Matthew A Addicoat

List of Publications by Year
in descending order

125 papers	11,911 citations	38738 50 h-index	26610 107 g-index
131 all docs	131 docs citations	131 times ranked	9811 citing authors

#	Article	IF	Citations
1	Two-dimensional sp ² carbonâ€“conjugated covalent organic frameworks. Science, 2017, 357, 673-676.	12.6	866
2	Mixed Matrix Membranes (MMMs) Comprising Exfoliated 2D Covalent Organic Frameworks (COFs) for Efficient CO₂ Separation. Chemistry of Materials, 2016, 28, 1277-1285.	6.7	541
3	Conjugated organic framework with three-dimensionally ordered stable structure and delocalized Ï€ clouds. Nature Communications, 2013, 4, 2736.	12.8	528
4	Chemical sensing in two dimensional porous covalent organic nanosheets. Chemical Science, 2015, 6, 3931-3939.	7.4	504
5	Highly Emissive Covalent Organic Frameworks. Journal of the American Chemical Society, 2016, 138, 5797-5800.	13.7	501
6	Interlayer Hydrogen-Bonded Covalent Organic Frameworks as High-Performance Supercapacitors. Journal of the American Chemical Society, 2018, 140, 10941-10945.	13.7	339
7	Locking Covalent Organic Frameworks with Hydrogen Bonds: General and Remarkable Effects on Crystalline Structure, Physical Properties, and Photochemical Activity. Journal of the American Chemical Society, 2015, 137, 3241-3247.	13.7	320
8	Solid state organic amine detection in a photochromic porous metal organic framework. Chemical Science, 2015, 6, 1420-1425.	7.4	316
9	Interplaying Intrinsic and Extrinsic Proton Conductivities in Covalent Organic Frameworks. Chemistry of Materials, 2016, 28, 1489-1494.	6.7	310
10	Catalytic covalent organic frameworks via pore surface engineering. Chemical Communications, 2014, 50, 1292-1294.	4.1	292
11	Molecular Level Control of the Capacitance of Two-Dimensional Covalent Organic Frameworks: Role of Hydrogen Bonding in Energy Storage Materials. Chemistry of Materials, 2017, 29, 2074-2080.	6.7	277
12	A Nitrogenâ€Rich 2D sp²â€Carbonâ€Linked Conjugated Polymer Framework as a Highâ€Performance Cathode for Lithiumâ€Ion Batteries. Angewandte Chemie - International Edition, 2019, 58, 849-853.	13.8	275
13	Rational design of crystalline supermicroporous covalent organic frameworks with triangular topologies. Nature Communications, 2015, 6, 7786.	12.8	274
14	Triazine Functionalized Porous Covalent Organic Framework for Photo-organocatalytic Eâ€“Z Isomerization of Olefins. Journal of the American Chemical Society, 2019, 141, 6152-6156.	13.7	270
15	Charge Dynamics in A Donorâ€“Acceptor Covalent Organic Framework with Periodically Ordered Bicontinuous Heterojunctions. Angewandte Chemie - International Edition, 2013, 52, 2017-2021.	13.8	263
16	On-water surface synthesis of crystalline, few-layer two-dimensional polymers assisted by surfactant monolayers. Nature Chemistry, 2019, 11, 994-1000.	13.6	262
17	Control of Crystallinity and Porosity of Covalent Organic Frameworks by Managing Interlayer Interactions Based on Self-Complementary Ï€-Electronic Force. Journal of the American Chemical Society, 2013, 135, 546-549.	13.7	257
18	Multiple-component covalent organic frameworks. Nature Communications, 2016, 7, 12325.	12.8	227

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19	Zinc ion interactions in a two-dimensional covalent organic framework based aqueous zinc ion battery. Chemical Science, 2019, 10, 8889-8894.	7.4	220
20	Ionic Covalent Organic Frameworks: Design of a Charged Interface Aligned on 1D Channel Walls and Its Unusual Electrostatic Functions. Angewandte Chemie - International Edition, 2017, 56, 4982-4986.	13.8	217
21	Creation of Superheterojunction Polymers via Direct Polycondensation: Segregated and Bicontinuous Donorâ€“Acceptor Ï€-Columnar Arrays in Covalent Organic Frameworks for Long-Lived Charge Separation. Journal of the American Chemical Society, 2015, 137, 7817-7827.	13.7	213
22	Photoinduced Chargeâ€Carrier Generation in Epitaxial MOF Thin Films: High Efficiency as a Result of an Indirect Electronic Band Gap?. Angewandte Chemie - International Edition, 2015, 54, 7441-7445.	13.8	206
23	Extension of the Universal Force Field to Metalâ€“Organic Frameworks. Journal of Chemical Theory and Computation, 2014, 10, 880-891.	5.3	200
24	Ultrastable Imineâ€Based Covalent Organic Frameworks for Sulfuric Acid Recovery: An Effect of Interlayer Hydrogen Bonding. Angewandte Chemie - International Edition, 2018, 57, 5797-5802.	13.8	192
25	A Crystalline, 2D Polyarylimide Cathode for Ultrastable and Ultrafast Li Storage. Advanced Materials, 2019, 31, e1901478.	21.0	192
26	Electrochemical Stimuli-Driven Facile Metal-Free Hydrogen Evolution from Pyrene-Porphyrin-Based Crystalline Covalent Organic Framework. ACS Applied Materials & Interfaces, 2017, 9, 23843-23851.	8.0	179
27	Decoding the Morphological Diversity in Two Dimensional Crystalline Porous Polymers by Core Planarity Modulation. Angewandte Chemie - International Edition, 2016, 55, 7806-7810.	13.8	168
28	Highly oriented MOF thin film-based electrocatalytic device for the reduction of CO₂ to CO exhibiting high faradaic efficiency. Journal of Materials Chemistry A, 2016, 4, 15320-15326.	10.3	166
29	A Thiadiazole-Based Covalent Organic Framework: A Metal-Free Electrocatalyst toward Oxygen Evolution Reaction. ACS Catalysis, 2020, 10, 5623-5630.	11.2	140
30	Nonlinear Optical Switching in Regioregular Porphyrin Covalent Organic Frameworks. Angewandte Chemie - International Edition, 2019, 58, 6896-6900.	13.8	135
31	Large pore donorâ€“acceptor covalent organic frameworks. Chemical Science, 2013, 4, 4505.	7.4	127
32	Extension of the Universal Force Field for Metalâ€“Organic Frameworks. Journal of Chemical Theory and Computation, 2016, 12, 5215-5225.	5.3	126
33	Fabrication of Highly Uniform Gel Coatings by the Conversion of Surface-Anchored Metalâ€“Organic Frameworks. Journal of the American Chemical Society, 2014, 136, 8-11.	13.7	116
34	Connecting Microscopic Structures, Mesoscale Assemblies, and Macroscopic Architectures in 3D-Printed Hierarchical Porous Covalent Organic Framework Foams. Journal of the American Chemical Society, 2020, 142, 8252-8261.	13.7	115
35	Confining H3PO4 network in covalent organic frameworks enables proton super flow. Nature Communications, 2020, 11, 1981.	12.8	114
36	Covalent organic framework based microspheres as an anode material for rechargeable sodium batteries. Journal of Materials Chemistry A, 2018, 6, 16655-16663.	10.3	113

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37	Designed synthesis of double-stage two-dimensional covalent organic frameworks. Scientific Reports, 2015, 5, 14650.	3.3	107
38	Dual Metalation in a Two-Dimensional Covalent Organic Framework for Photocatalytic Câ€“N Cross-Coupling Reactions. Journal of the American Chemical Society, 2022, 144, 7822-7833.	13.7	102
39	Thiopheneâ€Bridged Donorâ€“Acceptor sp²â€Carbonâ€Linked 2D Conjugated Polymers as Photocathodes for Water Reduction. Advanced Materials, 2021, 33, e2006274.	21.0	100
40	Azobenzene-Equipped Covalent Organic Framework: Light-Operated Reservoir. Journal of the American Chemical Society, 2019, 141, 19078-19087.	13.7	86
41	Synthesis of Vinyleneâ€Linked Twoâ€Dimensional Conjugated Polymers via the Hornerâ€“Wadsworthâ€“Emmons Reaction. Angewandte Chemie - International Edition, 2020, 59, 23620-23625.	13.8	86
42	3-Dimensional atomic scale structure of the ionic liquidâ€“graphite interface elucidated by AM-AFM and quantum chemical simulations. Nanoscale, 2014, 6, 8100-8106.	5.6	78
43	Pore engineering of ultrathin covalent organic framework membranes for organic solvent nanofiltration and molecular sieving. Chemical Science, 2020, 11, 5434-5440.	7.4	78
44	A Nitrogenâ€Rich 2D sp²â€Carbonâ€Linked Conjugated Polymer Framework as a Highâ€Performance Cathode for Lithiumâ€Ion Batteries. Angewandte Chemie, 2019, 131, 859-863.	2.0	71
45	AuToGraFS: Automatic Topological Generator for Framework Structures. Journal of Physical Chemistry A, 2014, 118, 9607-9614.	2.5	67
46	Accurate treatment of nonbonded interactions within systematic molecular fragmentation. Journal of Chemical Physics, 2009, 131, .	3.0	66
47	The fragment molecular orbital and systematic molecular fragmentation methods applied to water clusters. Physical Chemistry Chemical Physics, 2012, 14, 7752.	2.8	61
48	Kick: Constraining a stochastic search procedure with molecular fragments. Journal of Computational Chemistry, 2009, 30, 57-64.	3.3	55
49	Weak Intermolecular Interactions in Covalent Organic Framework-Carbon Nanofiber Based Crystalline yet Flexible Devices. ACS Applied Materials & Interfaces, 2019, 11, 30828-30837.	8.0	54
50	Highâ€Precision Size Recognition and Separation in Synthetic 1D Nanochannels. Angewandte Chemie - International Edition, 2019, 58, 15922-15927.	13.8	50
51	Luminescent sp²-Carbon-Linked 2D Conjugated Polymers with High Photostability. Chemistry of Materials, 2020, 32, 7985-7991.	6.7	48
52	Assessment of the Density Functional Tight Binding Method for Protic Ionic Liquids. Journal of Chemical Theory and Computation, 2014, 10, 4633-4643.	5.3	44
53	Mixed hierarchical local structure in a disordered metalâ€“organic framework. Nature Communications, 2021, 12, 2062.	12.8	44
54	Nonlinear Optical Switching in Regioregular Porphyrin Covalent Organic Frameworks. Angewandte Chemie, 2019, 131, 6970-6974.	2.0	43

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55	Outstanding Charge Mobility by Band Transport in Two-Dimensional Semiconducting Covalent Organic Frameworks. Journal of the American Chemical Society, 2022, 144, 7489-7496.	13.7	43
56	Exceptional electron conduction in two-dimensional covalent organic frameworks. CheM, 2021, 7, 3309-3324.	11.7	41
57	Fully sp²â€Carbonâ€Linked Crystalline Twoâ€Dimensional Conjugated Polymers: Insight into 2D Poly(phenylenecyanovinylene) Formation and its Optoelectronic Properties. Chemistry - A European Journal, 2019, 25, 6562-6568.	3.3	40
58	Two-dimensional artificial light-harvesting antennae with predesigned high-order structure and robust photosensitising activity. Scientific Reports, 2016, 6, 32944.	3.3	39
59	Ultrastable Imineâ€Based Covalent Organic Frameworks for Sulfuric Acid Recovery: An Effect of Interlayer Hydrogen Bonding. Angewandte Chemie, 2018, 130, 5899-5904.	2.0	39
60	Porosity Switching in Polymorphic Porous Organic Cages with Exceptional Chemical Stability. Angewandte Chemie - International Edition, 2019, 58, 4243-4247.	13.8	39
61	Nearâ€“atomic-scale observation of grain boundaries in a layer-stacked two-dimensional polymer. Science Advances, 2020, 6, eabb5976.	10.3	39
62	Moduleâ€Patterned Polymerization towards Crystalline 2D sp²â€Carbon Covalent Organic Framework Semiconductors. Angewandte Chemie - International Edition, 2022, 61, .	13.8	38
63	A Nanographeneâ€Based Twoâ€Dimensional Covalent Organic Framework as a Stable and Efficient Photocatalyst. Angewandte Chemie - International Edition, 2022, 61, .	13.8	38
64	Stochastic structure determination for conformationally flexible heterogenous molecular clusters: Application to ionic liquids. Journal of Computational Chemistry, 2013, 34, 2591-2600.	3.3	37
65	A Dual-Function Highly Crystalline Covalent Organic Framework for HCl Sensing and Visible-Light Heterogeneous Photocatalysis. Macromolecules, 2021, 54, 6595-6604.	4.8	34
66	A Ï€-stacked phenylacetylene dimer. Physical Chemistry Chemical Physics, 2011, 13, 16706.	2.8	33
67	Ionic Covalent Organic Frameworks: Design of a Charged Interface Aligned on 1D Channel Walls and Its Unusual Electrostatic Functions. Angewandte Chemie, 2017, 129, 5064-5068.	2.0	33
68	Decoding the Morphological Diversity in Two Dimensional Crystalline Porous Polymers by Core Planarity Modulation. Angewandte Chemie, 2016, 128, 7937-7941.	2.0	32
69	Threshold Photoionization and Density Functional Theory Studies of the Niobium Carbide Clusters Nb₃C_n (n = 1â^'4) and Nb₄C_n (n = 1â^'6). Journal of Physical Chemistry A, 2008, 112, 5582-5592.	2.5	31
70	Probing charge transfer characteristics in a donorâ€“acceptor metalâ€“organic framework by Raman spectroelectrochemistry and pressure-dependence studies. Physical Chemistry Chemical Physics, 2018, 20, 25772-25779.	2.8	28
71	Ionization Potentials of Tantalumâ^'Carbide Clusters:â€‰ An Experimental and Density Functional Theory Study. Journal of Physical Chemistry A, 2005, 109, 11180-11190.	2.5	27
72	Photoionization of Nb3CO and Nb3(CO)2:Â Is CO Molecularly or Dissociatively Adsorbed on Niobium?. Journal of Physical Chemistry A, 2004, 108, 964-970.	2.5	26

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73	Norbornane-based covalent organic frameworks for gas separation. Nanoscale, 2022, 14, 2475-2481.	5.6	24
74	Optimization of a genetic algorithm for searching molecular conformer space. Journal of Chemical Physics, 2011, 135, 174106.	3.0	23
75	Combination of Knoevenagel Polycondensation and Waterâ€Assisted Dynamic Michaelâ€Additionâ€Elimination for the Synthesis of Vinyleneâ€Linked 2D Covalent Organic Frameworks. Angewandte Chemie - International Edition, 2022, 61, .	13.8	23
76	Density functional theory investigation of Cu(I)â€•and Cu(II)â€•curcumin complexes. Journal of Computational Chemistry, 2011, 32, 429-438.	3.3	22
77	Spectroscopic observation of gold-dicarbide: Photodetachment and velocity map imaging of the AuC2 anion. Journal of Chemical Physics, 2013, 138, 174310.	3.0	18
78	Controlling embedment and surface chemistry of nanoclusters in metalâ€“organic frameworks. Chemical Communications, 2016, 52, 5175-5178.	4.1	18
79	Synthese von Vinylâ€verknÃ¼pften zweidimensionalen konjugierten Polymeren via Hornerâ€Wadsworthâ€Emmonsâ€Reaktion. Angewandte Chemie, 2020, 132, 23827-23832.	2.0	18
80	Redox-Triggered Buoyancy and Size Modulation of a Dynamic Covalent Gel. Chemistry of Materials, 2019, 31, 4148-4155.	6.7	15
81	Efficacious and sustained release of an anticancer drug mitoxantrone from new covalent organic frameworks using protein corona. Chemical Science, 2022, 13, 7920-7932.	7.4	15
82	Optimization of a Genetic Algorithm for the Functionalization of Fullerenes. Journal of Chemical Theory and Computation, 2012, 8, 1841-1851.	5.3	14
83	Linear Chains of Magnetic Ions Stacked with Variable Distance: Ferromagnetic Ordering with a Curie Temperature above 20â€…K. Angewandte Chemie - International Edition, 2016, 55, 12683-12687.	13.8	14
84	Highâ€Precision Size Recognition and Separation in Synthetic 1D Nanochannels. Angewandte Chemie, 2019, 131, 16069-16074.	2.0	13
85	Associative versus dissociative binding of CO to 4d transition metal trimers: A density functional study. Journal of Computational Chemistry, 2008, 29, 1497-1506.	3.3	12
86	Morphological Evolution of Two-Dimensional Porous Hexagonal Trimesic Acid Framework. ACS Applied Materials & Interfaces, 2020, 12, 15588-15594.	8.0	12
87	Explicit treatment of hydrogen bonds in the universal force field: Validation and application for metal-organic frameworks, hydrates, and host-guest complexes. Journal of Chemical Physics, 2017, 147, 161705.	3.0	10
88	Porosity Switching in Polymorphic Porous Organic Cages with Exceptional Chemical Stability. Angewandte Chemie, 2019, 131, 4287-4291.	2.0	10
89	Silica bound co-pillar[4+1]arene as a novel supramolecular stationary phase. Chemical Communications, 2020, 56, 1792-1794.	4.1	9
90	DFT Calculations on Group 5 Mixed Metal Tetramers: TaxNbyVz (x + y + z = 4). Australian Journal of Chemistry, 2004, 57, 1197.	0.9	8

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91	BFW:Â A Density Functional for Transition Metal Clusters. Journal of Physical Chemistry A, 2007, 111, 2625-2628.	2.5	8
92	Structure and dynamics of ionic liquids: general discussion. Faraday Discussions, 2018, 206, 291-337.	3.2	8
93	First spectroscopic observation of gold(<scp>i</scp>) butadiynylide: Photodetachment velocity map imaging of the AuC4H anion. Journal of Chemical Physics, 2016, 145, 044320.	3.0	7
94	Crystal structure evaluation: calculating relative stabilities and other criteria: general discussion. Faraday Discussions, 2018, 211, 325-381.	3.2	7
95	O^(â^)â‹¯C interactions and bond formation in 1-naphtholate anions with peri-located electrophilic carbon centres. CrystEngComm, 2019, 21, 1009-1018.	2.6	7
96	Moduleâ€Patterned Polymerization towards Crystalline 2D sp²â€Carbon Covalent Organic Framework Semiconductors. Angewandte Chemie, 2022, 134, .	2.0	7
97	Reactions of Nb2 and Nb3 with CO, D2, N2, and O2: Reconciling experimental kinetics with density functional theory-calculated reaction profiles. Journal of Chemical Physics, 2012, 137, 034301.	3.0	6
98	Covalently Linked Organic Networks. Frontiers in Materials, 2015, 2, .	2.4	6
99	New directions in gas sorption and separation with MOFs: general discussion. Faraday Discussions, 2017, 201, 175-194.	3.2	6
100	The SMFA program for quantum chemistry calculations on large molecules. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2019, 9, e1413.	14.6	6
101	How to functionalise metalâ€“organic frameworks to enable guest nanocluster embedment. Journal of Materials Chemistry A, 2020, 8, 4889-4897.	10.3	6
102	Tailored pore size and microporosity of covalent organic framework (COF) membranes for improved molecular separation. , 2021, 1, 100008.		6
103	Thermal Conductivity of Two-Dimensional Benzobisoxazole-Linked Covalent Organic Frameworks with Nanopores: Implications for Thermal Management Applications. ACS Applied Nano Materials, 2022, 5, 13787-13793.	5.0	6
104	Photoionization efficiency spectroscopy and density functional theory investigations of RhHo2On (n=0â€“2) clusters. Journal of Chemical Physics, 2009, 130, 164311.	3.0	5
105	Excited states of Nb3N2 and Nb3C2: Density functional theory, CASSCF, and MRCI studies. Journal of Chemical Physics, 2009, 130, 164308.	3.0	5
106	Photodetachment velocity map imaging of the 1Aâ€² â†2Aâ€² transition in the AuOH anion. Chemical Physics Letters, 2015, 625, 164-167.	2.6	5
107	Control of Crystallinity of Vinyleneâ€Linked Twoâ€Dimensional Conjugated Polymers by Rational Monomer Design. Chemistry - A European Journal, 2022, 28, .	3.3	5
108	MOFs modeling and theory: general discussion. Faraday Discussions, 2017, 201, 233-245.	3.2	4

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109	Combination of Knoevenagel Polycondensation and Waterâ€Assisted Dynamic Michaelâ€Additionâ€Elimination for the Synthesis of Vinyleneâ€Linked 2D Covalent Organic Frameworks. Angewandte Chemie, 2022, 134, .	2.0	4
110	Performance of GFN1-xTB for periodic optimization of metal organic frameworks. Physical Chemistry Chemical Physics, 2022, 24, 10906-10914.	2.8	4
111	Effect of unwanted guest molecules on the stacking configuration of covalent organic frameworks: a periodic energy decomposition analysis. Physical Chemistry Chemical Physics, 2022, 24, 15494-15501.	2.8	4
112	Structure searching methods: general discussion. Faraday Discussions, 2018, 211, 133-180.	3.2	3
113	One step conversion of 1,5-bis(dimethylamino)naphthalene to salts of â€œback to backâ€•bis-acridine derivatives. New Journal of Chemistry, 2020, 44, 9621-9625.	2.8	3
114	Role of Host-Guest Interaction in Understanding Polymerisation in Metal-Organic Frameworks. Frontiers in Chemistry, 2021, 9, 716294.	3.6	3
115	A Density Functional Theory Investigation of the Bimetallic Clusters Nb2Rh and NbRh2 and the Complexes They Form with CO. Australian Journal of Chemistry, 2011, 64, 1554.	0.9	2
116	Stochastic Search of Molecular Cluster Interaction Energy Surfaces with Coupled Cluster Quality Prediction. The Phenylacetylene Dimer. Journal of Chemical Theory and Computation, 2013, 9, 3848-3854.	5.3	2
117	A supramolecular cavitand for selective chromatographic separation of peptides using LC-MS/MS: a combined in silico and experimental approach. New Journal of Chemistry, 2021, 45, 141-146.	2.8	2
118	A Nanographeneâ€Based Twoâ€Dimensional Covalent Organic Framework as a Stable and Efficient Photocatalyst. Angewandte Chemie, 2022, 134, .	2.0	2
119	Computational Study of CO Reactivity with Nb3X Heteronuclear Clusters. Australian Journal of Chemistry, 2008, 61, 854.	0.9	1
120	Catalytic Activity Towards Hydrogen Evolution Dependent of the Degree of Conjugation and Absorption of Six Organic Chromophores. ChemistryOpen, 2020, 9, 405-408.	1.9	1
121	'Perfect Match'â€”Combining Density Functional Calculations with Spectroscopic Characterization of Transition Metal Clusters. Australian Journal of Chemistry, 2005, 58, 564.	0.9	1
122	Using a Meta-GA for parametric optimization of simple gas in the computational chemistry domain. , 2010, , .		0
123	Highlights from the Faraday Discussion on New Directions in Porous Crystalline Materials, Edinburgh, UK, June 2017. Chemical Communications, 2017, 53, 10750-10756.	4.1	0
124	Ionic liquids at interfaces: general discussion. Faraday Discussions, 2018, 206, 549-586.	3.2	0
125	Supramolecular Chromatographic Separation of C60 and C70 Fullerenes: Flash Column Chromatography vs. High Pressure Liquid Chromatography. International Journal of Molecular Sciences, 2021, 22, 5726.	4.1	0