

Cheng-liang Xiao

List of Publications by Year in descending order

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78
papers

5,320
citations

94433

37
h-index

82547

72
g-index

81
all docs

81
docs citations

81
times ranked

3514
citing authors

#	ARTICLE	IF	CITATIONS
1	Umbellate Distortions of the Uranyl Coordination Environment Result in a Stable and Porous Polycatenated Framework That Can Effectively Remove Cesium from Aqueous Solutions. <i>Journal of the American Chemical Society</i> , 2015, 137, 6144-6147.	13.7	392
2	Identifying the Recognition Site for Selective Trapping of $^{99}\text{TcO}_4^-$ in a Hydrolytically Stable and Radiation Resistant Cationic Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2017, 139, 14873-14876.	13.7	386
3	Efficient and Selective Uptake of TcO_4^- by a Cationic Metal-Organic Framework Material with Open Ag ⁺ Sites. <i>Environmental Science & Technology</i> , 2017, 51, 3471-3479.	10.0	323
4	Synthesis of novel nanomaterials and their application in efficient removal of radionuclides. <i>Science China Chemistry</i> , 2019, 62, 933-967.	8.2	256
5	$^{99}\text{TcO}_4^-$ remediation by a cationic polymeric network. <i>Nature Communications</i> , 2018, 9, 3007.	12.8	234
6	Efficient removal of uranium from aqueous solution by zero-valent iron nanoparticle and its graphene composite. <i>Journal of Hazardous Materials</i> , 2015, 290, 26-33.	12.4	231
7	Excellent Selectivity for Actinides with a Tetradentate 2,9-Diamide-1,10-Phenanthroline Ligand in Highly Acidic Solution: A Hard-Soft Donor Combined Strategy. <i>Inorganic Chemistry</i> , 2014, 53, 1712-1720.	4.0	219
8	Exceptional Perrhenate/Pertechnetate Uptake and Subsequent Immobilization by a Low-Dimensional Cationic Coordination Polymer: Overcoming the Hofmeister Bias Selectivity. <i>Environmental Science and Technology Letters</i> , 2017, 4, 316-322.	8.7	181
9	Successful Decontamination of $^{99}\text{TcO}_4^-$ in Groundwater at Legacy Nuclear Sites by a Cationic Metal-Organic Framework with Hydrophobic Pockets. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4968-4972.	13.8	177
10	Rapid Simultaneous Removal of Toxic Anions [HSeO_3^-], [SeO_3^{2-}], and [SeO_4^{2-}], and Metals Hg^{2+} , Cu^{2+} , and Cd^{2+} by MoS_4^{2-} Intercalated Layered Double Hydroxide. <i>Journal of the American Chemical Society</i> , 2017, 139, 12745-12757.	13.7	164
11	Rare earth separations by selective borate crystallization. <i>Nature Communications</i> , 2017, 8, 14438.	12.8	125
12	Efficient Capture of Perrhenate and Pertechnetate by a Mesoporous Zr Metal-Organic Framework and Examination of Anion Binding Motifs. <i>Chemistry of Materials</i> , 2018, 30, 1277-1284.	6.7	125
13	$^{99}\text{TcO}_4^-$ removal from legacy defense nuclear waste by an alkaline-stable 2D cationic metal organic framework. <i>Nature Communications</i> , 2020, 11, 5571.	12.8	124
14	Distinctive Two-Step Intercalation of Sr^{2+} into a Coordination Polymer with Record High ^{90}Sr Uptake Capabilities. <i>CheM</i> , 2019, 5, 977-994.	11.7	119
15	Separation and Remediation of $^{99}\text{TcO}_4^-$ from Aqueous Solutions. <i>Chemistry of Materials</i> , 2019, 31, 3863-3877.	6.7	106
16	Metal-organic frameworks for radionuclide sequestration from aqueous solution: a brief overview and outlook. <i>Dalton Transactions</i> , 2017, 46, 16381-16386.	3.3	104
17	Selenium Sequestration in a Cationic Layered Rare Earth Hydroxide: A Combined Batch Experiments and EXAFS Investigation. <i>Environmental Science & Technology</i> , 2017, 51, 8606-8615.	10.0	98
18	Understanding the Bonding Nature of Uranyl Ion and Functionalized Graphene: A Theoretical Study. <i>Journal of Physical Chemistry A</i> , 2014, 118, 2149-2158.	2.5	96

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19	Exploring Actinide Materials Through Synchrotron Radiation Techniques. <i>Advanced Materials</i> , 2014, 26, 7807-7848.	21.0	89
20	Selective Separation and Complexation of Trivalent Actinide and Lanthanide by a Tetradentate Softâ€“Hard Donor Ligand: Solvent Extraction, Spectroscopy, and DFT Calculations. <i>Inorganic Chemistry</i> , 2019, 58, 4420-4430.	4.0	84
21	Highly Efficient Separation of Trivalent Minor Actinides by a Layered Metal Sulfide (KInSn ₂ S ₆) from Acidic Radioactive Waste. <i>Journal of the American Chemical Society</i> , 2017, 139, 16494-16497.	13.7	81
22	Efficient uptake of perrhenate/pertechnenate from aqueous solutions by the bifunctional anion-exchange resin. <i>Radiochimica Acta</i> , 2018, 106, 581-591.	1.2	74
23	Theoretical Investigation on Multiple Bonds in Terminal Actinide Nitride Complexes. <i>Inorganic Chemistry</i> , 2014, 53, 9607-9614.	4.0	73
24	Large-Pore 3D Cubic Mesoporous (KIT-6) Hybrid Bearing a Hardâ€“Soft Donor Combined Ligand for Enhancing U(VI) Capture: An Experimental and Theoretical Investigation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 3774-3784.	8.0	70
25	Europium, uranyl, and thorium-phenanthroline amide complexes in acetonitrile solution: an ESI-MS and DFT combined investigation. <i>Dalton Transactions</i> , 2015, 44, 14376-14387.	3.3	63
26	Quantum Chemistry Study of Uranium(VI), Neptunium(V), and Plutonium(IV,VI) Complexes with Preorganized Tetradentate Phenanthrolineamide Ligands. <i>Inorganic Chemistry</i> , 2014, 53, 10846-10853.	4.0	61
27	Comprehensive comparison of bismuth and silver functionalized nickel foam composites in capturing radioactive gaseous iodine. <i>Journal of Hazardous Materials</i> , 2021, 417, 125978.	12.4	60
28	Nano-MOF ⁺ Technique for Efficient Uranyl Remediation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 21619-21626.	8.0	59
29	Novel bismuth-based electrospinning materials for highly efficient capture of radioiodine. <i>Chemical Engineering Journal</i> , 2021, 412, 128687.	12.7	59
30	Efficient Recovery of End-of-Life NdFeB Permanent Magnets by Selective Leaching with Deep Eutectic Solvents. <i>Environmental Science & Technology</i> , 2020, 54, 10370-10379.	10.0	57
31	Unraveling the complexation mechanism of actinide(III) and lanthanide(III) with a new tetradentate phenanthroline-derived phosphonate ligand. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 1726-1740.	6.0	53
32	Design and synthesis of a chiral uranium-based microporous metal organic framework with high SHG efficiency and sequestration potential for low-valent actinides. <i>Dalton Transactions</i> , 2015, 44, 18810-18814.	3.3	49
33	Preparation of macroporous silica-based crown ether materials for strontium separation. <i>Journal of Porous Materials</i> , 2010, 17, 153-161.	2.6	46
34	Synthesis and characterization of novel macroporous silica-polymer-calixcrown hybrid supramolecular recognition materials for effective separation of cesium. <i>Journal of Hazardous Materials</i> , 2014, 267, 109-118.	12.4	44
35	Molecular modification of a novel macroporous silica-based impregnated polymeric composite by tri-n-butyl phosphate and its application in the adsorption for some metals contained in a typical simulated HLLW. <i>Journal of Hazardous Materials</i> , 2007, 147, 601-609.	12.4	42
36	Efficient capture of radioactive iodine by a new bismuth-decorated electrospinning carbon nanofiber. <i>Journal of Nuclear Materials</i> , 2020, 542, 152526.	2.7	41

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37	Effect of Counteranions on the Extraction and Complexation of Trivalent Lanthanides with Tetradentate Phenanthroline-Derived Phosphonate Ligands. <i>Inorganic Chemistry</i> , 2020, 59, 17453-17463.	4.0	40
38	A facile additive-free method for tunable fabrication of UO ₂ and U ₃ O ₈ nanoparticles in aqueous solution. <i>CrystEngComm</i> , 2014, 16, 2645.	2.6	38
39	Successful Decontamination of ⁹⁹ TcO ₄ ⁻ in Groundwater at Legacy Nuclear Sites by a Cationic Metal-Organic Framework with Hydrophobic Pockets. <i>Angewandte Chemie</i> , 2019, 131, 5022-5026.	2.0	37
40	Efficient sequestration of radioactive ⁹⁹ TcO ₄ ⁻ by a rare 3-fold interlocking cationic metal-organic framework: A combined batch experiments, pair distribution function, and crystallographic investigation. <i>Chemical Engineering Journal</i> , 2022, 427, 130942.	12.7	37
41	Influence of a N-Heterocyclic Core on the Binding Capability of N,O-Hybrid Diamide Ligands toward Trivalent Lanthanides and Actinides. <i>Inorganic Chemistry</i> , 2021, 60, 8754-8764.	4.0	35
42	Unfolding the Extraction and Complexation Behaviors of Trivalent f-Block Elements by a Tetradentate N,O-Hybrid Phenanthroline Derived Phosphine Oxide Ligand. <i>Inorganic Chemistry</i> , 2021, 60, 2805-2815.	4.0	31
43	Chromatographic separation of cesium by a macroporous silica-based supramolecular recognition agent impregnated material. <i>Separation and Purification Technology</i> , 2009, 66, 541-548.	7.9	30
44	Comparative Investigation into the Complexation and Extraction Properties of Tridentate and Tetradentate Phosphine Oxide-Functionalized 1,10-Phenanthroline Ligands toward Lanthanides and Actinides. <i>Chemistry - A European Journal</i> , 2021, 27, 10717-10730.	3.3	27
45	Cobalt Metal-Organic Frameworks with Aggregation-Induced Emission Characteristics for Fluorometric/Colorimetric Dual Channel Detection of Nitrogen-Rich Heterocyclic Compounds. <i>Analytical Chemistry</i> , 2022, 94, 3744-3748.	6.5	27
46	Physicochemical Properties of Novel Phosphobetaine Zwitterionic Surfactants and Mixed Systems with an Anionic Surfactant. <i>Journal of Surfactants and Detergents</i> , 2011, 14, 433-438.	2.1	23
47	A neptunium(^v)-mediated interwoven transuranium-rotaxane network incorporating a mechanically interlocked [2]daisy chain unit. <i>Chemical Communications</i> , 2018, 54, 8645-8648.	4.1	21
48	Online Teaching Practices and Strategies for Inorganic Chemistry Using a Combined Platform Based on DingTalk, Learning@ZJU, and WeChat. <i>Journal of Chemical Education</i> , 2020, 97, 2940-2944.	2.3	21
49	Template-Free Synthesis and Mechanistic Study of Porous Three-Dimensional Hierarchical Uranium-Containing and Uranium Oxide Microspheres. <i>Chemistry - A European Journal</i> , 2014, 20, 12655-12662.	3.3	20
50	Graphene oxide@Mg ₃ Si ₄ O ₉ (OH) ₁₀ : A hierarchical layered silicate nanocomposite with superior adsorption capacity for enriching Eu(III). <i>Chemical Engineering Journal</i> , 2018, 338, 628-635.	12.7	20
51	Selective Dissolution and Separation of Rare Earths Using Guanidine-Based Deep Eutectic Solvents. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8507-8514.	6.7	20
52	Boosting Proton Conductivity in Highly Robust 3D Inorganic Cationic Extended Frameworks through Ion Exchange with Dihydrogen Phosphate Anions. <i>Chemistry - A European Journal</i> , 2015, 21, 17591-17595.	3.3	19
53	Unveiling the Uncommon Fluorescent Recognition Mechanism towards Pertechnetate Using a Cationic Metal-Organic Framework Bearing N-Heterocyclic AIE Molecules. <i>Chemistry - A European Journal</i> , 2021, 27, 5632-5637.	3.3	19
54	Selective separation of Am(III) from Eu(III) by 2,9-Bis(dialkyl-1,2,4-triazin-3-yl)-1,10-phenanthrolines: a relativistic quantum chemistry study. <i>Radiochimica Acta</i> , 2014, 102, 875-886.	1.2	18

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55	⁹⁹ TcO ₄ Separation through Selective Crystallization Assisted by Polydentate Benzene-Aminoguanidinium Ligands. <i>Inorganic Chemistry</i> , 2021, 60, 6463-6471.	4.0	17
56	Constructing Cationic Metal-Organic Framework Materials Based on Pyrimidyl as a Functional Group for Perrhenate/Pertechnetate Sorption. <i>Inorganic Chemistry</i> , 2021, 60, 16420-16428.	4.0	17
57	Complexation Behaviors of a Tridentate Phenanthroline Carboxamide Ligand with Trivalent f-Block Elements in Different Anion Systems: A Thermodynamic and Crystallographic Perspective. <i>Inorganic Chemistry</i> , 2022, 61, 2824-2834.	4.0	17
58	High selectivity towards small copper ions by a preorganized phenanthroline-derived tetradentate ligand and new insight into the complexation mechanism. <i>Dalton Transactions</i> , 2014, 43, 12470-12473.	3.3	15
59	Preparation of a Novel Silica-Based DtBuCH18C6 Impregnated Polymeric Composite Modified by Tri-n-butyl Phosphate and Its Application in Chromatographic Partitioning of Strontium from High Level Liquid Waste. <i>Industrial & Engineering Chemistry Research</i> , 2007, 46, 2164-2171.	3.7	14
60	A unique delaminated MoS ₄ /OS-LEuH composite exhibiting turn-on luminescence sensing for detection of water in formamide. <i>Dalton Transactions</i> , 2017, 46, 3110-3114.	3.3	14
61	Highly efficient sorption of selenate and selenite onto a cationic layered single hydroxide via anion exchange and inner-sphere complexation. <i>Chemical Engineering Journal</i> , 2021, 420, 129726.	12.7	14
62	ZnCl ₂ : A Green Brønsted Acid for Selectively Recovering Rare Earth Elements from Spent NdFeB Permanent Magnets. <i>Environmental Science & Technology</i> , 2022, 56, 4404-4412.	10.0	14
63	Incipient wetness impregnation to prepare bismuth-modified all-silica beta zeolite for efficient radioactive iodine capture. , 2022, 1, 92-104.		14
64	Azo dye removal from aqueous solution by organic-inorganic hybrid dodecanoic acid modified layered Mg-Al hydrotalcite. <i>Korean Journal of Chemical Engineering</i> , 2011, 28, 933-938.	2.7	13
65	Design criteria for tetradentate phenanthroline-derived heterocyclic ligands to separate Am(III) from Eu(III). <i>Science China Chemistry</i> , 2014, 57, 1439-1448.	8.2	13
66	SPEC Process II. Adsorption of strontium and some typical co-existent elements contained in high level liquid waste onto a macroporous silica-based crown ether impregnated functional composite. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2009, 280, 181-191.	1.5	12
67	Synthesis and characterization of a cesium-selective macroporous silica-based supramolecular recognition material with high stability. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2016, 307, 713-723.	1.5	12
68	Direct CO ₂ Capture from Air via Crystallization with a Trichelating Iminoguanidine Ligand. <i>ACS Omega</i> , 2020, 5, 20428-20437.	3.5	11
69	Selective Capture Mechanism of Radioactive Thorium from Highly Acidic Solution by a Layered Metal Sulfide. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 37308-37315.	8.0	11
70	Two-Fold Interlocking Cationic Metal-Organic Framework Material with Exchangeable Chloride for Perrhenate/Pertechnetate Sorption. <i>Inorganic Chemistry</i> , 2022, 61, 11463-11470.	4.0	10
71	Synthesis and Characterization of a New Polymer-Based Supramolecular Recognition Material and its Adsorption for Cesium. <i>Solvent Extraction and Ion Exchange</i> , 2012, 30, 17-32.	2.0	9
72	Chromate separation by selective crystallization. <i>Chinese Chemical Letters</i> , 2020, 31, 1974-1977.	9.0	9

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73	Synthesis of a Novel Macroporous Silica-Calix[4]arene-Crown Supramolecular Recognition Material and its Adsorption for Cesium and some Typical Metals in Highly Active Liquid Waste. Solvent Extraction and Ion Exchange, 2010, 28, 526-542.	2.0	8
74	Synthesis and characterization of a novel organic-inorganic hybrid supramolecular recognition material and its selective adsorption for cesium. Journal of Radioanalytical and Nuclear Chemistry, 2014, 299, 699-708.	1.5	7
75	A one-pot process based on P44414Cl-HCl aqueous biphasic system for recovering rare earth elements from NdFeB permanent magnet. Chinese Chemical Letters, 2022, 33, 953-956.	9.0	7
76	Temperature-responsive alkaline aqueous biphasic system for radioactive wastewater treatment. Chinese Chemical Letters, 2022, 33, 3561-3564.	9.0	7
77	Synthesis of ordered mesoporous U_3O_8 by a nanocasting route. Radiochimica Acta, 2014, 102, 813-816.	1.2	3
78	Radionuclide sequestration by metal-organic frameworks. , 2019, , 355-382.		1