Tobias Reich

List of Publications by Year
in descending order

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101 papers	4,427 citations	101543 36 h-index	110387 64 g-index
101 all docs	101 docs citations	101 times ranked	3263 citing authors

#	Article	IF	Citations
1	Uranyl(VI) carbonate complex formation: Validation of the Ca2UO2(CO3)3(aq.) species. Radiochimica Acta, 2001, 89, 511-518.	1.2	353
2	Investigation of Aquo and Chloro Complexes of UO22+, NpO2+, Np4+, and Pu3+ by X-ray Absorption Fine Structure Spectroscopy. Inorganic Chemistry, 1997, 36, 4676-4683.	4.0	349
3	Complexation of Uranium by Cells and S-Layer Sheets of Bacillus sphaericus JG-A12. Applied and Environmental Microbiology, 2005, 71, 5532-5543.	3.1	246
4	Multinuclear NMR, Raman, EXAFS, and X-ray diffraction studies of uranyl carbonate complexes in near-neutral aqueous solution. X-ray structure of [C(NH2)3]6[(UO2)3(CO3)6].cntdot.6.5H2O. Inorganic Chemistry, 1995, 34, 4797-4807.	4.0	199
5	ROBL â€“ a CRG beamline for radiochemistry and materials research at the ESRF. Journal of Synchrotron Radiation, 1999, 6, 1076-1085.	2.4	182
6	Polarized x-ray-absorption spectroscopy of the uranyl ion: Comparison of experiment and theory. Physical Review B, 1996, 54, 156-165.	3.2	155
7	Complexation of uranium(VI) with protocatechuic acid?application of iterative transformation factor analysis to EXAFS spectroscopy. Analytical and Bioanalytical Chemistry, 2003, 376, 631-638.	3.7	154
8	An EXAFS study of uranium(VI) sorption onto silica gel and ferrihydrite. Journal of Electron Spectroscopy and Related Phenomena, 1998, 96, 237-243.	1.7	132
9	Structure of uranium sorption complexes at montmorillonite edge sites. Radiochimica Acta, 2002, 90, 653-657.	1.2	118
10	Interaction of uranium(VI) with various modified and unmodified natural and synthetic humic substances studied by EXAFS and FTIR spectroscopy. Inorganica Chimica Acta, 2003, 351, 133-140.	2.4	103
11	EXAFS Determinations of Uranium Structures:Â The Uranyl Ion Complexed with Tartaric, Citric, and Malic Acids. Inorganic Chemistry, 1996, 35, 784-787.	4.0	100
12	The Rossendorf Beam Line ROBL â€“ a dedicated experimental station for XAFS measurements of actinides and other radionuclides. Radiochimica Acta, 2000, 88, 633-638.	1.2	90
13	EXAFS investigation of uranium(VI) complexes formed at Bacillus cereus and Bacillus sphaericus surfaces. Radiochimica Acta, 2001, 89, 625-632.	1.2	77
14	Do Perchlorate and Triflate Anions Bind to the Uranyl Cation in an Acidic Aqueous Medium? A Combined EXAFS and Quantum Mechanical Investigation. ChemPhysChem, 2001, 2, 591-598.	2.1	76
15	Spectroscopic Characterization of the Uranium Carbonate Andersonite Na2Ca[UO2(CO3)3]Â·6H2O. Environmental Science & Technology, 2004, 38, 6032-6036.	10.0	76
16	Characterization of U(VI)-Acidithiobacillus ferrooxidans complexes using EXAFS, transmission electron microscopy, and energy-dispersive X-ray analysis. Radiochimica Acta, 2003, 91, 583-592.	1.2	73
17	Sorption of Uranium(VI) onto Ferric Oxides in Sulfate-Rich Acid Waters. Environmental Science & Technology, 2003, 37, 2898-2904.	10.0	72
18	The Structure of U6+ Sorption Complexes on Vermiculite and Hydrobiotite. Clays and Clay Minerals, 1999, 47, 439-457.	1.3	70

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19	Electronic and structural investigations of technetium compounds by x-ray absorption spectroscopy. Inorganic Chemistry, 1995, 34, 193-198.	4.0	68
20	The hydrolysis of dioxouranium(VI) investigated using EXAFS and 17O-NMR. Radiochimica Acta, 2000, 88, .	1.2	67
21	Uranium speciation in plants. Radiochimica Acta, 2003, 91, 319-328.	1.2	64
22	The colloid chemistry of acid rock drainage solution from an abandoned Znâ€“Pbâ€“Ag mine. Applied Geochemistry, 2002, 17, 633-648.	3.0	61
23	Solution coordination chemistry of uranium in the binary UO2 2+-SO4 2- and the ternary UO2 2+-SO4 2--OH- system. Radiochimica Acta, 2000, 88, 559-566.	1.2	57
24	Structural characterization of U(VI) surface complexes on kaolinite in the presence of humic acid using EXAFS spectroscopy. Journal of Colloid and Interface Science, 2008, 319, 40-47.	9.4	56
25	Neptunium(V) Sorption and Diffusion in Opalinus Clay. Environmental Science & Technology, 2009, 43, 6567-6571.	10.0	55
26	Uranyl(VI) complexes with alpha-substituted carboxylic acids in aqueous solution. Radiochimica Acta, 2003, 91, .	1.2	54
27	Spectroscopic characterization of alkaline earth uranyl carbonates. Journal of Solid State Chemistry, 2005, 178, 567-577.	2.9	54
28	On the Structure of Np(VI) and Np(VII) Species in Alkaline Solution Studied by EXAFS and Quantum Chemical Methods. Journal of Physical Chemistry A, 2001, 105, 11441-11445.	2.5	52
29	Determination of structural parameters of uranyl ions complexed with organic acids using EXAFS. Journal of Alloys and Compounds, 1998, 271-273, 123-127.	5.5	50
30	Antioxidant activity of cerium dioxide nanoparticles and nanorods in scavenging hydroxyl radicals. RSC Advances, 2019, 9, 11077-11081.	3.6	48
31	Laser and X-ray spectroscopic studies of uranium-calcite interface phenomena. Journal of Nuclear Materials, 1997, 248, 408-411.	2.7	47
32	Ddpd as Expanded Terpyridine: Dramatic Effects of Symmetry and Electronic Properties in First Row Transition Metal Complexes. Inorganics, 2018, 6, 86.	2.7	41
33	A XAS study of the local environments of cations in (U, Ce)O2. Journal of Nuclear Materials, 2003, 312, 103-110.	2.7	40
34	Plutonium(III) complexation by humic substances studied by X-ray absorption fine structure spectroscopy. Inorganica Chimica Acta, 2006, 359, 237-242.	2.4	40
35	A theoretical study of uranyl hydroxide monomeric and dimeric complexes. Chemical Physics Letters, 2001, 347, 127-132.	2.6	39
36	Comparison of ultracold neutron sources for fundamental physics measurements. Physical Review C, 2017, 95, .	2.9	39

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37	EXAFS study on the neptunium(V) complexation by various humic acids under neutral pH conditions. Radiochimica Acta, 2005, 93, .	1.2	36
38	Near-threshold behavior of theK-shell satellites in CO. Physical Review A, 1994, 49, 4570-4577.	2.5	32
39	Structures of Substituted-Cyclopentadienyl Uranium(III) Dimers and Related Uranium Metallocenes Deduced by EXAFS. Organometallics, 1999, 18, 1253-1258.	2.3	32
40	A theoretical study on the structures of UO2(CO3)34â^', Ca2UO2(CO3)30, and Ba2UO2(CO3)30. Chemical Physics Letters, 2002, 357, 73-77.	2.6	32
41	Neptunium(IV) complexation by humic substances studied by X-ray absorption fine structure spectroscopy. Radiochimica Acta, 2005, 93, 187-196.	1.2	30
42	Evidence for the existence of Tc(IV) â€“ humic substance species by X-ray absorption near-edge spectroscopy. Radiochimica Acta, 2002, 90, 879-884.	1.2	27
43	Calculation of inelastic mean free path of photoelectrons in some solids. Journal of Electron Spectroscopy and Related Phenomena, 1988, 46, 255-267.	1.7	24
44	Sorption of neptunium(V) on Opalinus Clay under aerobic/anaerobic conditions. Radiochimica Acta, 2011, 99, 71-77.	1.2	23
45	Uranyl sorption onto birnessite: A surface complexation modeling and EXAFS study. Chemical Geology, 2014, 373, 59-70.	3.3	23
46	Valence band offset in ZnS layers on Si(111) grown by molecular beam epitaxy. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1991, 9, 2238.	1.6	22
47	Speciation of Np(V) uptake by Opalinus Clay using synchrotron microbeam techniques. Analytical and Bioanalytical Chemistry, 2012, 404, 2151-2162.	3.7	22
48	Smooth crack-free targets for nuclear applications produced by molecular plating. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 714, 163-175.	1.6	22
49	High-resolution in-source laser spectroscopy in perpendicular geometry. Hyperfine Interactions, 2017, 238, 1.	0.5	22
50	A XANES and EXAFS Investigation of the Speciation of Selenite following Bacterial Metabolization. Inorganic Chemistry, 1995, 34, 1617-1619.	4.0	21
51	Reactivity of technetium(I) thioether carbonyl complexes towards histidineâ€"an EXAFS study in solution. Inorganica Chimica Acta, 2001, 322, 79-86.	2.4	21
52	Application of XAFS Spectroscopy to Actinide Environmental Science. AIP Conference Proceedings, 2007, , .	0.4	21
53	Neptunium(V) sorption on kaolinite. Radiochimica Acta, 2011, 99, 349-357.	1.2	21
54	Distribution coefficients for the sorption of Th, U, Np, Pu, and Am on Opalinus Clay. Radiochimica Acta, 2016, 104, 33-40.	1.2	21

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55	EXAFS structural analysis of aqueous uranium(VI) complexes with lignin degradation products. Radiochimica Acta, 2000, 88, 593-598.	1.2	20
56	The performance of thin layers produced by molecular plating as Î±-particle sources. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 721, 35-44.	1.6	20
57	Performance of the solid deuterium ultra-cold neutron source at the pulsed reactor TRIGA Mainz. European Physical Journal A, 2014, 50, 1.	2.5	20
58	Nanocomposite antimicrobials prevent bacterial growth through the enzyme-like activity of Bi-doped cerium dioxide (Ce_{1â^'x}Bi_xO_{2â^'Î´}). Nanoscale, 2020, 12, 21344-21358.	5.6	20
59	Toward a soft X-ray Fourier-transform spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1994, 347, 182-191.	1.6	19
60	EXAFS and XRD investigations of zeunerite and meta-zeunerite. Zeitschrift Fur Kristallographie - Crystalline Materials, 2003, 218, 37-45.	0.8	17
61	Uptake of actinides by calcium silicate hydrate (C-S-H) phases. Applied Geochemistry, 2018, 98, 426-434.	3.0	16
62	Solid State Fluorination on the Minute Scale: Synthesis of WO_{3â^'}_xF_x with Photocatalytic Activity. Advanced Functional Materials, 2020, 30, 1909051.	14.9	15
63	Sensitive redox speciation of neptunium by CEâ€“ICPâ€“MS. Analytical and Bioanalytical Chemistry, 2012, 404, 2143-2150.	3.7	14
64	Solution structures of rhenium (V) oxo peptide complexes of glycylglycylcysteine and cysteinylglycine as studied by capillary electrophoresis and X-ray absorption spectroscopy. Journal of Inorganic Biochemistry, 1998, 70, 99-106.	3.5	13
65	Quantitative XPS surface analysis: Correction for contamination layer. Journal of Electron Spectroscopy and Related Phenomena, 1991, 56, 33-49.	1.7	12
66	Upgrade of the ultracold neutron source at the pulsed reactor TRIGA Mainz. European Physical Journal A, 2017, 53, 1.	2.5	12
67	Electron spectroscopy for chemical analysis investigation of the interaction of uranyl and calcium ions with humic acids. Inorganica Chimica Acta, 1998, 273, 234-237.	2.4	11
68	Actinide Sorption Studies Using the Isotopes²³⁷Np and²³⁹Np. Journal of Nuclear Science and Technology, 2008, 45, 133-137.	1.3	11
69	Study of the role of sulfur functionalities in humic acids for uranium(VI) complexation. Radiochimica Acta, 2010, 98, 467-477.	1.2	11
70	Determination of a three-step excitation and ionization scheme for resonance ionization and ultratrace analysis of Np-237. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2011, 66, 242-247.	2.9	11
71	Influence of temperature and background electrolyte on the sorption of neptunium(V) on Opalinus Clay. Applied Clay Science, 2012, 69, 43-49.	5.2	11
72	Spark Plasma Sintering (SPS)-Assisted Synthesis and Thermoelectric Characterization of MagnÃ©li Phase V₆O₁₁. Inorganic Chemistry, 2018, 57, 1259-1268.	4.0	11

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73	Recent developments in resonance ionization mass spectrometry for ultra-trace analysis of actinide elements. Radiochimica Acta, 2019, 107, 645-652.	1.2	11
74	EXAFS analyses of technetium(I) carbonyl complexes â€“ stability studies in solutions. Radiochimica Acta, 2000, 88, 239-246.	1.2	10
75	EXAFS as a tool for bond-length determination in the environment of heavy atoms. Journal of Synchrotron Radiation, 2001, 8, 695-697.	2.4	10
76	Geochemical Interactions of Plutonium with Opalinus Clay Studied by Spatially Resolved Synchrotron Radiation Techniques. Environmental Science & Technology, 2017, 51, 7892-7902.	10.0	10
77	Application of Resonance Ionization Mass Spectrometry for Ultratrace Analysis of Technetium. Analytical Chemistry, 2017, 89, 9077-9082.	6.5	10
78	Technetium coordination ability of cysteine-containing peptides: X-ray absorption spectroscopy of a 99Tc labelled endothelin derivative. Applied Radiation and Isotopes, 1997, 48, 1045-1050.	1.5	9
79	Investigation of the Electrophoretic Mobility of the Actinides Th, U, Np, Pu, and Am in Different Oxidation States. Analytical Chemistry, 2019, 91, 11537-11543.	6.5	8
80	Lineshape asymmetry parameters in X-ray photoelectron spectra. Journal of Electron Spectroscopy and Related Phenomena, 1996, 77, 15-24.	1.7	7
81	Emission of ThO2 valence electrons upon excitation with synchrotron radiation near the O 4,5(Th) resonance absorption threshold. Radiochemistry, 2009, 51, 560-566.	0.7	7
82	The influence of Costerâ€"Kronig decay processes on the relative intensities of 2s and 2p photoelectron lines of Si, P, S, Cl, and Ca. Journal of Electron Spectroscopy and Related Phenomena, 1992, 58, 67-73.	1.7	6
83	X-ray photoelectron spectroscopy investigation of the interaction of U(VI) and Fe(III) with natural humic acid in aqueous solutions. Journal FÃ¼r Praktische Chemie, 1999, 341, 773-777.	0.2	6
84	Neptunium(V) sorption onto gibbsite. Radiochimica Acta, 2009, 97, .	1.2	6
85	Influence of humic acid on neptunium(V) sorption and diffusion in Opalinus Clay. Radiochimica Acta, 2013, , 130617035320002.	1.2	6
86	Determination of the Stability Constants of the Acetate Complexes of the Actinides Am(III), Th(IV), Np(V), and U(VI) Using Capillary Electrophoresis-Inductively Coupled Plasma Mass Spectrometry. Inorganic Chemistry, 2019, 58, 4851-4858.	4.0	6
87	Development, characterization, and first application of a resonant laser secondary neutral mass spectrometry setup for the research of plutonium in the context of long-term nuclear waste storage. Analytical and Bioanalytical Chemistry, 2021, 413, 3987-3997.	3.7	6
88	Effect of Ca(II) on U(VI) and Np(VI) retention on Ca-bentonite and clay minerals at hyperalkaline conditions - New insights from batch sorption experiments and luminescence spectroscopy. Science of the Total Environment, 2022, 842, 156837.	8.0	6
89	Phase relations in the system V/Nb/O. V. Investigation of mixed crystals V 1-x Nb x O 2. Fresenius' Journal of Analytical Chemistry, 1999, 363, 202-205.	1.5	5
90	Search for an electric charge of the neutron. Physical Review D, 2018, 97, .	4.7	5

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91	High resolution in the soft xâ€ray range from a toroidal grating monochromator. Review of Scientific Instruments, 1993, 64, 2552-2557.	1.3	3
92	Speciation analysis with synchrotron radiation. Analytical and Bioanalytical Chemistry, 2005, 383, 10-11.	3.7	3
93	Regularization methods for the analysis of EXAFS spectra of chemical complexes. Journal of Inverse and Ill-Posed Problems, 2007, 15, .	1.0	3
94	New Regularization Method for EXAFS Analysis. AIP Conference Proceedings, 2007, , .	0.4	2
95	Modeling the sorption of Np(V) on Na-montmorillonite â€“ effects of pH, ionic strength and CO₂. Radiochimica Acta, 2019, 107, 615-622.	1.2	2
96	Modern Speciation Techniques Applied to Environmental Systems. , 1999, , 11-38.		2
97	Chemical Speciation Studies of Radionuclides by XAFS. European Physical Journal Special Topics, 1997, 7, C2-789-C2-792.	0.2	2
98	Instrumental determination of phosphorus in silicon for photovoltaics by Î² spectroscopy: a new approach. Journal of Radioanalytical and Nuclear Chemistry, 2017, 311, 541-548.	1.5	1
99	Determination of kinetic parameters of redox reactions using CEâ€ICPâ€MS: A case study for the reduction of Np(V) by hydroxylamine hydrochloride. Electrophoresis, 2018, 39, 3013-3021.	2.4	1
100	Do Perchlorate and Triflate Anions Bind to the Uranyl Cation in an Acidic Aqueous Medium? A Combined EXAFS and Quantum Mechanical Investigation. ChemPhysChem, 2001, 2, 591-598.	2.1	1
101	Improving material properties and performance of nuclear targets for transmutation-relevant experiments. Journal of Radioanalytical and Nuclear Chemistry, 2015, 305, 913-919.	1.5	0