Stefan Mebs

List of Publications by Year
in descending order

103	2,046	218677	302126
papers	citations	26 h-index	39 g-index

106	106	106	1949
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	From an Fe₂P₃ complex to FeP nanoparticles as efficient electrocatalysts for water-splitting. Chemical Science, 2018, 9, 8590-8597.	7.4	103
2	Evolving Highly Active Oxidic Iron(III) Phase from Corrosion of Intermetallic Iron Silicide to Master Efficient Electrocatalytic Water Oxidation and Selective Oxygenation of 5â€Hydroxymethylfurfural. Advanced Materials, 2021, 33, e2008823.	21.0	91
3	Understanding the formation of bulk- and surface-active layered (oxy)hydroxides for water oxidation starting from a cobalt selenite precursor. Energy and Environmental Science, 2020, 13, 3607-3619.	30.8	77
4	Protonation/reduction dynamics at the [4Feâ€“4S] cluster of the hydrogen-forming cofactor in [FeFe]-hydrogenases. Physical Chemistry Chemical Physics, 2018, 20, 3128-3140.	2.8	76
5	Charge Transfer via the Dative Nâˆ’B Bond and Dihydrogen Contacts. Experimental and Theoretical Electron Density Studies of Small Lewis Acidâˆ’Base Adducts. Journal of Physical Chemistry A, 2010, 114, 10185-10196.	2.5	70
6	Stepwise isotope editing of [FeFe]-hydrogenases exposes cofactor dynamics. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 8454-8459.	7.1	60
7	Probing Donorâ€“Acceptor Interactions in peri-Substituted Diphenylphosphinoacenaphthylâ€“Element Dichlorides of Group 13 and 15 Elements. Organometallics, 2014, 33, 7247-7259.	2.3	56
8	Heavy Carbene Analogues: Donorâ€Free Bismuthenium and Stibenium Ions. Angewandte Chemie - International Edition, 2018, 57, 10080-10084.	13.8	55
9	Bridging Hydride at Reduced H-Cluster Species in [FeFe]-Hydrogenases Revealed by Infrared Spectroscopy, Isotope Editing, and Quantum Chemistry. Journal of the American Chemical Society, 2017, 139, 12157-12160.	13.7	53
10	Peri-Substituted (Ace)Naphthylphosphinoboranes. (Frustrated) Lewis Pairs. Inorganic Chemistry, 2013, 52, 11881-11888.	4.0	48
11	Real-Space Indicators for Chemical Bonding. Experimental and Theoretical Electron Density Studies of Four Deltahedral Boranes. Inorganic Chemistry, 2011, 50, 90-103.	4.0	45
12	Effective intermediate-spin iron in O ₂ -transporting heme proteins. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 8556-8561.	7.1	45
13	Mesityltellurenyl Cations Stabilized by Triphenylpnictogens [MesTe(EPh₃)]⁺ (E) Tj ETQq1 1 0.784314 rgBT	4.0	44
14	6-Diphenylphosphinoacenaphth-5-yl-mercurials as Ligands for d¹⁰ Metals. Observation of Closed-Shell Interactions of the Type Hg(II)Â·Â·Â·M; M = Hg(II), Ag(I), Au(I). Inorganic Chemistry, 2015, 54, 1847-1859.	4.0	43
15	Nanostructured Intermetallic Nickel Silicide (Pre)Catalyst for Anodic Oxygen Evolution Reaction and Selective Dehydrogenation of Primary Amines. Advanced Energy Materials, 2022, 12, .	19.5	42
16	Hydrogen and oxygen trapping at the H-cluster of [FeFe]-hydrogenase revealed by site-selective spectroscopy and QM/MM calculations. Biochimica Et Biophysica Acta - Bioenergetics, 2018, 1859, 28-41.	1.0	39
17	Charge Transfer via the Dative Nâˆ’B Bond and Dihydrogen Contacts. Experimental and Theoretical Electron Density Studies of Four Deltahedral Boranes. Journal of Physical Chemistry A, 2011, 115, 1385-1395.	2.5	37
18	Hapticity Uncovered: Realâ€Space Bonding Indicators for Zincocene Chemistry. Chemistry - A European Journal, 2012, 18, 11647-11661.	3.3	37

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19	Peri-Substituted Phosphorusâ€“Tellurium Systemsâ€“An Experimental and Theoretical Investigation of the PÂ·Â·Â·Te through-Space Interaction. Inorganic Chemistry, 2015, 54, 2435-2446.	4.0	30
20	Schwere Carbenhomologe: donorfreie Bismuteniumâ€•und Stibeniumâ€•ionen. Angewandte Chemie, 2018, 130, 10237-10241.	2.0	30
21	Geometry of the Catalytic Active Site in [FeFe]-Hydrogenase Is Determined by Hydrogen Bonding and Proton Transfer. ACS Catalysis, 2019, 9, 9140-9149.	11.2	30
22	A soft molecular 2Feâ€“2As precursor approach to the synthesis of nanostructured FeAs for efficient electrocatalytic water oxidation. Chemical Science, 2020, 11, 11834-11842.	7.4	30
23	Intramolecularly Coordinated (6-(Diphenylphosphino)acenaphth-5-yl)stannanes. Repulsion vs Attraction of P- and Sn-Containing Substituents in the peri Positions. Organometallics, 2014, 33, 2409-2423.	2.3	29
24	[Ge(H)(2â€C₆H₄PPh₂)₃] as Ligand Precursor at Ruthenium: Formation and Reactivity of [Ru(Cl){Ge(2â€C₆H₄PPh₂)₃}]. European Journal of Inorganic Chemistry, 2014, 2014, 4826-4835.	2.0	29
25	Complex modes of bonding: NCI/ELI-D vs. DORI surface analyses of hapticities and hydrogenâ€“hydrogen contacts in zincocene related compounds. Chemical Physics Letters, 2016, 651, 172-177.	2.6	28
26	The Weakly Coordinating Tris(trichlorosilyl)silyl Anion. Angewandte Chemie - International Edition, 2017, 56, 16490-16494.	13.8	28
27	Mapping the Trajectory of Nucleophilic Substitution at Silicon Using a periâ€Substituted Acenaphthyl Scaffold. Chemistry - A European Journal, 2017, 23, 10568-10579.	3.3	27
28	Stoichiometric Formation of an Oxoiron(IV) Complex by a Soluble Methane Monooxygenase Type Activation of O₂ at an Iron(II)-Cyclam Center. Journal of the American Chemical Society, 2020, 142, 5924-5928.	13.7	27
29	Periâ€Interactions in 8â€Diphenylphosphinoâ€1â€bromonaphthalene, 6â€Diphenylphosphinoâ€5â€bromoacenaphthene, and Derivatives. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2013, 639, 2233-2249.	1.2	25
30	Intramolecularly Group 15 Stabilized Aryltellurenyl Halides and Triflates. Organometallics, 2015, 34, 5341-5360.	2.3	24
31	Role of Dispersion in Metallophilic HgÂ·Â·Â·M Interactions (M = Cu, Ag, Au) within Coinage Metal Complexes of Bis(6-diphenylphosphinoacenaphth-5-yl)mercury. Inorganic Chemistry, 2016, 55, 11513-11521.	4.0	24
32	Triâ€•and Tetranuclear Metalâ€String Complexes with Metallophilic d¹⁰â€“d¹⁰ Interactions. Chemistry - A European Journal, 2020, 26, 275-284.	3.3	23
33	Carbon fibre paper coated by a layered manganese oxide: a nano-structured electrocatalyst for water-oxidation with high activity over a very wide pH range. Journal of Materials Chemistry A, 2019, 7, 25333-25346.	10.3	22
34	Highâ€Spin Imido Cobalt Complexes with Imidyl Radical Character**. Angewandte Chemie - International Edition, 2021, 60, 15376-15380.	13.8	22
35	Sterically Congested 5-Diphenylphosphinoacenaphth-6-yl-silanes and -silanols. Organometallics, 2015, 34, 3873-3887.	2.3	21
36	Axial Ligation and Redox Changes at the Cobalt Ion in Cobalamin Bound to Corrinoid Iron-Sulfur Protein (CoFeSP) or in Solution Characterized by XAS and DFT. PLoS ONE, 2016, 11, e0158681.	2.5	20

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37	Anion Binding and Oxidative Modification at the Molybdenum Cofactor of Formate Dehydrogenase from Rhodobacter capsulatus Studied by X-ray Absorption Spectroscopy. Inorganic Chemistry, 2020, 59, 214-225.	4.0	20
38	Differential Protonation at the Catalytic Six-Iron Cofactor of [FeFe]-Hydrogenases Revealed by ⁵⁷Fe Nuclear Resonance X-ray Scattering and Quantum Mechanics/Molecular Mechanics Analyses. Inorganic Chemistry, 2019, 58, 4000-4013.	4.0	19
39	Selective Oxidation and Functionalization of 6-Diphenylphosphinoacenaphthyl-5-tellurenyl Species 6-Ph₂P-Ace-5-TeX (X = Mes, Cl, O₃SCF₃). Various Types of Pâ€“EÂ·Â·Â·Te(II,IV) Bonding Situations (E = O, S, Se). Organometallics, 2017, 36, 1566-1579.	2.3	18
40	Transition metal complexes of antimony centered ligands based upon acenaphthyl scaffolds. Coordination non-innocent or not?. Dalton Transactions, 2019, 48, 4504-4513.	3.3	18
41	Linear MgCp*₂ vs Bent CaCp*₂: London Dispersion, Ligand-Induced Charge Localizations, and Pseudo-Pregostic Câ€“HÂ·Â·Â·Ca Interactions. Inorganic Chemistry, 2018, 57, 4906-4920.	4.0	17
42	Spontaneous Siâ€“C bond cleavage in (Triphos^{Si})-nickel complexes. Dalton Transactions, 2017, 46, 907-917.	3.3	16
43	Temperature Dependence of Structural Dynamics at the Catalytic Cofactor of [FeFe]-hydrogenase. Inorganic Chemistry, 2020, 59, 16474-16488.	4.0	16
44	Cationic Carbene Analogues: Donorâ€Free Phosphenium and Arsenium Ions. Angewandte Chemie - International Edition, 2021, 60, 19133-19138.	13.8	16
45	Operando tracking of oxidation-state changes by coupling electrochemistry with time-resolved X-ray absorption spectroscopy demonstrated for water oxidation by a cobalt-based catalyst film. Analytical and Bioanalytical Chemistry, 2021, 413, 5395-5408.	3.7	16
46	Spectroscopic Characterization of a Reactive [Cu₂(Î¼â€OH)₂]²⁺ Intermediate in Cu/TEMPO Catalyzed Aerobic Alcohol Oxidation Reaction. Angewandte Chemie - International Edition, 2021, 60, 23018-23024.	13.8	16
47	Protonation State of MnFe and FeFe Cofactors in a Ligand-Binding Oxidase Revealed by X-ray Absorption, Emission, and Vibrational Spectroscopy and QM/MM Calculations. Inorganic Chemistry, 2016, 55, 9869-9885.	4.0	15
48	A Monoaryllead Trichloride That Resists Reductive Elimination. Angewandte Chemie - International Edition, 2018, 57, 5917-5920.	13.8	15
49	Transient Phosphenium and Arsenium Ions versus Stable Stibenium and Bismuthenium Ions. Chemistry - A European Journal, 2019, 25, 14758-14761.	3.3	15
50	Ambiguous Role of N â† Sn Coordinated Stannylene: Lewis Base or Acid?. Organometallics, 2019, 38, 816-828.	2.3	15
51	A tetranuclear arylstibonic acid with an adamantane type structure. Dalton Transactions, 2015, 44, 7105-7108.	3.3	14
52	Real-Space Bonding Indicator Analysis of the Donorâ€“Acceptor Complexes X₃BNY₃, X₃AlNY₃, X₃BPY₃, and X₃AlPY₃ (X, Y = H, Me, Cl). Journal of Physical Chemistry A, 2017, 121, 7717-7725.	2.5	13
53	The reaction of phenoxatellurine with single-electron oxidizers revisited. New Journal of Chemistry, 2019, 43, 12754-12766.	2.8	13
54	Fundamental Relation between Molecular Geometry and Real-Space Topology. Combined AIM, ELI-D, and ASF Analysis of Hapticities and Intramolecular Hydrogenâ€“Hydrogen Bonds in Zincocene-Related Compounds. Journal of Physical Chemistry A, 2014, 118, 4351-4362.	2.5	12

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55	Insights into Frustrated and Regular peri -Substituted (Ace-)Naphthylaminoboranes and (Ace-)Naphthylphosphinoboranes. European Journal of Inorganic Chemistry, 2017, 2017, 3302-3311.	2.0	12
56	Das schwach koordinierende Tris(trichlorsilyl)silylâ€Anion. Angewandte Chemie, 2017, 129, 16713-16717.	2.0	12
57	Proximity Enforced Agostic Interactions Involving Closed-Shell Coinage Metal Ions. Inorganic Chemistry, 2019, 58, 16372-16378.	4.0	12
58	Aurophilicity and Photoluminescence of (6â€Diphenylpnicogenoacenaphthâ€5â€yl)gold Compounds. European Journal of Inorganic Chemistry, 2019, 2019, 647-659.	2.0	12
59	Functionalized Fluorophosphonium Ions. Chemistry - A European Journal, 2019, 25, 9861-9865.	3.3	11
60	Transmetallation of bis(6-diphenylphosphinoxy-acenapth-5-yl)mercury with tin tetrachloride, antimony trichloride and bismuth trichloride. Dalton Transactions, 2019, 48, 5585-5594.	3.3	11
61	A bioinspired oxoiron(<scp>iv</scp>) motif supported on a N₂S₂ macrocyclic ligand. Chemical Communications, 2021, 57, 2947-2950.	4.1	11
62	Rhodiumâ€Mediated Oxygenation of Nitriles with Dioxygen: Isolation of Rhodium Derivatives of Peroxyimidic Acids. Chemistry - A European Journal, 2015, 21, 12299-12302.	3.3	10
63	From Monomeric Tin(II) Hydride to Nonsymmetric Distannyne. Organometallics, 2019, 38, 2403-2407.	2.3	10
64	The Bis(ferrocenyl)phosphenium Ion Revisited. Angewandte Chemie - International Edition, 2020, 59, 1581-1584.	13.8	10
65	Intramolecular Reaction of Transient Phosphenium and Arsenium Ions Giving Rise to Isolable 9â€Phosphaâ€• and 9â€Arsenaâ€Fluorenium Ions. Angewandte Chemie - International Edition, 2020, 59, 14414-14417.	13.8	10
66	The Aromatic 2-Iminomethylphenyltellurenyl Cation. A Lewis Superacid Despite the Intramolecularly Coordinating N-Donor Ligand. Organometallics, 2020, 39, 1202-1212.	2.3	10
67	Spectroscopical Investigations on the Redox Chemistry of [FeFe]-Hydrogenases in the Presence of Carbon Monoxide. Molecules, 2018, 23, 1669.	3.8	9
68	Synthesis and Spectroscopic Characterisation of a Heterodinuclear Iron(III)â€Copper(II) Complex Based on an Asymmetric Dinucleating Ligand System. European Journal of Inorganic Chemistry, 2012, 2012, 4565-4569.	2.0	8
69	Gradual Fluorination of Ladderâ€type Quarterphenyl. Israel Journal of Chemistry, 2014, 54, 789-795.	2.3	8
70	The Effect of Donor Additives on the Stability and Structure of 5â€Diphenylphosphinoacenaphthâ€6â€yllithium. European Journal of Inorganic Chemistry, 2019, 2019, 712-720.	2.0	8
71	Protonation and Sulfido versus Oxo Ligation Changes at the Molybdenum Cofactor in Xanthine Dehydrogenase (XDH) Variants Studied by X-ray Absorption Spectroscopy. Inorganic Chemistry, 2017, 56, 2165-2176.	4.0	7
72	1,8-Bis(diphenylphosphino)biphenylene. A new ligand for late transition metal complexes. Zeitschrift Fur Kristallographie - Crystalline Materials, 2018, 233, 627-639.	0.8	7

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73	Silyl Cations Stabilized by Pincer Type Ligands with Adjustable Donor Atoms. European Journal of Inorganic Chemistry, 2020, 2020, 4093-4110.	2.0	7
74	Study of Donorâ€“Acceptor Bonds on the N â€Coordinated Sn/Pb(II) Atoms in peri â€Substituted Naphthalenes: Evidence of Pbâ†'B Interaction. European Journal of Inorganic Chemistry, 2020, 2020, 3644-3653.	2.0	7
75	Ein Monoarylbleitrichlorid, das der reduktiven Eliminierung trotzt. Angewandte Chemie, 2018, 130, 6020-6023.	2.0	6
76	Different Reactivities of (5-Ph₂P-Ace-6-)₂MeSiH toward the Rhodium(I) Chlorides [(C₂H₄)₂RhCl]₂ and [(CO)₂RhCl]₂. Hirshfeld Atom Refinement of a Rhâ€“HÂ·Â·Â·Si Interaction. Organometallics, 2021, 40, 2027-2038.	2.3	6
77	Intramolecularly Coordinated 2â€Iminomethylphenyltellurium Compounds. European Journal of Inorganic Chemistry, 2017, 2017, 3435-3445.	2.0	5
78	Das Bis(ferrocenyl)phospheniumâ€Ion im neuen Licht betrachtet. Angewandte Chemie, 2020, 132, 1597-1600.	2.0	5
79	Intramolekulare Reaktionen transienter Phospheniumâ€•und Arseniumâ€Ionen fÃ¼hren zur Bildung isolierbarer 9â€Phosphaâ€•und 9â€Arsenaâ€Fluoreniumâ€Ionen. Angewandte Chemie, 2020, 132, 14520-14524.	2.0	5
80	(6-Diphenylphosphinoacenaphth-5-yl)indium and -nickel Compounds: Synthesis, Structure, Transmetalation, and Cross-Coupling Reactions. Organometallics, 2021, 40, 1284-1295.	2.3	5
81	Intramolecular Pâ€“HÂ·Â·Â·Hâ€“Si Dihydrogen Bonding in the 5-Dimethylsilyl-9,9-dimethylxanthen-4-yl-diphenylphosphonium Cation. Organometallics, 2018, 37, 4287-4296.	2.3	4
82	Transmetallation of Bis(6â€diphenylphosphinoacenaphthâ€5â€yl)â€Mercury and â€Tributyltin with Precious Metal Chlorides. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2020, 646, 856-865.	1.2	4
83	Isolation of an Antiaromatic 9â€Hydroxy Fluorenyl Cation. Chemistry - A European Journal, 2021, 27, 8105-8109.	3.3	4
84	Lewis Superacidic Tellurenyl Cationâ€Induced Electrophilic Activation of an Inert Carborane. Chemistry - A European Journal, 2021, 27, 14577-14581.	3.3	4
85	Ligand binding at the A-cluster in full-length or truncated acetyl-CoA synthase studied by X-ray absorption spectroscopy. PLoS ONE, 2017, 12, e0171039.	2.5	3
86	Bis(6-diphenylphosphinoacenaphth-5-yl)telluride as a ligand toward coinage metal chlorides. Dalton Transactions, 2019, 48, 2635-2645.	3.3	3
87	Proximity enforced oxidative addition of a strong unpolar Ïƒ-Siâ€“Si bond at rhodium(<scp>i</scp>). Dalton Transactions, 2020, 49, 1731-1735.	3.3	3
88	Highâ€Spinâ€Imidocobaltkomplexe mit Imidylradikalcharakter**. Angewandte Chemie, 2021, 133, 15504-15508.	2.0	3
89	Tris(6-diphenylphosphinoacenaphth-5-yl)gallium: Z-Type Ligand and Transmetalation Reagent. Organometallics, 2021, 40, 3785-3796.	2.3	3
90	Donor Acceptor Complexes between the Chalcogen Fluorides SF₂, SeF₂, SeF₄and TeF₄and an Nâ€Heterocyclic Carbene. Chemistry - A European Journal, 2022, 28, .	3.3	3

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91	Nickel and Palladium Complexes of a PP(O)P Pincer Ligand Based upon a peri-Substituted Acenaphthyl Scaffold and a Secondary Phosphine Oxide. Inorganic Chemistry, 2022, 61, 8406-8418.	4.0	3
92	Bis(6â€diphenylphosphinoâ€acenaphthâ€5â€yl)sulfoxide: A New Ligand for Late Transition Metal Complexes. European Journal of Inorganic Chemistry, 2020, 2020, 3829-3836.	2.0	2
93	The influence of secondary interactions on the [Ni(O2)]+ mediated aldehyde oxidation reactions. Journal of Inorganic Biochemistry, 2021, 227, 111668.	3.5	2
94	Heavier bis(m-terphenyl)element phosphaethynolates of group 13. Dalton Transactions, 2022, 51, 7622-7629.	3.3	2
95	Fate of oxygen species from O2 activation at dimetal cofactors in an oxidase enzyme revealed by 57Fe nuclear resonance X-ray scattering and quantum chemistry. Biochimica Et Biophysica Acta - Bioenergetics, 2019, 1860, 148060.	1.0	1
96	Synthesis, Structure and Bonding Analysis of the Zwitterionic PPP-Pincer Complex (6-Ph2P-Ace-5-)2P(O)AuCl2. Crystals, 2020, 10, 564.	2.2	1
97	Kationische Carbenâ€Analoga: Donorfreie Phosphoniumâ€•und Arseniumâ€Ionen. Angewandte Chemie, 2021, 133, 19282-19287.	2.0	1
98	Kinetic Stabilization of Heavier Bis(mâ€terphenyl)pnictogen Phosphaethynolates. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2022, 648, .	1.2	1
99	Titelbild: Das schwach koordinierende Tris(trichlorsilyl)silylâ€Anion (Angew. Chem. 52/2017). Angewandte Chemie, 2017, 129, 16637-16637.	2.0	0
100	Hapticity of asymmetric rhodium-allyl compounds in the light of real-space bonding indicators. Zeitschrift Fur Kristallographie - Crystalline Materials, 2018, 233, 615-626.	0.8	0
101	Titelbild: Schwere Carbenhomologe: donorfreie Bismutenium- und Stibenium-Ionen (Angew. Chem.) Tj ETQq1 1 0.784314 rgBT /Overl	2.0	0
102	Titelbild: Das Bis(ferrocenyl)phosphoniumâ€Ion im neuen Licht betrachtet (Angew. Chem. 4/2020). Angewandte Chemie, 2020, 132, 1373-1373.	2.0	0
103	Spektroskopische Charakterisierung eines reaktiven [Cu 2 (Î¼â€OH) 2] 2+ Intermediates in Cu/TEMPOâ€katalysierten aeroben Alkoholoxidationen. Angewandte Chemie, 2021, 133, 23201.	2.0	0