Lothar Helm

List of Publications by Year
in descending order

79 papers	6,177 citations	71102 41 h-index	69250 77 g-index
84 all docs	84 docs citations	84 times ranked	5261 citing authors

#	Article	IF	Citations
1	MRI micelles self-assembled from synthetic gadolinium-based nano building blocks. Chemical Communications, 2019, 55, 945-948.	4.1	19
2	The Periodic Table and Kinetics?. Chimia, 2019, 73, 179-184.	0.6	9
3	Selfâ€Assembled Nanomicelles as MRI Bloodâ€Pool Contrast Agent. Chemistry - A European Journal, 2018, 24, 1348-1357.	3.3	19
4	Carbazole as Linker for Dinuclear Gadoliniumâ€Based MRI Contrast Agents. European Journal of Inorganic Chemistry, 2017, 2017, 5403-5412.	2.0	5
5	Complexation of [Gd(DTTAâ€“Me)(H₂O)₂]^{â^'} by Fluoride and Its Consequences to Water Exchange. Inorganic Chemistry, 2016, 55, 6231-6239.	4.0	9
6	PEGylated DOTA-AHA-Based GdIIIChelates: A Relaxometric Study. European Journal of Inorganic Chemistry, 2015, 2015, 4784-4784.	2.0	0
7	PEGylated DOTAâ€AHAâ€Based Gd^{III} Chelates: A Relaxometric Study. European Journal of Inorganic Chemistry, 2015, 2015, 4798-4809.	2.0	5
8	Gold nanoparticles functionalised with fast water exchanging Gd³⁺ chelates: linker effects on the relaxivity. Dalton Transactions, 2015, 44, 4016-4031.	3.3	19
9	Dinuclear DOTAâ€Based Gd^{III} Chelates â€“ Revisiting a Straightforward Strategy for Relaxivity Improvement. European Journal of Inorganic Chemistry, 2015, 2015, 1579-1591.	2.0	12
10	Dynamic aggregation of the mid-sized gadolinium complex {Ph4[Gd(DTTA)(H2O)2]â^' 3}. Journal of Biological Inorganic Chemistry, 2014, 19, 145-159.	2.6	8
11	Gd(DOTAlaP): Exploring the Boundaries of Fast Water Exchange in Gadolinium-Based Magnetic Resonance Imaging Contrast Agents. Inorganic Chemistry, 2014, 53, 6985-6994.	4.0	23
12	¹H and ¹⁷O NMR Relaxometric and Computational Study on Macrocyclic Mn(II) Complexes. Inorganic Chemistry, 2013, 52, 3268-3279.	4.0	77
13	Gadolinium complexes of monophosphinic acid DOTA derivatives conjugated to cyclodextrin scaffolds: efficient MRI contrast agents for higher magnetic fields. Dalton Transactions, 2012, 41, 13509.	3.3	32
14	Hyperfine Coupling Constants on Innerâ€Sphere Water Molecules of Gd^{III}â€Based MRI Contrast Agents. ChemPhysChem, 2012, 13, 3640-3650.	2.1	80
15	New Bisaqua Picolinate-Based Gadolinium Complexes as MRI Contrast Agents with Substantial High-Field Relaxivities. European Journal of Inorganic Chemistry, 2012, 2012, 2049-2061.	2.0	30
16	Synthesis, complexation and NMR relaxation properties of Gd3+ complexes of Mes(DO3A)3. Dalton Transactions, 2011, 40, 4260.	3.3	23
17	The Challenge of T1 Contrast Agents for High-Magnetic Field MRI. Chimia, 2011, 65, 696.	0.6	3
18	Optimization of gadolinium-based MRI contrast agents for high magnetic-field applications. Future Medicinal Chemistry, 2010, 2, 385-396.	2.3	95

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19	Kinetics of Yttriumâ"Ligand Complexation Monitored Using Hyperpolarized ⁸⁹Y as a Model for Gadolinium in Contrast Agents. Journal of the American Chemical Society, 2010, 132, 5006-5007.	13.7	48
20	Multipleâ€Frequency and Variableâ€Temperature EPR Study of Gadolinium(III) Complexes with Polyaminocarboxylates: Analysis and Comparison of the Magnetically Dilute Powder and the Frozenâ€Solution Spectra. Helvetica Chimica Acta, 2009, 92, 2173-2185.	1.6	17
21	A ruthenium-based metallostar: synthesis, sensitized luminescence and 1H relaxivity. Dalton Transactions, 2009, , 2088.	3.3	46
22	Gadolinium(III) complexes of 1,4,7-triazacyclononane based picolinate ligands: simultaneous optimization of water exchange kinetics and electronic relaxation. Dalton Transactions, 2009, , 8033.	3.3	42
23	Gold Nanoparticles Functionalized with Gadolinium Chelates as High-Relaxivity MRI Contrast Agents. Journal of the American Chemical Society, 2009, 131, 10828-10829.	13.7	134
24	Towards the Rational Design of MRI Contrast Agents: Electron Spin Relaxation Is Largely Unaffected by the Coordination Geometry of Gadolinium(III)â€"DOTAâ€Type Complexes. Chemistry - A European Journal, 2008, 14, 2658-2667.	3.3	39
25	Gd(III)â€EPTPAC₁₆, a new selfâ€assembling potential liver MRI contrast agent: in vitro characterization and in vivo animal imaging studies. NMR in Biomedicine, 2008, 21, 322-336.	2.8	14
26	In vivo MRI assessment of a novel Gd^{III}â€based contrast agent designed for high magnetic field applications. Contrast Media and Molecular Imaging, 2008, 3, 78-85.	0.8	33
27	Nuclear Spin Relaxation Parameters of MRI Contrast Agents â€" Insight from Quantum Mechanical Calculations. European Journal of Inorganic Chemistry, 2008, 2008, 201-211.	2.0	28
28	Ligand exchange and complex formation kinetics studied by NMR exemplified on fac-[(CO)3M(H2O)]+ (M=Mn, Tc, Re). Coordination Chemistry Reviews, 2008, 252, 2346-2361.	18.8	33
29	A benzene-core trinuclear Gd^{III}complex: towards the optimization of relaxivity for MRI contrast agent applications at high magnetic field. Dalton Transactions, 2008, , 1195-1202.	3.3	72
30	Comparison of different methods for calculating the paramagnetic relaxation enhancement of nuclear spins as a function of the magnetic field. Journal of Chemical Physics, 2008, 128, 052315.	3.0	95
31	Physicochemical Properties of the High-Field MRI-Relevant [Gd(DTTA-Me)(H₂O)₂]^{â"} Complex. Inorganic Chemistry, 2008, 47, 8357-8366.	4.0	32
32	Gadolinium (III) ion in liquid water: Structure, dynamics, and magnetic interactions from first principles. Journal of Chemical Physics, 2007, 127, 084506.	3.0	49
33	Design of Gd(III)-Based Magnetic Resonance Imaging Contrast Agents:Â Static and Transient Zero-Field Splitting Contributions to the Electronic Relaxation and Their Impact on Relaxivity. Journal of Physical Chemistry B, 2007, 111, 832-840.	2.6	34
34	Multiple-Frequency EPR Spectra of Two Aqueous Gd3+Polyamino Polypyridine Carboxylate Complexes:Â A Study of High Field Effects. Journal of Physical Chemistry A, 2007, 111, 5399-5407.	2.5	20
35	Understanding Paramagnetic Relaxation Phenomena for Water-Soluble Gadofullerenes. Journal of Physical Chemistry C, 2007, 111, 5633-5639.	3.1	63
36	H₅EPTPACH₂OH: Synthesis, Relaxometric Characterization and ¹H NMR Spectroscopic Studies on the Solution Dynamics of Its Ln^{III} Complexes. European Journal of Inorganic Chemistry, 2007, 2007, 5489-5499.	2.0	8

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37	Physicochemical and MRI characterization of Gd3+-loaded polyamidoamine and hyperbranched dendrimers. Journal of Biological Inorganic Chemistry, 2007, 12, 406-420.	2.6	78
38	A High-Frequency EPR Study of Frozen Solutions of GdIIIComplexes:Â Straightforward Determination of the Zero-Field Splitting Parameters and Simulation of the NMRD Profiles. Journal of the American Chemical Society, 2006, 128, 7807-7816.	13.7	59
39	O17 nuclear quadrupole coupling constants of water bound to a metal ion: A gadolinium(III) case study. Journal of Chemical Physics, 2006, 125, 054503.	3.0	23
40	Relevance of the Ligand Exchange Rate and Mechanism of fac-[(CO)3M(H2O)3]+ (M = Mn, Tc, Re) Complexes for New Radiopharmaceuticals. Inorganic Chemistry, 2006, 45, 10378-10390.	4.0	48
41	Water-Exchange Study Revealed Unexpected Substitution Behavior of [(CO)2(NO)Re(H2O)3]2+in Aqueous Media. Inorganic Chemistry, 2006, 45, 4199-4204.	4.0	7
42	Relaxivity in paramagnetic systems: Theory and mechanisms. Progress in Nuclear Magnetic Resonance Spectroscopy, 2006, 49, 45-64.	7.5	156
43	Hyperfine interactions in aqueous solution of Cr3+: an ab initio molecular dynamics study. Theoretical Chemistry Accounts, 2006, 115, 190-195.	1.4	14
44	Unexpected Aggregation of Neutral, Xylene-Cored Dinuclear GdIII Chelates in Aqueous Solution. Chemistry - A European Journal, 2006, 12, 6841-6851.	3.3	33
45	The effect of pyridinecarboxylate chelating groups on the stability and electronic relaxation of gadolinium complexes. Dalton Transactions, 2005, , 1129-1135.	3.3	58
46	WATER AND PROTON EXCHANGE PROCESSES ON METAL IONS. Advances in Inorganic Chemistry, 2005, 57, 327-379.	1.0	74
47	Core spin-polarization correction in pseudopotential-based electronic structure calculations. Physical Review B, 2005, 71, .	3.2	39
48	Destroying Gadofullerene Aggregates by Salt Addition in Aqueous Solution of Gd@C60(OH)xand Gd@C60[C(COOH2)]10. Journal of the American Chemical Society, 2005, 127, 9368-9369.	13.7	119
49	Rigid MIIL2Gd2III (M = Fe, Ru) Complexes of a Terpyridine-Based Heteroditopic Chelate:â€‰ A Class of Candidates for MRI Contrast Agents. Journal of the American Chemical Society, 2005, 127, 5147-5157.	13.7	98
50	Quantum Chemical Investigation of Hyperfine Coupling Constants on First Coordination Sphere Water Molecule of Gadolinium(III) Aqua Complexes. Journal of Physical Chemistry A, 2005, 109, 10997-11005.	2.5	49
51	Dinuclear, Bishydrated GdIIIPolyaminocarboxylates with a Rigid Xylene Core Display Remarkable Proton Relaxivities. Inorganic Chemistry, 2005, 44, 4747-4755.	4.0	58
52	Water-Soluble Gadofullerenes:Â Toward High-Relaxivity, pH-Responsive MRI Contrast Agents. Journal of the American Chemical Society, 2005, 127, 799-805.	13.7	341
53	Inorganic and Bioinorganic Solvent Exchange Mechanisms. Chemical Reviews, 2005, 105, 1923-1960.	47.7	667
54	Superparamagnetic gadonanotubes are high-performance MRI contrast agents. Chemical Communications, 2005, , 3915.	4.1	310

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55	Molecular Dynamics of Gd(III) Complexes in Aqueous Solution by HF EPR. Biological Magnetic Resonance, 2004, , 207-247.	0.4	5
56	8S paramagnetic centres in molecular assemblies: possible effect of their proximity on the water proton relaxivity. Magnetic Resonance in Chemistry, 2003, 41, 794-799.	1.9	27
57	MD Simulations of Acyclic and Macrocyclic Gd3+-Based MRI Contrast Agents: Influence of the Internal Mobility on Water Proton Relaxivity. Chemistry - A European Journal, 2003, 9, 5468-5480.	3.3	40
58	A Highly Stable Gadolinium Complex with a Fast, Associative Mechanism of Water Exchange. Journal of the American Chemical Society, 2003, 125, 14274-14275.	13.7	81
59	SOLVENT EXCHANGE ON METAL IONS. Advances in Inorganic Chemistry, 2003, 54, 1-69.	1.0	56
60	Multiexponential Electronic Spin Relaxation and Redfield's Limit in Gd(III) Complexes in Solution:Â Consequences for17O/1H NMR and EPR Simultaneous Analysis. Journal of the American Chemical Society, 2002, 124, 2042-2048.	13.7	42
61	Relaxivity of MRI Contrast Agents. Topics in Current Chemistry, 2002, , 61-101.	4.0	168
62	Molecular Dynamics Simulation of [Gd(egta)(H2O)]â˜’ in Aqueous Solution: Internal Motions of the Poly(amino carboxylate) and Water Ligands, and Rotational Correlation Times. Chemistry - A European Journal, 2002, 8, 1031.	3.3	49
63	Gd(III) based MRI contrast agents: improved physical meaning in a combined analysis of EPR and NMR data?. Inorganic Chemistry Communication, 2002, 5, 811-815.	3.9	40
64	EPR Spectroscopy of MRI-Related Gd(III) Complexes:Â Simultaneous Analysis of Multiple Frequency and Temperature Spectra, Including Static and Transient Crystal Field Effects. Journal of the American Chemical Society, 2001, 123, 2637-2644.	13.7	129
65	First Solvation Shell of the Cu(II) Aqua Ion: Evidence for Fivefold Coordination. Science, 2001, 291, 856-859.	12.6	358
66	Molecular Dynamics Simulations of MRI-Relevant GdIII Chelates: Direct Access to Outer-Sphere Relaxivity. Chemistry - A European Journal, 2001, 7, 600-610.	3.3	78
67	EPR on aqueous Gd3+ complexes and a new analysis method considering both line widths and shifts. Physical Chemistry Chemical Physics, 2000, 2, 1311-1317.	2.8	36
68	Coordination equilibriumâ€" a clue for fast water exchange on potential magnetic resonance imaging contrast agents?. , 1999, 37, 701-708.		73
69	Gd(DTPA-bisamide)alkyl Copolymers: A Hint for the Formation of MRI Contrast Agents with Very High Relaxivity. Chemistry - A European Journal, 1999, 5, 1202-1211.	3.3	97
70	17O-NMR, EPR and NMRD Characterization of [Gd(DTPA-BMEA)(H2O)]: A Neutral MRI Contrast Agent. European Journal of Inorganic Chemistry, 1998, 1998, 2017-2021.	2.0	32
71	Direct assessment of water exchange on a Gd(III) chelate bound to a protein. Journal of Biological Inorganic Chemistry, 1998, 3, 606-613.	2.6	51
72	Structure and Dynamics of a Trinuclear Gadolinium(III) Complex: The Effect of Intramolecular Electron Spin Relaxation on Its Proton Relaxivity1. Inorganic Chemistry, 1998, 37, 4104-4113.	4.0	63

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73	Structural and Dynamic Parameters Obtained from17O NMR, EPR, and NMRD Studies of Monomeric and Dimeric Gd3+Complexes of Interest in Magnetic Resonance Imaging:Â An Integrated and Theoretically Self-Consistent Approach1. Journal of the American Chemical Society, 1996, 118, 9333-9346.	13.7	630
74	Water exchange on [Gd(H2O)8]3+ and [Gd(PDTA)(H2O)2]- in aqueous solution: A variable-pressure, -temperature and -magnetic field17O NMR study. Magnetic Resonance in Chemistry, 1993, 31, 1011-1020.	1.9	138
75	High-pressure NMR kinetics. Part 34. Variable-temperature and variable-pressure NMR kinetic study of solvent exchange on hexaaquaruthenium(3+) and -(2+) and hexakis(acetonitrile)ruthenium(2+). Inorganic Chemistry, 1988, 27, 873-879.	4.0	125
76	High pressure NMR kinetics. 29. Variable-temperature, -pressure, and -frequency oxygen-17 NMR study of water exchange on hexaaquatitanium(III): a limiting associative mechanism?. Inorganic Chemistry, 1987, 26, 1763-1768.	4.0	43
77	High pressure NMR kinetics. Part 30. Water exchange on hexaaquagallium(III): high-pressure evidence for a dissociative exchange mechanism. Journal of the American Chemical Society, 1987, 109, 4444-4450.	13.7	60
78	Water Exchange on Hexaaquavanadium(III): a Variable-Temperature and Variable-Pressure17O-NMR Study at 1.4 and 4.7 Tesla. Helvetica Chimica Acta, 1985, 68, 508-521.	1.6	110
79	Direct measurement of a prominent outer-sphere electron self-exchange: kinetic parameters for the hexaaquaruthenium(II)/(III) couple determined by oxygen-17 and ruthenium-99 NMR. Journal of the American Chemical Society, 1985, 107, 312-317.	13.7	68