(111) using high-resolution spectroscopy. <i>Chemical Science</i> , 2019, 10, 930-935.	7.4	64
25	Coupling between magnetic order and charge transport in a two-dimensional magnetic semiconductor. <i>Nature Materials</i> , 2022, 21, 754-760.	27.5	60
26	Ferromagnetic Ordering in Superatomic Solids. <i>Journal of the American Chemical Society</i> , 2014, 136, 16926-16931.	13.7	58
27	Assembling Hierarchical Cluster Solids with Atomic Precision. <i>Journal of the American Chemical Society</i> , 2014, 136, 15873-15876.	13.7	56
28	van der Waals Solids from Self-Assembled Nanoscale Building Blocks. <i>Nano Letters</i> , 2016, 16, 1445-1449.	9.1	56
29	Single-crystal-to-single-crystal intercalation of a low-bandgap superatomic crystal. <i>Nature Chemistry</i> , 2017, 9, 1170-1174.	13.6	56
30	In Situ Formation of N-Heterocyclic Carbene-Bound Single-Molecule Junctions. <i>Journal of the American Chemical Society</i> , 2018, 140, 8944-8949.	13.7	54
31	Mechanically Tunable Quantum Interference in Ferrocene-Based Single-Molecule Junctions. <i>Nano Letters</i> , 2020, 20, 6381-6386.	9.1	52
32	Controlled Electrochemical Intercalation of Graphene/h-BN van der Waals Heterostructures. <i>Nano Letters</i> , 2018, 18, 460-466.	9.1	49
33	Patterning Superatom Dopants on Transition Metal Dichalcogenides. <i>Nano Letters</i> , 2016, 16, 3385-3389.	9.1	47
34	Coordination Chemistry: New Routes to Mesostructured Materials. <i>Chemistry - A European Journal</i> , 2009, 15, 6552-6559.	3.3	42
35	Soluble Prussian Blue Nanoworms from the Assembly of Metal–Organic Block Ionomers. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 1597-1602.	13.8	41
36	High Oxidation State Iridium Mono- μ_4 -oxo Dimers Related to Water Oxidation Catalysis. <i>Journal of the American Chemical Society</i> , 2016, 138, 15917-15926.	13.7	41

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37	Superatomic Two-Dimensional Semiconductor. <i>Nano Letters</i> , 2018, 18, 1483-1488.	9.1	41
38	Two-Dimensional Nanosheets from Redox-Active Superatoms. <i>ACS Central Science</i> , 2017, 3, 1050-1055.	11.3	38
39	Quantum Soldering of Individual Quantum Dots. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 12473-12476.	13.8	37
40	Solvent-dependent conductance decay constants in single cluster junctions. <i>Chemical Science</i> , 2016, 7, 2701-2705.	7.4	31
41	Gold-Carbon Contacts from Oxidative Addition of Aryl Iodides. <i>Journal of the American Chemical Society</i> , 2020, 142, 7128-7133.	13.7	31
42	Molecular Scaffolding of Prussian Blue Analogues Using a Phenanthroline-Extended Triptycene Ligand. <i>Crystal Growth and Design</i> , 2011, 11, 4551-4558.	3.0	28
43	Ligand Control of Manganese Telluride Molecular Cluster Core Nuclearity. <i>Inorganic Chemistry</i> , 2015, 54, 8348-8355.	4.0	28
44	Doping-Induced Superconductivity in the van der Waals Superatomic Crystal $\text{Re}_6\text{Se}_8\text{Cl}_2$. <i>Nano Letters</i> , 2020, 20, 1718-1724.	9.1	28
45	Electron Cartography in Clusters. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 13815-13820.	13.8	24
46	Tuning the electronic properties of hexanuclear cobalt sulfide superatoms <i>via</i> ligand substitution. <i>Chemical Science</i> , 2019, 10, 1760-1766.	7.4	24
47	A single-molecule blueprint for synthesis. <i>Nature Reviews Chemistry</i> , 2021, 5, 695-710.	30.2	24
48	Multifunctional Vesicles from a Self-assembled Cluster-Containing Diblock Copolymer. <i>Journal of the American Chemical Society</i> , 2018, 140, 5607-5611.	13.7	23
49	In Situ Coupling of Single Molecules Driven by Gold-Catalyzed Electrooxidation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16008-16012.	13.8	23
50	Two-Dimensional Hierarchical Semiconductor with Addressable Surfaces. <i>Journal of the American Chemical Society</i> , 2018, 140, 9369-9373.	13.7	22
51	Visualizing Atomically Layered Magnetism in CrSBr. <i>Advanced Materials</i> , 2022, 34, e2201000.	21.0	22
52	Spin Waves and Magnetic Exchange Hamiltonian in CrSBr. <i>Advanced Science</i> , 2022, 9, .	11.2	20
53	Dimensional Control of Assembling Metal Chalcogenide Clusters. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 1245-1254.	2.0	19
54	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 6125-6129.	13.8	18

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55	Spontaneous Electronic Band Formation and Switchable Behaviors in a Phase-Rich Superatomic Crystal. <i>Journal of the American Chemical Society</i> , 2018, 140, 15601-15605.	13.7	17
56	Single-Electron Currents in Designer Single-Cluster Devices. <i>Journal of the American Chemical Society</i> , 2020, 142, 14924-14932.	13.7	16
57	Superatomic solid solutions. <i>Nature Chemistry</i> , 2021, 13, 607-613.	13.6	15
58	Dimerization of Endohedral Fullerene in a Superatomic Crystal. <i>Chemistry - A European Journal</i> , 2017, 23, 13305-13308.	3.3	13
59	Ligand Effect on the Electronic Structure of Cobalt Sulfide Clusters: A Combined Experimental and Theoretical Study. <i>Journal of Physical Chemistry C</i> , 2019, 123, 25121-25127.	3.1	13
60	FeO/TiO ₂ Hetero-Nanostructures for High-Areal-Capacity Fluoride Cathodes. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 33803-33809.	8.0	12
61	Solution-Processable Superatomic Thin-Films. <i>Journal of the American Chemical Society</i> , 2019, 141, 10967-10971.	13.7	11
62	Cyclopropenylidenes as Strong Carbene Anchoring Groups on Au Surfaces. <i>Journal of the American Chemical Society</i> , 2020, 142, 19902-19906.	13.7	11
63	Shape Matching in Superatom Chemistry and Assembly. <i>Journal of the American Chemical Society</i> , 2020, 142, 11993-11998.	13.7	11
64	From atom-precise nanoclusters to superatom materials. <i>Journal of Chemical Physics</i> , 2022, 156, 170401.	3.0	11
65	Mo ₆ S ₃ Br ₆ : An Anisotropic 2D Superatomic Semiconductor. <i>Advanced Functional Materials</i> , 2019, 29, 1902951.	14.9	10
66	Site-Selective Surface Modification of 2D Superatomic Re ₆ Se ₈ . <i>Journal of the American Chemical Society</i> , 2022, 144, 74-79.	13.7	10
67	Controlling Ligand Coordination Spheres and Cluster Fusion in Superatoms. <i>Journal of the American Chemical Society</i> , 2022, 144, 306-313.	13.7	10
68	Hierarchical Coherent Phonons in a Superatomic Semiconductor. <i>Advanced Materials</i> , 2019, 31, e1903209.	21.0	9
69	Increased Molecular Conductance in Oligo[<i>n</i>]phenylene Wires by Thermally Enhanced Dihedral Planarization. <i>Nano Letters</i> , 2022, 22, 4919-4924.	9.1	9
70	Nickel Phosphinidene Molecular Clusters from Organocyclophosphine Precursors. <i>Chemistry - A European Journal</i> , 2019, 25, 10840-10844.	3.3	8
71	Microporous Battery Electrodes from Molecular Cluster Precursors. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 11292-11297.	8.0	8
72	Strong polaronic effect in a superatomic two-dimensional semiconductor. <i>Journal of Chemical Physics</i> , 2020, 152, 171101.	3.0	8

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73	High-Spin Superatom Stabilized by Dual Subshell Filling. <i>Journal of the American Chemical Society</i> , 2022, 144, 5172-5179.	13.7	8
74	Two-Dimensional Fullerene Assembly from an Exfoliated van der Waals Template. <i>Angewandte Chemie</i> , 2018, 130, 6233-6237.	2.0	6
75	Superatom Regiochemistry Dictates the Assembly and Surface Reactivity of a Two-Dimensional Material. <i>Journal of the American Chemical Society</i> , 2022, 144, 1119-1124.	13.7	6
76	Spin injection by spin-charge coupling in proximity induced magnetic graphene. <i>2D Materials</i> , 2022, 9, 045003.	4.4	6
77	Electron Cartography in Clusters. <i>Angewandte Chemie</i> , 2018, 130, 14011-14016.	2.0	4
78	Polytypism, Anisotropic Transport, and Weyl Nodes in the van der Waals Metal TaFeTe ₄ . <i>Journal of the American Chemical Society</i> , 2021, 143, 109-113.	13.7	4
79	In Situ Coupling of Single Molecules Driven by Gold-Catalyzed Electrooxidation. <i>Angewandte Chemie</i> , 2019, 131, 16154-16158.	2.0	3
80	Intermolecular Resonance Correlates Electron Pairs Down a Supermolecular Chain: Antiferromagnetism in K-Doped p-Terphenyl. <i>Journal of the American Chemical Society</i> , 2020, 142, 20624-20630.	13.7	3
81	Broad-band Chiral Absorbance of Visible Light. <i>Journal of the American Chemical Society</i> , 2022, 144, 5263-5267.	13.7	3
82	Charge carrier scattering and ultrafast Auger dynamics in two-dimensional superatomic semiconductors. <i>Applied Physics Letters</i> , 2020, 116, 201109.	3.3	1
83	Exchange Bias from Frustrated Spins. <i>ACS Central Science</i> , 2021, 7, 1295-1297.	11.3	1
84	Cover Picture: Mesostructured Prussian Blue Analogues (<i>Angew. Chem. Int. Ed.</i> 3/2008). <i>Angewandte Chemie - International Edition</i> , 2007, 47, 419-419.	13.8	0
85	Innenrücktitelbild: Quantum Soldering of Individual Quantum Dots (<i>Angew. Chem.</i> 50/2012). <i>Angewandte Chemie</i> , 2012, 124, 12797-12797.	2.0	0
86	Dimensional Control of Assembling Metal Chalcogenide Clusters. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 1243-1243.	2.0	0