

Natalia B Shustova

List of Publications by Year in descending order

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115
papers

6,391
citations

66315

42
h-index

66879

78
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126
docs citations

126
times ranked

5835
citing authors

#	ARTICLE	IF	CITATIONS
1	Dynamically Controlled Electronic Behavior of Stimuli-Responsive Materials: Exploring Dimensionality and Connectivity. <i>Advanced Energy Materials</i> , 2022, 12, 2100441.	10.2	32
2	Leaching model of radionuclides in metal-organic framework particles. <i>Computational Materials Science</i> , 2022, 201, 110886.	1.4	2
3	A Metal-Organic Framework (MOF)-Based Multifunctional Cargo Vehicle for Reactive Gas Delivery and Catalysis. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	10
4	Editorial for the Special Issue: Dimensionality of Emerging Materials and Energy. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	0
5	Playing "jenga" with MOFs: De-interpenetration for pore opening. <i>CheM</i> , 2022, 8, 325-326.	5.8	1
6	Stimuli-Modulated Metal Oxidation States in Photochromic MOFs. <i>Journal of the American Chemical Society</i> , 2022, 144, 4457-4468.	6.6	37
7	Keeping COFs in the loop. <i>Nature Chemistry</i> , 2022, 14, 485-486.	6.6	2
8	Mechanistic Investigations of Gas-Phase Catalytic Hydrogenation in Metal-Organic Frameworks: Cooperative Activity of the Metal and Linker Sites in Cu_2Rh_3 (BTC) ₂ . <i>Journal of Physical Chemistry C</i> , 2022, 126, 11553-11565.	1.5	3
9	Let the light be a guide: Chromophore communication in metal-organic frameworks. <i>Nano Research</i> , 2021, 14, 338-354.	5.8	36
10	Photoresponsive frameworks: energy transfer in the spotlight. <i>Faraday Discussions</i> , 2021, 231, 266-280.	1.6	11
11	Graphitic supramolecular architectures based on corannulene, fullerene, and beyond. <i>Chemical Communications</i> , 2021, 57, 10125-10138.	2.2	12
12	Confinement-guided photophysics in MOFs, COFs, and cages. <i>Chemical Society Reviews</i> , 2021, 50, 4382-4410.	18.7	84
13	Beyond structural motifs: the frontier of actinide-containing metal-organic frameworks. <i>Chemical Science</i> , 2021, 12, 7214-7230.	3.7	43
14	Heterometallic Actinide-Containing Photoresponsive Metal-Organic Frameworks: Dynamic and Static Tuning of Electronic Properties. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 8072-8080.	7.2	51
15	Heterometallic Actinide-Containing Photoresponsive Metal-Organic Frameworks: Dynamic and Static Tuning of Electronic Properties. <i>Angewandte Chemie</i> , 2021, 133, 8152-8160.	1.6	9
16	Frontispiece: Heterometallic Actinide-Containing Photoresponsive Metal-Organic Frameworks: Dynamic and Static Tuning of Electronic Properties. <i>Angewandte Chemie - International Edition</i> , 2021, 60, .	7.2	0
17	Frontispiz: Heterometallic Actinide-Containing Photoresponsive Metal-Organic Frameworks: Dynamic and Static Tuning of Electronic Properties. <i>Angewandte Chemie</i> , 2021, 133, .	1.6	0
18	Wirt-Gast-Wechselwirkungen in einer Serie isoretikulärer Metallorganischer Gerüststrukturen für molekulare photokatalytische CO_2 -Reduktion. <i>Angewandte Chemie</i> , 2021, 133, 17998-18004.	1.6	13

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19	Host-Guest Interactions in a Metal-Organic Framework Isoreticular Series for Molecular Photocatalytic CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17854-17860.	7.2	69
20	Broken-hearted carbon bowl via electron shuttle reaction: energetics and electron coupling. <i>Chemical Science</i> , 2021, 12, 6600-6606.	3.7	5
21	Boarding-Up Radiation Damage and Radionuclide Leaching Kinetics in Linker-Capped Metal-Organic Frameworks. <i>Inorganic Chemistry</i> , 2020, 59, 179-183.	1.9	22
22	Photophysics Modulation in Photoswitchable Metal-Organic Frameworks. <i>Chemical Reviews</i> , 2020, 120, 8790-8813.	23.0	275
23	Growth of Crystalline Bimetallic Metal-Organic Framework Films via Transmetalation. <i>Langmuir</i> , 2020, 36, 9900-9908.	1.6	6
24	Anion-exchanged and quaternary ammonium functionalized MIL-101-Cr metal-organic framework (MOF) for ReO ₄ ⁻ /TcO ₄ ⁻ sequestration from groundwater. <i>Journal of Environmental Radioactivity</i> , 2020, 222, 106372.	0.9	22
25	Direct Identification of Mixed-Metal Centers in Metal-Organic Frameworks: Cu ₃ (BTC) ₂ Transmetalated with Rh ²⁺ Ions. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 8138-8144.	2.1	16
26	A Multivariate Toolbox for Donor-Acceptor Alignment: MOFs and COFs. <i>Trends in Chemistry</i> , 2020, 2, 367-382.	4.4	20
27	Electronic structures and magnetism of Zr-, Th-, and U-based metal-organic frameworks (MOFs) by density functional theory. <i>Computational Materials Science</i> , 2020, 184, 109903.	1.4	25
28	Heterometallic multinuclear nodes directing MOF electronic behavior. <i>Chemical Science</i> , 2020, 11, 7379-7389.	3.7	14
29	Confinement-Driven Photophysics in Cages, Covalent Organic Frameworks, Metal-Organic Frameworks, and DNA. <i>Journal of the American Chemical Society</i> , 2020, 142, 4769-4783.	6.6	23
30	A Dual Threat: Redox Activity and Electronic Structures of Well-Defined Donor-Acceptor Fulleritic Covalent Organic Materials. <i>Angewandte Chemie</i> , 2020, 132, 6056-6062.	1.6	8
31	A Dual Threat: Redox Activity and Electronic Structures of Well-Defined Donor-Acceptor Fulleritic Covalent Organic Materials. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 6000-6006.	7.2	20
32	Heterometallic Metal-Organic Frameworks (MOFs): The Advent of Improving the Energy Landscape. <i>ACS Energy Letters</i> , 2019, 4, 1938-1946.	8.8	76
33	Sequestration of Radionuclides in Metal-Organic Frameworks from Density Functional Theory Calculations. <i>Journal of Physical Chemistry C</i> , 2019, 123, 26842-26855.	1.5	12
34	Selective Catalytic Chemistry at Rhodium(II) Nodes in Bimetallic Metal-Organic Frameworks. <i>Angewandte Chemie</i> , 2019, 131, 16685-16689.	1.6	7
35	Selective Catalytic Chemistry at Rhodium(II) Nodes in Bimetallic Metal-Organic Frameworks. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16533-16537.	7.2	29
36	Thermodynamics and Electronic Properties of Heterometallic Multinuclear Actinide-Containing Metal-Organic Frameworks with Structural Memory. <i>Journal of the American Chemical Society</i> , 2019, 141, 11628-11640.	6.6	71

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37	Connecting Wires: Photoinduced Electronic Structure Modulation in Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2019, 141, 5350-5358.	6.6	90
38	Actinide-based MOFs: a middle ground in solution and solid-state structural motifs. <i>Chemical Communications</i> , 2018, 54, 6472-6483.	2.2	91
39	Photochemistry and photophysics of MOFs: steps towards MOF-based sensing enhancements. <i>Chemical Society Reviews</i> , 2018, 47, 4710-4728.	18.7	478
40	Flipping the Switch: Fast Photoisomerization in a Confined Environment. <i>Journal of the American Chemical Society</i> , 2018, 140, 7611-7622.	6.6	110
41	Hierarchical Materials as Tailored Nuclear Waste Forms: A Perspective. <i>Chemistry of Materials</i> , 2018, 30, 4475-4488.	3.2	98
42	Stack the Bowls: Tailoring the Electronic Structure of Corannulene-Integrated Crystalline Materials. <i>Angewandte Chemie</i> , 2018, 130, 11480-11485.	1.6	9
43	Stack the Bowls: Tailoring the Electronic Structure of Corannulene-Integrated Crystalline Materials. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 11310-11315.	7.2	38
44	Inkjet-Printed Photoluminescent Patterns of Aggregation-Induced-Emission Chromophores on Surface-Anchored Metal-Organic Frameworks. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 25754-25762.	4.0	23
45	A metal-organic framework as a flask: photophysics of confined chromophores with a benzylidene imidazolinone core. <i>Chemical Communications</i> , 2017, 53, 7361-7364.	2.2	20
46	Hierarchical Corannulene-Based Materials: Energy Transfer and Solid-State Photophysics. <i>Angewandte Chemie</i> , 2017, 129, 4596-4600.	1.6	13
47	Hierarchical Corannulene-Based Materials: Energy Transfer and Solid-State Photophysics. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 4525-4529.	7.2	34
48	Electronic Properties of Bimetallic Metal-Organic Frameworks (MOFs): Tailoring the Density of Electronic States through MOF Modularity. <i>Journal of the American Chemical Society</i> , 2017, 139, 5201-5209.	6.6	178
49	Multifaceted Modularity: A Key for Stepwise Building of Hierarchical Complexity in Actinide Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2017, 139, 16852-16861.	6.6	107
50	Fulleretic Materials: Buckyball- and Buckybowl-Based Crystalline Frameworks. <i>Chemistry of Materials</i> , 2017, 29, 7054-7061.	3.2	62
51	Fulleretic Well-Defined Scaffolds: Donor-Fullerene Alignment Through Metal Coordination and Its Effect on Photophysics. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 9070-9074.	7.2	43
52	Fulleretic Well-Defined Scaffolds: Donor-Fullerene Alignment Through Metal Coordination and Its Effect on Photophysics. <i>Angewandte Chemie</i> , 2016, 128, 9216-9220.	1.6	15
53	Redox-Active Corannulene Buckybowls in a Crystalline Hybrid Scaffold. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 2195-2199.	7.2	45
54	Titelbild: Redox-Active Corannulene Buckybowls in a Crystalline Hybrid Scaffold (<i>Angew. Chem.</i> 6/2016). <i>Angewandte Chemie</i> , 2016, 128, 1963-1963.	1.6	0

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55	Metal-organic framework photophysics: Optoelectronic devices, photoswitches, sensors, and photocatalysts. <i>MRS Bulletin</i> , 2016, 41, 890-896.	1.7	57
56	Supramolecular Assembly of Metal-Organic Tubes Constructed from the Ditopic Heteroscorpionate Ligand (4-(NH ₂ C ₆ H ₄)CHpz ₂ (pz = Pyrazolyl) and Silver(I). <i>European Journal of Inorganic Chemistry</i> , 2016, 2016, 2615-2625.	1.0	10
57	Redox-Active Corannulene Buckybowls in a Crystalline Hybrid Scaffold. <i>Angewandte Chemie</i> , 2016, 128, 2235-2239.	1.6	16
58	Photophysics, Dynamics, and Energy Transfer in Rigid Mimics of GFP-based Systems. <i>Inorganic Chemistry</i> , 2016, 55, 7257-7264.	1.9	40
59	Metal-Organic Frameworks as a Versatile Tool To Study and Model Energy Transfer Processes. <i>Chemistry - A European Journal</i> , 2015, 21, 15474-15479.	1.7	69
60	A Bio-inspired Approach for Chromophore Communication: Ligand-to-Ligand and Host-to-Guest Energy Transfer in Hybrid Crystalline Scaffolds. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 13639-13643.	7.2	57
61	Mimic of the Green Fluorescent Protein β -Barrel: Photophysics and Dynamics of Confined Chromophores Defined by a Rigid Porous Scaffold. <i>Journal of the American Chemical Society</i> , 2015, 137, 2223-2226.	6.6	82
62	Perfluoroalkylfullerenes. <i>Chemical Reviews</i> , 2015, 115, 1051-1105.	23.0	90
63	Active Sites in Copper-Based Metal-Organic Frameworks: Understanding Substrate Dynamics, Redox Processes, and Valence-Band Structure. <i>Journal of Physical Chemistry C</i> , 2015, 119, 27457-27466.	1.5	87
64	An elusive fulvene 1,7,11,24-C ₆₀ (CF ₃) ₄ and its unusual reactivity. <i>Chemical Communications</i> , 2014, 50, 1205-1208.	2.2	9
65	Energy Transfer on Demand: Photoswitch-Directed Behavior of Metal-Porphyrin Frameworks. <i>Journal of the American Chemical Society</i> , 2014, 136, 11886-11889.	6.6	188
66	Selective Turn-On Ammonia Sensing Enabled by High-Temperature Fluorescence in Metal-Organic Frameworks with Open Metal Sites. <i>Journal of the American Chemical Society</i> , 2013, 135, 13326-13329.	6.6	409
67	Regioselective Sequential Additions of Nucleophiles and Electrophiles to Perfluoroalkylfullerenes: Which Cage C Atoms Are the Most Reactive and Why?. <i>Chemistry - A European Journal</i> , 2013, 19, 5070-5080.	1.7	17
68	Structure of 7,9,12,15,18,20,39,24,45,57-C ₆₀ (CF ₃) ₁₀ (1,2:3,4-O) ₂ . The first regiospecific diepoxidation of a fullerene derivative. <i>Acta Chimica Slovenica</i> , 2013, 60, 577-82.	0.2	1
69	Conformational Locking by Design: Relating Strain Energy with Luminescence and Stability in Rigid Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2012, 134, 19596-19599.	6.6	176
70	Phenyl Ring Dynamics in a Tetraphenylethylene-Bridged Metal-Organic Framework: Implications for the Mechanism of Aggregation-Induced Emission. <i>Journal of the American Chemical Society</i> , 2012, 134, 15061-15070.	6.6	368
71	Substituent effects in a series of 1,7-C ₆₀ (RF) ₂ compounds (RF = CF ₃ , C ₂ F ₅ , n-C ₃ F ₇ , i-C ₃ F ₇ , n-C ₄ F ₉ , s-C ₄ F ₉), <i>Tj ETQq11</i> 0.784314 rgBT <i>Chemical Science</i> , 2012, 3, 1399.	3.7	25
72	Chemical tailoring of fullerene acceptors: synthesis, structures and electrochemical properties of perfluoroisopropylfullerenes. <i>Chemical Communications</i> , 2011, 47, 875-877.	2.2	20

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73	Turn-On Fluorescence in Tetraphenylethylene-Based Metal-Organic Frameworks: An Alternative to Aggregation-Induced Emission. <i>Journal of the American Chemical Society</i> , 2011, 133, 20126-20129.	6.6	623
74	Poly(perfluoroalkylation) of Metallic Nitride Fullerenes Reveals Addition-Pattern Guidelines: Synthesis and Characterization of a Family of $Sc_3N@C_{80}(CF_3)_n$ ($n=2\sim 16$) and Their Radical Anions. <i>Journal of the American Chemical Society</i> , 2011, 133, 2672-2690.	6.6	73
75	Fine-Tuning Redox Properties of Perfluoroalkylated Fullerenes: Playing with Perfluoroalkyl Groups and Addition Motifs. ECS Meeting Abstracts, 2011, , .	0.0	0
76	Nitrogen Directs Multiple Radical Additions to the $9,9\text{-}C_{60}H_2$ (C ₆₀ -h ₅)[5,6]fullerene: X-ray Structure of $6,9,12,15,18\text{-}C_{59}N(CF_3)_5$. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 5537-5540.	7.2	28
77	In Search of Fullerene-Based Superacids: Synthesis, X-ray Structure, and DFT Study of $C_{60}(C_2F_5)_5$. <i>Chemistry - A European Journal</i> , 2011, 17, 8799-8802.	1.7	20
78	Perfluoroalkylation of Fullerenes. <i>World Scientific Series on Carbon Nanoscience</i> , 2011, , 101-143.	0.1	1
79	Soluble Chlorofullerenes $C_{60}Cl_{2,4,6,8,10}$. Synthesis, Purification, Compositional Analysis, Stability, and Experimental/Theoretical Structure Elucidation, Including the X-ray Structure of $C_{1-C_{60}Cl_{10}}$. <i>Journal of the American Chemical Society</i> , 2010, 132, 6443-6462.	6.6	57
80	Redox-Tuning Endohedral Fullerene Spin States: From the Dication to the Trianion Radical of $Sc_3N@C_{80}(CF_3)_2$ in Five Reversible Single-Electron Steps. <i>Chemistry - A European Journal</i> , 2010, 16, 4721-4724.	1.7	42
81	Saturnene Revealed: X-ray Crystal Structure of $D_5d\text{-}C_{60}F_{20}$ Formed in Reactions of C_{60} with A_xM_y Fluorinating Agents (A=Alkali Metal; M=3d Metal). <i>Angewandte Chemie - International Edition</i> , 2010, 49, 812-815.	7.2	12
82	High-temperature and photochemical syntheses of C ₆₀ and C ₇₀ fullerene derivatives with linear perfluoroalkyl chains. <i>Journal of Fluorine Chemistry</i> , 2010, 131, 1198-1212.	0.9	19
83	Unraveling the Electron Spin Resonance Pattern of Nonsymmetric Radicals with 30 Fluorine Atoms: Electron Spin Resonance and Vis-Near-Infrared Spectroelectrochemistry of the Anion Radicals and Dianions of $C_{60}(CF_3)_n$ ($n=2\sim 10$) Derivatives and Density Functional Theory-Assisted Assignment. <i>Journal of the American Chemical Society</i> , 2010, 132, 11709-11721.	6.6	14
84	$Sc_3N@C_{80}I_h(7)(CF_3)_{14}$ and $Sc_3N@C_{80}I_h(7)(CF_3)_{16}$. Endohedral Metallofullerene Derivatives with Exohedral Addends on Four and Eight Triple-Hexagon Junctions. Does the Sc_3N Cluster Control the Addition Pattern or Vice Versa?. <i>Journal of the American Chemical Society</i> , 2009, 131, 17630-17637.	6.6	59
85	Synthesis, Spectroscopic and Electrochemical Characterization, and DFT Study of Seventeen $C_{70}(CF_3)_n$ ($n=2, 4, 6, 8, 10, 12$) Derivatives ($n=2, 4, 6, 8, 10, 12$). <i>Chemistry - A European Journal</i> , 2008, 14, 107-121.	1.7	73
86	ESR-Vis/NIR Spectroelectrochemical Study of $C_{70}(CF_3)_2^{\cdot-}$ and $C_{70}(C_2F_5)_2^{\cdot-}$ Radical Anions. <i>ChemPhysChem</i> , 2008, 9, 431-438.	1.0	17
87	$C_{1-C_{84}}(CF_3)_{12}$: Trifluoromethylation Yields Structural Proof of a Minor C_{84} Cage and Reveals a Principle of Higher Fullerene Reactivity. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 6204-6207.	7.2	63
88	Molecular and Crystal Structure of the $C_{60}F_{18}$ Adducts with Bromine and Carbon Disulfide. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2008, 16, 597-602.	1.0	2
89	Synthesis and X-ray or NMR/DFT Structure Elucidation of Twenty-One New Trifluoromethyl Derivatives of Soluble Cage Isomers of C ₇₆ , C ₇₈ , C ₈₄ , and C ₉₀ . <i>Journal of the American Chemical Society</i> , 2008, 130, 13471-13489.	6.6	91
90	1,3,7,10,14,17,21,28,31,42,52,55-Dodecakis(trifluoromethyl)-1,3,7,10,14,17,21,28,31,42,52,55-dodecahydro(C ₆₀ -h ₅)[5,6]fullerene. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2008, 64, o159-o159.	0.2	5

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109	Electron affinity and suppression effect in analysis of chlorofullerenes by MALDI mass spectrometry. Russian Chemical Bulletin, 2005, 54, 1121-1124.	0.4	5
110	Synthesis and structures of C60 fullerene chlorides. Russian Chemical Bulletin, 2005, 54, 1656-1666.	0.4	32
111	Synthesis and structural characterization of highly chlorinated C70, C70Cl28. Chemical Communications, 2005, , 72.	2.2	48
112	Preparation and crystallographic characterization of C60Cl24. Chemical Communications, 2005, , 1411.	2.2	43
113	Negative Ions of Trifluoromethyl Fullerene Derivatives: First Thermodynamic Data. Fullerenes Nanotubes and Carbon Nanostructures, 2005, 12, 201-207.	1.0	2
114	Fluorination of the cubic and hexagonal C60 modifications by crystalline manganese trifluoride. Physics of the Solid State, 2002, 44, 629-630.	0.2	2
115	A MOF Multifunctional Cargo Vehicle for Reactive Gas Delivery and Catalysis. Angewandte Chemie, 0, , .	1.6	0