

Investigation of Zr(<sup>iv</sup>) and <sup>89</sup>Zr  
hydroxamates: progress towards designing a better che  
immuno-PET imaging

Chemical Communications

49, 1002-1004

DOI: 10.1039/c2cc37549d

Citation Report

#	ARTICLE	IF	CITATIONS
1	89Zr, a Radiometal Nuclide with High Potential for Molecular Imaging with PET: Chemistry, Applications and Remaining Challenges. <i>Molecules</i> , 2013, 18, 6469-6490.	1.7	92
2	Zirconium-89 Labeled Antibodies: A New Tool for Molecular Imaging in Cancer Patients. <i>BioMed Research International</i> , 2014, 2014, 1-13.	0.9	103
3	Rational Design, Synthesis, and Evaluation of Tetrahydroxamic Acid Chelators for Stable Complexation of Zirconium(IV). <i>Chemistry - A European Journal</i> , 2014, 20, 5584-5591.	1.7	63
4	Phase associations and potential selective extraction methods for selected high-tech metals from ferromanganese nodules and crusts with siderophores. <i>Applied Geochemistry</i> , 2014, 43, 13-21.	1.4	38
5	Charting the mechanism and reactivity of zirconium oxalate with hydroxamate ligands using density functional theory: implications in new chelate design. <i>Dalton Transactions</i> , 2014, 43, 9872-9884.	1.6	44
6	Density functional theory study of bis(imino) N-heterocyclic carbene iron(II) complexes. <i>Canadian Journal of Chemistry</i> , 2014, 92, 925-931.	0.6	3
7	Synthesis and characterisation of zirconium complexes for cell tracking with Zr-89 by positron emission tomography. <i>Dalton Transactions</i> , 2014, 43, 14851-14857.	1.6	31
8	An octadentate bifunctional chelating agent for the development of stable zirconium-89 based molecular imaging probes. <i>Chemical Communications</i> , 2014, 50, 11523-11525.	2.2	120
9	Structural and electrochemical characterization of a cerium(IV) hydroxamate complex: implications for the beneficiation of light rare earth ores. <i>Chemical Communications</i> , 2014, 50, 5361-5363.	2.2	30
10	A 4-tert-butylcalix[4]arene tetrahydroxamate podand based on the 1-oxypiperidine-2-one (1,2-PIPO) chelate. Self-assembly into a supramolecular ionophore driven by coordination of tetravalent zirconium or hafnium(IV). <i>RSC Advances</i> , 2014, 4, 22743-22754.	1.7	7
11	Alternative Chelator for <sup>89</sup> Zr Radiopharmaceuticals: Radiolabeling and Evaluation of 3,4,3-(LI-1,2-HOPO). <i>Journal of Medicinal Chemistry</i> , 2014, 57, 4849-4860.	2.9	143
12	Synthesis and Structural Study of Tetravalent (Zr <sup>4+</sup> , Hf <sup>4+</sup> , Ce <sup>4+</sup> ), <i>Tj ETQq1 1 0.784314 rgBT /O</i> of <i>Inorganic Chemistry</i> , 2015, 2015, 1529-1541.	1.0	18
13	The impact of weakly bound <sup>89</sup> Zr on preclinical studies: Non-specific accumulation in solid tumors and aspergillus infection. <i>Nuclear Medicine and Biology</i> , 2015, 42, 360-368.	0.3	32
14	[ <sup>89</sup> Zr]Oxinate4 for long-term in vivo cell tracking by positron emission tomography. <i>European Journal of Nuclear Medicine and Molecular Imaging</i> , 2015, 42, 278-287.	3.3	90
15	Evaluation of cetuximab as a candidate for targeted $\beta$ -particle radiation therapy of HER1-positive disseminated intraperitoneal disease. <i>MAbs</i> , 2015, 7, 255-264.	2.6	31
16	Forward and Reverse (Retro) Iron(III) or Gallium(III) Desferrioxamine E and Ring-Expanded Analogues Prepared Using Metal-Templated Synthesis from <i>endo</i> -Hydroxamic Acid Monomers. <i>Inorganic Chemistry</i> , 2015, 54, 3573-3583.	1.9	15
17	In vivo imaging with antibodies and engineered fragments. <i>Molecular Immunology</i> , 2015, 67, 142-152.	1.0	173
18	Novel Bifunctional Cyclic Chelator for <sup>89</sup> Zr Labeling – Radiolabeling and Targeting Properties of RGD Conjugates. <i>Molecular Pharmaceutics</i> , 2015, 12, 2142-2150.	2.3	70

#	ARTICLE	IF	CITATIONS
19	Conformational and structural studies of N-methylacetohydroxamic acid and of its mono- and bis-chelated uranium(VI) complexes. <i>Journal of Inorganic Biochemistry</i> , 2015, 151, 164-175.	1.5	8
20	Nuclear molecular imaging with nanoparticles: radiochemistry, applications and translation. <i>British Journal of Radiology</i> , 2015, 88, 20150185.	1.0	27
21	<i>p</i> -SCN-Bn-HOPO: A Superior Bifunctional Chelator for <sup>89</sup> Zr ImmunoPET. <i>Bioconjugate Chemistry</i> , 2015, 26, 2579-2591.	1.8	104
22	Radiometals: towards a new success story in nuclear imaging?. <i>Dalton Transactions</i> , 2015, 44, 4845-4858.	1.6	50
23	Tripodal tris(hydroxypyridinone) ligands for immunoconjugate PET imaging with <sup>89</sup> Zr <sup>4+</sup> : comparison with desferrioxamine-B. <i>Dalton Transactions</i> , 2015, 44, 4884-4900.	1.6	72
24	Di-macrocyclic terephthalamide ligands as chelators for the PET radionuclide zirconium-89. <i>Chemical Communications</i> , 2015, 51, 2301-2303.	2.2	41
25	A nuclear chocolate box: the periodic table of nuclear medicine. <i>Dalton Transactions</i> , 2015, 44, 4819-4844.	1.6	115
26	Evaluation of a 3-hydroxypyridin-2-one (2,3-HOPO) Based Macrocyclic Chelator for <sup>89</sup> Zr <sup>4+</sup> and Its Use for ImmunoPET Imaging of HER2 Positive Model of Ovarian Carcinoma in Mice. <i>Theranostics</i> , 2016, 6, 511-521.	4.6	49
27	Macrocyclic-Based Hydroxamate Ligands for Complexation and Immunoconjugation of <sup>89</sup> Zirconium for Positron Emission Tomography (PET) Imaging. <i>ChemPlusChem</i> , 2016, 81, 274-281.	1.3	55
28	In Vitro and In Vivo Comparison of Selected Ga-68 and Zr-89 Labelled Siderophores. <i>Molecular Imaging and Biology</i> , 2016, 18, 344-352.	1.3	41
29	A desferrioxamine B squaramide ester for the incorporation of zirconium-89 into antibodies. <i>Chemical Communications</i> , 2016, 52, 11889-11892.	2.2	77
30	Current advances in ligand design for inorganic positron emission tomography tracers <sup>68</sup> Ga, <sup>64</sup> Cu, <sup>89</sup> Zr and <sup>44</sup> Sc. <i>Dalton Transactions</i> , 2016, 45, 15702-15724.	1.6	81
31	Synthesis and Evaluation of a Zr-89-Labeled Monoclonal Antibody for Immuno-PET Imaging of Amyloid- $\beta^2$ Deposition in the Brain. <i>Molecular Imaging and Biology</i> , 2016, 18, 598-605.	1.3	23
32	Advanced Chelator Design for Metal Complexes in Imaging Applications. <i>Advances in Inorganic Chemistry</i> , 2016, 68, 301-339.	0.4	7
33	Semi-automated production of <sup>89</sup> Zr-oxalate/ <sup>89</sup> Zr-chloride and the potential of <sup>89</sup> Zr-chloride in radiopharmaceutical compounding. <i>Applied Radiation and Isotopes</i> , 2016, 107, 317-322.	0.7	22
34	Octadentate Zirconium(IV)-Loaded Macrocycles with Varied Stoichiometry Assembled From Hydroxamic Acid Monomers using Metal-Templated Synthesis. <i>Inorganic Chemistry</i> , 2017, 56, 3719-3728.	1.9	24
35	Investigation of the complexation of <sup>nat</sup> Zr( <sup>iv</sup> ) and <sup>89</sup> Zr( <sup>iv</sup> ) by hydroxypyridinones for the development of chelators for PET imaging applications. <i>Dalton Transactions</i> , 2017, 46, 4749-4758.	1.6	26
36	Exploiting the biosynthetic machinery of <i>Streptomyces pilosus</i> to engineer a water-soluble zirconium( <sup>iv</sup> ) chelator. <i>Organic and Biomolecular Chemistry</i> , 2017, 15, 5719-5730.	1.5	33

#	ARTICLE	IF	CITATIONS
37	Copper, gallium and zirconium positron emission tomography imaging agents: The importance of metal ion speciation. <i>Coordination Chemistry Reviews</i> , 2017, 352, 499-516.	9.5	49
38	Zirconium tetraazamacrocyclic complexes display extraordinary stability and provide a new strategy for zirconium-89-based radiopharmaceutical development. <i>Chemical Science</i> , 2017, 8, 2309-2314.	3.7	87
39	Production, applications and status of zirconium-89 immunoPET agents. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2017, 314, 7-21.	0.7	13
40	Rational Design, Development, and Stability Assessment of a Macrocyclic Four- $\beta$ -Hydroxamate-Bearing Bifunctional Chelating Agent for $^{89}\text{Zr}$ . <i>ChemMedChem</i> , 2017, 12, 1555-1571.	1.6	23
41	$^{89}\text{Zr}$ -Immuno-Positron Emission Tomography in Oncology: State-of-the-Art $^{89}\text{Zr}$ Radiochemistry. <i>Bioconjugate Chemistry</i> , 2017, 28, 2211-2223.	1.8	146
42	A new tetrapodal 3-hydroxy-4-pyridinone ligand for complexation of $^{89}\text{Zr}$ for positron emission tomography (PET) imaging. <i>Dalton Transactions</i> , 2017, 46, 9654-9663.	1.6	27
43	Multifunctional Desferrichrome Analogues as Versatile $^{89}\text{Zr(IV)}$ Chelators for ImmunoPET Probe Development. <i>Molecular Pharmaceutics</i> , 2017, 14, 2831-2842.	2.3	41
44	Comparison of the octadentate bifunctional chelator DFO*-pPhe-NCS and the clinically used hexadentate bifunctional chelator DFO-pPhe-NCS for $^{89}\text{Zr}$ -immuno-PET. <i>European Journal of Nuclear Medicine and Molecular Imaging</i> , 2017, 44, 286-295.	3.3	111
45	The chemistry of PET imaging with zirconium-89. <i>Chemical Society Reviews</i> , 2018, 47, 2554-2571.	18.7	60
46	Advances in the Chemical Biology of Desferrioxamine B. <i>ACS Chemical Biology</i> , 2018, 13, 11-25.	1.6	62
47	A comprehensively revised strategy that improves the specific activity and long-term stability of clinically relevant $^{89}\text{Zr}$ -immuno-PET agents. <i>Dalton Transactions</i> , 2018, 47, 13214-13221.	1.6	11
48	Evaluation of a chloride-based $^{89}\text{Zr}$ isolation strategy using a tributyl phosphate (TBP)-functionalized extraction resin. <i>Nuclear Medicine and Biology</i> , 2018, 64-65, 1-7.	0.3	17
49	The chemical biology and coordination chemistry of putrebactin, avaroferrin, bisucaberin, and alcaligin. <i>Journal of Biological Inorganic Chemistry</i> , 2018, 23, 969-982.	1.1	16
50	Recent Advances in Zirconium-89 Chelator Development. <i>Molecules</i> , 2018, 23, 638.	1.7	84
51	Improved synthesis of the bifunctional chelator <i>p</i> -SCN-Bn-HOPO. <i>Organic and Biomolecular Chemistry</i> , 2019, 17, 6866-6871.	1.5	12
52	Progress of Coordination and Utilization of Zirconium-89 for Positron Emission Tomography (PET) Studies. <i>Nuclear Medicine and Molecular Imaging</i> , 2019, 53, 115-124.	0.6	16
53	The solution thermodynamic stability of desferrioxamine B (DFO) with $\text{Zr(IV)}$ . <i>Journal of Inorganic Biochemistry</i> , 2019, 198, 110753.	1.5	30
54	Tales of the Unexpected: The Case of Zirconium(IV) Complexes with Desferrioxamine. <i>Molecules</i> , 2019, 24, 2098.	1.7	24

#	ARTICLE	IF	CITATIONS
55	The Radiopharmaceutical Chemistry of Zirconium-89. , 2019, , 371-390.		4
56	Rational Design, Synthesis and Preliminary Evaluation of Novel Fusarinine C-Based Chelators for Radiolabeling with Zirconium-89. <i>Biomolecules</i> , 2019, 9, 91.	1.8	11
57	Analogues of desferrioxamine B (DFOB) with new properties and new functions generated using precursor-directed biosynthesis. <i>BioMetals</i> , 2019, 32, 395-408.	1.8	8
58	Structural Characterization of the Solution Chemistry of Zirconium(IV) Desferrioxamine: A Coordination Sphere Completed by Hydroxides. <i>Inorganic Chemistry</i> , 2020, 59, 17443-17452.	1.9	13
59	Metallo-Fluorocarbon Nanoemulsion for Inflammatory Macrophage Detection via PET and MRI. <i>Journal of Nuclear Medicine</i> , 2020, 62, jnumed.120.255273.	2.8	14
60	A High-Denticity Chelator Based on Desferrioxamine for Enhanced Coordination of Zirconium-89. <i>Inorganic Chemistry</i> , 2020, 59, 11715-11727.	1.9	20
61	Reply to the "Comment on "Investigation of Zr(IV) and <sup>89</sup> Zr(IV) complexation with hydroxamates: progress towards designing a better chelator than desferrioxamine B for immuno-PET imaging" by A. Bianchi and M. Savastano, <i>Chem. Commun.</i> , 2020, 56, DOCCO1189D. <i>Chemical Communications</i> , 2020, 56, 12667-12668.	2.2	2
62	Comment on "Investigation of Zr(IV) and <sup>89</sup> Zr(IV) complexation with hydroxamates: progress towards designing a better chelator than desferrioxamine B for immuno-PET imaging" by F. Guérard, Y.-S. Lee, R. Tripiet, L. P. Szajek, J. R. Deschamps and M. W. Brechbiel, <i>Chem. Commun.</i> , 2013, 1002. <i>Chemical Communications</i> , 2020, 56, 12664-12666.	2.2	5
63	Promising Performance of 4HMS, a New Zirconium-89 Octadendate Chelator. <i>ACS Omega</i> , 2020, 5, 10731-10739.	1.6	13
64	ImmunoPET: Concept, Design, and Applications. <i>Chemical Reviews</i> , 2020, 120, 3787-3851.	23.0	263
65	Predicting the Thermodynamic Stability of Zirconium Radiotracers. <i>Inorganic Chemistry</i> , 2020, 59, 2070-2082.	1.9	44
66	Synthesis of biscarboxylic acid functionalised EDTA mimicking polymers and their ability to form Zr(IV) chelation mediated nanostructures. <i>Polymer Chemistry</i> , 2020, 11, 2799-2810.	1.9	7
67	Directing macrocyclic architecture using iron(III)-, gallium(III)-, or zirconium(IV)-assisted ring closure of linear dimeric endo-hydroxamic acid ligands. <i>Journal of Inorganic Biochemistry</i> , 2021, 216, 111337.	1.5	3
68	Head-to-head comparison of DFO* and DFO chelators: selection of the best candidate for clinical <sup>89</sup> Zr-immuno-PET. <i>European Journal of Nuclear Medicine and Molecular Imaging</i> , 2021, 48, 694-707.	3.3	43
69	Radioactive Metals in Imaging and Therapy. , 2021, , 706-740.		6
70	Revealing the Structure of Transition Metal Complexes of Formaldoxime. <i>Inorganic Chemistry</i> , 2021, 60, 5523-5537.	1.9	5
71	State of the Art in Radiolabeling of Antibodies with Common and Uncommon Radiometals for Preclinical and Clinical Immuno-PET. <i>Bioconjugate Chemistry</i> , 2021, 32, 1315-1330.	1.8	37
72	Preparation of <sup>89</sup> Zr Solutions for Radiopharmaceuticals Synthesis. <i>Radiochemistry</i> , 2021, 63, 369-383.	0.2	4

#	ARTICLE	IF	CITATIONS
73	Squaric Acid-Based Radiopharmaceuticals for Tumor Imaging and Therapy. <i>Bioconjugate Chemistry</i> , 2021, 32, 1223-1231.	1.8	17
74	<sup>89</sup> Zr as a promising radionuclide and its applications for effective cancer imaging. <i>Journal of Radioanalytical and Nuclear Chemistry</i> , 2021, 330, 15-28.	0.7	6
75	The Race for Hydroxamate-Based Zirconium-89 Chelators. <i>Cancers</i> , 2021, 13, 4466.	1.7	23
76	A Semi Rigid Novel Hydroxamate AMPED-Based Ligand for <sup>89</sup> Zr PET Imaging. <i>Molecules</i> , 2021, 26, 5819.	1.7	4
77	Development and in vitro evaluation of new bifunctional <sup>89</sup> Zr-chelators based on the 6-amino-1,4-diazepane scaffold for immuno-PET applications. <i>Nuclear Medicine and Biology</i> , 2021, 102-103, 12-23.	0.3	6
78	Evaluation of macrocyclic hydroxyisophthalamide ligands as chelators for zirconium-89. <i>PLoS ONE</i> , 2017, 12, e0178767.	1.1	21
79	The Bioconjugation and Radiosynthesis of <sup>89</sup> Zr-DFO-labeled Antibodies. <i>Journal of Visualized Experiments</i> , 2015, , .	0.2	60
80	Chelators for Diagnostic Molecular Imaging with Radioisotopes of Copper, Gallium and Zirconium. <i>2-Oxoglutarate-Dependent Oxygenases</i> , 2016, , 260-312.	0.8	2
82	[ <sup>nat</sup> / <sup>89</sup> Zr][Zr(pyppa)]: Thermodynamically Stable and Kinetically Inert Binary Nonadentate Complex for Radiopharmaceutical Applications. <i>Inorganic Chemistry</i> , 2021, 60, 18082-18093.	1.9	7
83	Siderophores and iron transport. , 2021, , .		3
84	Two-dimensional Zr/Hf-hydroxamate metal-organic frameworks. <i>Chemical Communications</i> , 2022, 58, 3601-3604.	2.2	12
85	Poly(Hydroxamic Acid) Resins and Their Applications. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
86	Metal Coordination Properties of a Chromophoric Desferrioxamine (DFO) Derivative: Insight on the Coordination Stoichiometry and Thermodynamic Stability of Zr <sup>4+</sup> Complexes. <i>Molecules</i> , 2022, 27, 184.	1.7	5
87	CHAPTER 4. The Role of Fundamental Coordination Chemistry in the Development of Radioimaging Agents. <i>Monographs in Supramolecular Chemistry</i> , 2022, , 89-148.	0.2	0
88	Heptadentate chelates for <sup>89</sup> Zr-radiolabelling of monoclonal antibodies. <i>Inorganic Chemistry Frontiers</i> , 2022, 9, 3071-3081.	3.0	3
89	Poly(hydroxamic acid) resins and their applications. <i>Coordination Chemistry Reviews</i> , 2022, 471, 214727.	9.5	5
90	Design, Synthesis, and Evaluation of DFO-Em: A Modular Chelator with Octadentate Chelation for Optimal Zirconium-89 Radiochemistry. <i>Inorganic Chemistry</i> , 2022, 61, 20964-20976.	1.9	7
91	Zirconium immune-complexes for PET molecular imaging: Current status and prospects. <i>Coordination Chemistry Reviews</i> , 2023, 479, 215005.	9.5	7

#	ARTICLE	IF	CITATIONS
92	Radiochemical, Computational, and Spectroscopic Evaluation of High-Denticity Desferrioxamine Derivatives DFO2 and DFO2p toward an Ideal Zirconium-89 Chelate Platform. <i>Inorganic Chemistry</i> , 0, , .	1.9	1