

Nathaniel L Rosi

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1449485/publications.pdf>

Version: 2024-02-01

116
papers

36,069
citations

16411

64
h-index

19136

118
g-index

123
all docs

123
docs citations

123
times ranked

29016
citing authors

#	ARTICLE	IF	CITATIONS
1	Identifying UiO-67 Metal-Organic Framework Defects and Binding Sites through Ammonia Adsorption. ChemSusChem, 2022, 15, .	3.6	6
2	Peptide-based Methods for the Assembly of Plasmonic Nanostructures. , 2022, , 93-126.		0
3	Metal-Organic Frameworks on Palladium Nanoparticle-Functionalized Carbon Nanotubes for Monitoring Hydrogen Storage. ACS Applied Nano Materials, 2022, 5, 13779-13786.	2.4	9
4	Leveraging Peptide Sequence Modification to Promote Assembly of Chiral Helical Gold Nanoparticle Superstructures. Biochemistry, 2021, 60, 1044-1049.	1.2	14
5	Tuning the Lewis acidity of metal-organic frameworks for enhanced catalysis. Dalton Transactions, 2021, 50, 3116-3120.	1.6	9
6	The Emergence of Compositional Complexity and Anisotropy in Metal-Organic Frameworks. Chemical Research in Chinese Universities, 2021, 37, 187-188.	1.3	3
7	MOFs Constructed from Biomolecular Building Blocks. , 2021, , 291-320.		2
8	Heterogeneous Growth of UiO-66-NH ₂ on Oxidized Single-Walled Carbon Nanotubes to Form "Beads-on-a-String" Composites. ACS Applied Materials & Interfaces, 2021, 13, 15482-15489.	4.0	7
9	Size Discrimination of Carbohydrates via Conductive Carbon Nanotube@Metal Organic Framework Composites. Journal of the American Chemical Society, 2021, 143, 8022-8033.	6.6	16
10	Breast Cancer Targeting of a Drug Delivery System through Postsynthetic Modification of Curcumin@N ₃ -bio-MOF-100 via Click Chemistry. Inorganic Chemistry, 2021, 60, 11739-11744.	1.9	57
11	Postsynthetic Modification of Metal-Organic Frameworks. Inorganic Chemistry, 2021, 60, 11703-11705.	1.9	22
12	Interplay between Intrinsic Thermal Stability and Expansion Properties of Functionalized UiO-67 Metal-Organic Frameworks. Chemistry of Materials, 2021, 33, 910-920.	3.2	17
13	Construction of Chiral, Helical Nanoparticle Superstructures: Progress and Prospects. Advanced Materials, 2020, 32, e1905975.	11.1	69
14	Doping Effect on the Magnetism of Thiolate-Capped 25-Atom Alloy Nanoclusters. Chemistry of Materials, 2020, 32, 9238-9244.	3.2	22
15	H ₂ /CO ₂ separations in multicomponent metal-adeninate MOFs with multiple chemically distinct pore environments. Chemical Science, 2020, 11, 12807-12815.	3.7	18
16	Atom-by-Atom Evolution of the Same Ligand-Protected Au ₂₁ , Au ₂₂ , Au ₂₂ Cd ₁ , and Au ₂₄ Nanocluster Series. Journal of the American Chemical Society, 2020, 142, 20426-20433.	6.6	36
17	Heteroatom Tracing Reveals the 30-Atom Au-Ag Bimetallic Nanocluster as a Dimeric Structure. Journal of Physical Chemistry Letters, 2020, 11, 7307-7312.	2.1	9
18	Modeling of Diffusion of Acetone in UiO-66. Journal of Physical Chemistry C, 2020, 124, 28469-28478.	1.5	23

#	ARTICLE	IF	CITATIONS
19	Mixed Matrix Membranes from a Microporous Polymer Blend and Nanosized Metal-Organic Frameworks with Exceptional CO ₂ /N ₂ Separation Performance. , 2020, 2, 821-828.		27
20	Luminescence Turn-On Detection of Gossypol Using Ln ³⁺ -Based Metal-Organic Frameworks and Ln ³⁺ Salts. Journal of the American Chemical Society, 2020, 142, 2897-2904.	6.6	151
21	Ship-in-a-Bottle Preparation of Long Wavelength Molecular Antennae in Lanthanide Metal-Organic Frameworks for Biological Imaging. Journal of the American Chemical Society, 2020, 142, 8776-8781.	6.6	50
22	Design, Synthesis, and Characterization of Metal-Organic Frameworks for Enhanced Sorption of Chemical Warfare Agent Simulants. Journal of Physical Chemistry C, 2019, 123, 19748-19758.	1.5	33
23	Designing Open Metal Sites in Metal-Organic Frameworks for Paraffin/Olefin Separations. Journal of the American Chemical Society, 2019, 141, 13003-13007.	6.6	93
24	Fundamental Insights into the Reactivity and Utilization of Open Metal Sites in Cu(I)-MFU-4l. Organometallics, 2019, 38, 3453-3459.	1.1	12
25	Au ₁₃₀ Ag Nanoclusters with Non-Metallicity: A Drum of Silver-Rich Sites Enclosed in a Marks-Decahedral Cage of Gold-Rich Sites. Angewandte Chemie, 2019, 131, 18974-18978.	1.6	15
26	Au ₁₃₀ Ag Nanoclusters with Non-Metallicity: A Drum of Silver-Rich Sites Enclosed in a Marks-Decahedral Cage of Gold-Rich Sites. Angewandte Chemie - International Edition, 2019, 58, 18798-18802.	7.2	32
27	Tuning the Structure and Chiroptical Properties of Gold Nanoparticle Single Helices via Peptide Sequence Variation. Journal of the American Chemical Society, 2019, 141, 15710-15716.	6.6	29
28	Growth of ZIF-8 on molecularly ordered 2-methylimidazole/single-walled carbon nanotubes to form highly porous, electrically conductive composites. Chemical Science, 2019, 10, 737-742.	3.7	34
29	One Approach for Two: Toward the Creation of Near-Infrared Imaging Agents and Rapid Screening of Lanthanide(III) Ion Sensitizers Using Polystyrene Nanobeads. ACS Applied Bio Materials, 2019, 2, 1667-1675.	2.3	8
30	Deliberate Introduction of Particle Anisotropy in Helical Gold Nanoparticle Superstructures. Particle and Particle Systems Characterization, 2019, 36, 1800504.	1.2	9
31	Multivariate Stratified Metal-Organic Frameworks: Diversification Using Domain Building Blocks. Journal of the American Chemical Society, 2019, 141, 2161-2168.	6.6	91
32	Programmable Topology in New Families of Heterobimetallic Metal-Organic Frameworks. Journal of the American Chemical Society, 2018, 140, 6194-6198.	6.6	78
33	Modulating the hierarchical fibrous assembly of Au nanoparticles with atomic precision. Nature Communications, 2018, 9, 3871.	5.8	77
34	A Correlated Series of Au/Ag Nanoclusters Revealing the Evolutionary Patterns of Asymmetric Ag Doping. Journal of the American Chemical Society, 2018, 140, 14235-14243.	6.6	63
35	Single-ligand exchange on an Au-Cu bimetal nanocluster and mechanism. Nanoscale, 2018, 10, 12093-12099.	2.8	30
36	Near infrared excitation and emission in rare earth MOFs via encapsulation of organic dyes. Chemical Science, 2018, 9, 8099-8102.	3.7	53

#	ARTICLE	IF	CITATIONS
37	Total Structure Determination of Au ₁₆ (S-Adm) ₁₂ and Cd ₁ Au ₁₄ (S- <i>tert</i> -Bu) ₁₂ and Implications for the Structure of Au ₁₅ (SR) ₁₃ . Journal of the American Chemical Society, 2018, 140, 10988-10994.	6.6	81
38	Oxidation-Induced Transformation of Eight-Electron Gold Nanoclusters: [Au ₂₃ (SR) ₁₆] ⁺ to [Au ₂₈ (SR) ₂₀] ⁰ . Journal of Physical Chemistry Letters, 2017, 8, 866-870.	2.1	45
39	Ternary gradient metal-organic frameworks. Faraday Discussions, 2017, 201, 163-174.	1.6	8
40	Polyphosphazene polymer development for mixed matrix membranes using SIFSIX-Cu-2i as performance enhancement filler particles. Journal of Membrane Science, 2017, 535, 103-112.	4.1	19
41	All-Atom Molecular Dynamics Simulations of Peptide Amphiphile Assemblies That Spontaneously Form Twisted and Helical Ribbon Structures. Journal of Physical Chemistry Letters, 2017, 8, 2170-2174.	2.1	18
42	Rare Earth pcu Metal-Organic Framework Platform Based on RE ₄ (1/4) ₃ -OH ₄ (COO) ₆ ²⁺ Clusters: Rational Design, Directed Synthesis, and Deliberate Tuning of Excitation Wavelengths. Journal of the American Chemical Society, 2017, 139, 9333-9340.	6.6	102
43	Molecular surgery on a 23-gold-atom nanoparticle. Science Advances, 2017, 3, e1603193.	4.7	121
44	Shuttling single metal atom into and out of a metal nanoparticle. Nature Communications, 2017, 8, 848.	5.8	77
45	Triblock peptide-oligonucleotide chimeras (POCs): programmable biomolecules for the assembly of morphologically tunable and responsive hybrid materials. Chemical Communications, 2017, 53, 12221-12224.	2.2	8
46	Effect of countercation on the water stability of an anionic metal-organic framework. CrystEngComm, 2017, 19, 5417-5421.	1.3	13
47	Systematic Adjustment of Pitch and Particle Dimensions within a Family of Chiral Plasmonic Gold Nanoparticle Single Helices. Journal of the American Chemical Society, 2017, 139, 15043-15048.	6.6	62
48	Ligand Exchange for Controlling the Surface Chemistry and Properties of Nanoparticle Superstructures. ChemNanoMat, 2017, 3, 745-749.	1.5	11
49	Reconstructing the Surface of Gold Nanoclusters by Cadmium Doping. Journal of the American Chemical Society, 2017, 139, 17779-17782.	6.6	84
50	Controlling Ag-doping in [Ag _x Au _{25-x} (SC ₆ H ₁₁) ₁₈] ⁺ nanoclusters: cryogenic optical, electronic and electrocatalytic properties. Nanoscale, 2017, 9, 19183-19190.	1.8	43
51	Tailoring the Structure of 58-Electron Gold Nanoclusters: Au ₁₀₃ S ₂ (S-Nap) ₄₁ and Its Implications. Journal of the American Chemical Society, 2017, 139, 9994-10001.	6.6	159
52	Atomic Structure of Self-Assembled Monolayer of Thiolates on a Tetragonal Au ₉₂ Nanocrystal. Journal of the American Chemical Society, 2016, 138, 8710-8713.	6.6	150
53	Controlling the Atomic Structure of Au ₃₀ Nanoclusters by a Ligand-Based Strategy. Angewandte Chemie - International Edition, 2016, 55, 6694-6697.	7.2	164
54	Controlling the Atomic Structure of Au ₃₀ Nanoclusters by a Ligand-Based Strategy. Angewandte Chemie, 2016, 128, 6806-6809.	1.6	38

#	ARTICLE	IF	CITATIONS
55	Establishing Porosity Gradients within Metal-Organic Frameworks Using Partial Postsynthetic Ligand Exchange. <i>Journal of the American Chemical Society</i> , 2016, 138, 12045-12048.	6.6	112
56	Peptide-Directed Assembly of Single-Helical Gold Nanoparticle Superstructures Exhibiting Intense Chiroptical Activity. <i>Journal of the American Chemical Society</i> , 2016, 138, 13655-13663.	6.6	141
57	Silicon Nanoparticles with Surface Nitrogen: 90% Quantum Yield with Narrow Luminescence Bandwidth and the Ligand Structure Based Energy Law. <i>ACS Nano</i> , 2016, 10, 8385-8393.	7.3	154
58	Tailoring the Electronic and Catalytic Properties of Au ₂₅ Nanoclusters via Ligand Engineering. <i>ACS Nano</i> , 2016, 10, 7998-8005.	7.3	175
59	Isomerism in Au ₂₈ (SR) ₂₀ Nanocluster and Stable Structures. <i>Journal of the American Chemical Society</i> , 2016, 138, 1482-1485.	6.6	246
60	Observation of Body-Centered Cubic Gold Nanocluster. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 9826-9829.	7.2	147
61	Fabrication of MMMs with improved gas separation properties using externally-functionalized MOF particles. <i>Journal of Materials Chemistry A</i> , 2015, 3, 5014-5022.	5.2	283
62	Structure Determination of [Au ₁₈ (SR) ₁₄]. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 3140-3144.	7.2	213
63	Structure Determination of [Au ₁₈ (SR) ₁₄]. <i>Angewandte Chemie</i> , 2015, 127, 3183-3187.	1.6	56
64	Tri-icosahedral Gold Nanocluster [Au ₃₇ (PPh ₃) ₁₀ (SC ₂ H ₄ Ph) ₁₀ X ₂] ⁺ Linear Assembly of Icosahedral Building Blocks. <i>ACS Nano</i> , 2015, 9, 8530-8536.	7.2	165
65	Crystal Structure of Barrel-Shaped Chiral Au ₁₃₀ (p-MBT) ₅₀ Nanocluster. <i>Journal of the American Chemical Society</i> , 2015, 137, 10076-10079.	6.6	232
66	Orthogonal Ternary Functionalization of a Mesoporous Metal-Organic Framework via Sequential Postsynthetic Ligand Exchange. <i>Journal of the American Chemical Society</i> , 2015, 137, 10508-10511.	6.6	96
67	Adjusting the Metrics of 1-D Helical Gold Nanoparticle Superstructures Using Multivalent Peptide Conjugates. <i>Langmuir</i> , 2015, 31, 9492-9501.	1.6	34
68	Loading and triggered release of cargo from hollow spherical gold nanoparticle superstructures. <i>RSC Advances</i> , 2015, 5, 76291-76295.	1.7	8
69	Gold tetrahedra coil up: Kekulé-like and double helical superstructures. <i>Science Advances</i> , 2015, 1, e1500425.	4.7	216
70	Peptide Conjugates for Directing the Morphology and Assembly of 1D Nanoparticle Superstructures. <i>Chemistry - A European Journal</i> , 2014, 20, 941-945.	1.7	29
71	Hollow spherical gold nanoparticle superstructures with tunable diameters and visible to near-infrared extinction. <i>Nanoscale</i> , 2014, 6, 12328-12332.	2.8	27
72	Gold-Thiolate Ring as a Protecting Motif in the Au ₂₀ (SR) ₁₆ Nanocluster and Implications. <i>Journal of the American Chemical Society</i> , 2014, 136, 11922-11925.	6.6	287

#	ARTICLE	IF	CITATIONS
73	Alumina-supported cobalt-adeninate MOF membranes for CO ₂ /CH ₄ separation. <i>Journal of Materials Chemistry A</i> , 2014, 2, 1239-1241.	5.2	96
74	Crystal structure and electronic properties of a thiolate-protected Au ₂₄ nanocluster. <i>Nanoscale</i> , 2014, 6, 6458.	2.8	237
75	Cyclopentanethiolato-Protected Au ₃₆ (SC ₅ H ₉) ₂₄ Nanocluster: Crystal Structure and Implications for the Steric and Electronic Effects of Ligand. <i>Journal of Physical Chemistry A</i> , 2014, 118, 8264-8269.	1.1	101
76	Tailorable Plasmonic Circular Dichroism Properties of Helical Nanoparticle Superstructures. <i>Nano Letters</i> , 2013, 13, 3256-3261.	4.5	221
77	Systematic modulation and enhancement of CO ₂ :N ₂ selectivity and water stability in an isorecticular series of bio-MOF-11 analogues. <i>Chemical Science</i> , 2013, 4, 1746.	3.7	182
78	Stepwise Ligand Exchange for the Preparation of a Family of Mesoporous MOFs. <i>Journal of the American Chemical Society</i> , 2013, 135, 11688-11691.	6.6	310
79	Design and Preparation of a Core-Shell Metal-Organic Framework for Selective CO ₂ Capture. <i>Journal of the American Chemical Society</i> , 2013, 135, 9984-9987.	6.6	271
80	Chiral Structure of Thiolate-Protected 28-Gold-Atom Nanocluster Determined by X-ray Crystallography. <i>Journal of the American Chemical Society</i> , 2013, 135, 10011-10013.	6.6	530
81	Screening and evaluating aminated cationic functional moieties for potential CO ₂ capture applications using an anionic MOF scaffold. <i>Chemical Communications</i> , 2013, 49, 11385.	2.2	46
82	Nonsuperatomic [Au ₂₃ (SC ₆ H ₁₁) ₁₆] ⁺ Nanocluster Featuring Bipyramidal Au ₁₅ Kernel and Trimeric Au ₃ (SR) ₄ Motif. <i>Journal of the American Chemical Society</i> , 2013, 135, 18264-18267.	6.6	321
83	Lanthanide near infrared imaging in living cells with Yb ³⁺ nano metal organic frameworks. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 17199-17204.	3.3	248
84	Peptide-Directed Synthesis and Assembly of Hollow Spherical CoPt Nanoparticle Superstructures. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 3993-3995.	7.2	56
85	Total Structure and Optical Properties of a Phosphine/Thiolate-Protected Au ₂₄ Nanocluster. <i>Journal of the American Chemical Society</i> , 2012, 134, 20286-20289.	6.6	201
86	Total Structure and Electronic Properties of the Gold Nanocrystal Au ₃₆ (SR) ₂₄ . <i>Angewandte Chemie - International Edition</i> , 2012, 51, 13114-13118.	7.2	519
87	Metal-adeninate vertices for the construction of an exceptionally porous metal-organic framework. <i>Nature Communications</i> , 2012, 3, 604.	5.8	356
88	Strain-Promoted "Click" Modification of a Mesoporous Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2012, 134, 18886-18888.	6.6	125
89	Preparation of 1-D nanoparticle superstructures with tailorable thicknesses using gold-binding peptide conjugates. <i>Chemical Communications</i> , 2011, 47, 185-187.	2.2	40
90	Metal-biomolecule frameworks (MBioFs). <i>Chemical Communications</i> , 2011, 47, 7287.	2.2	371

#	ARTICLE	IF	CITATIONS
91	Zinc-Adeninate Metal-Organic Framework for Aqueous Encapsulation and Sensitization of Near-infrared and Visible Emitting Lanthanide Cations. <i>Journal of the American Chemical Society</i> , 2011, 133, 1220-1223.	6.6	589
92	Size-Controlled Peptide-Directed Synthesis of Hollow Spherical Gold Nanoparticle Superstructures. <i>Small</i> , 2011, 7, 1939-1942.	5.2	40
93	Gold Superstructures: Size-Controlled Peptide-Directed Synthesis of Hollow Spherical Gold Nanoparticle Superstructures (<i>Small</i> 14/2011). <i>Small</i> , 2011, 7, 1938-1938.	5.2	6
94	Expeditious Synthesis and Assembly of Sub-100 nm Hollow Spherical Gold Nanoparticle Superstructures. <i>Journal of the American Chemical Society</i> , 2010, 132, 14033-14035.	6.6	88
95	Peptide-Based Methods for the Preparation of Nanostructured Inorganic Materials. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 1924-1942.	7.2	428
96	High and Selective CO ₂ Uptake in a Cobalt Adeninate Metal-Organic Framework Exhibiting Pyrimidine- and Amino-Decorated Pores. <i>Journal of the American Chemical Society</i> , 2010, 132, 38-39.	6.6	889
97	Tuning MOF CO ₂ Adsorption Properties via Cation Exchange. <i>Journal of the American Chemical Society</i> , 2010, 132, 5578-5579.	6.6	548
98	Preparation of Unique 1-D Nanoparticle Superstructures and Tailoring their Structural Features. <i>Journal of the American Chemical Society</i> , 2010, 132, 6902-6903.	6.6	124
99	Near-infrared emitting ytterbium metal-organic frameworks with tunable excitation properties. <i>Chemical Communications</i> , 2009, , 4506.	2.2	135
100	Cation-Triggered Drug Release from a Porous Zinc-Adeninate Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2009, 131, 8376-8377.	6.6	966
101	Synthesis, Structure, Assembly, and Modulation of the CO ₂ Adsorption Properties of a Zinc-Adeninate Macrocyclic. <i>Journal of the American Chemical Society</i> , 2009, 131, 8401-8403.	6.6	156
102	Near-Infrared Luminescent Lanthanide MOF Barcodes. <i>Journal of the American Chemical Society</i> , 2009, 131, 18069-18071.	6.6	448
103	A New Peptide-Based Method for the Design and Synthesis of Nanoparticle Superstructures: Construction of Highly Ordered Gold Nanoparticle Double Helices. <i>Journal of the American Chemical Society</i> , 2008, 130, 13555-13557.	6.6	340
104	Oligonucleotide Loading Determines Cellular Uptake of DNA-Modified Gold Nanoparticles. <i>Nano Letters</i> , 2007, 7, 3818-3821.	4.5	517
105	Locked Nucleic Acid-Nanoparticle Conjugates. <i>ChemBioChem</i> , 2007, 8, 1230-1232.	1.3	76
106	Oligonucleotide-Modified Gold Nanoparticles for Intracellular Gene Regulation. <i>Science</i> , 2006, 312, 1027-1030.	6.0	1,838
107	Asymmetric Functionalization of Gold Nanoparticles with Oligonucleotides. <i>Journal of the American Chemical Society</i> , 2006, 128, 9286-9287.	6.6	326
108	Nanostructures in Biodiagnostics. <i>Chemical Reviews</i> , 2005, 105, 1547-1562.	23.0	4,434

#	ARTICLE	IF	CITATIONS
109	Optically and Chemically Encoded Nanoparticle Materials for DNA and Protein Detection. MRS Bulletin, 2005, 30, 376-380.	1.7	46
110	Rod Packings and Metal-Organic Frameworks Constructed from Rod-Shaped Secondary Building Units. Journal of the American Chemical Society, 2005, 127, 1504-1518.	6.6	2,186
111	Control of Nanoparticle Assembly by Using DNA-Modified Diatom Templates. Angewandte Chemie - International Edition, 2004, 43, 5500-5503.	7.2	153
112	Nanostructures in biodefense and molecular diagnostics. Expert Review of Molecular Diagnostics, 2004, 4, 749-751.	1.5	17
113	Hydrogen Storage in Microporous Metal-Organic Frameworks. Science, 2003, 300, 1127-1129.	6.0	4,435
114	Advances in the chemistry of metal-organic frameworks. CrystEngComm, 2002, 4, 401-404.	1.3	271
115	Infinite Secondary Building Units and Forbidden Catenation in Metal-Organic Frameworks The National Science Foundation support to M.O'K. (DMR-9804817) and O.M.Y. (DMR-9980469) is gratefully acknowledged.. Angewandte Chemie - International Edition, 2002, 41, 284.	7.2	293
116	Systematic Design of Pore Size and Functionality in Isoreticular MOFs and Their Application in Methane Storage. Science, 2002, 295, 469-472.	6.0	7,254