

Jens Langer

List of Publications by Year in descending order

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109
papers

2,954
citations

159585

30
h-index

214800

47
g-index

117
all docs

117
docs citations

117
times ranked

1480
citing authors

#	ARTICLE	IF	CITATIONS
1	Heavy Grignard Reagents: Challenges and Possibilities of Aryl Alkaline Earth Metal Compounds. Chemistry - A European Journal, 2007, 13, 6292-6306.	3.3	157
2	Dinitrogen complexation and reduction at low-valent calcium. Science, 2021, 371, 1125-1128.	12.6	131
3	A key step in the formation of acrylic acid from CO ₂ and ethylene: the transformation of a nickel lactone into a nickel-acrylate complex. Chemical Communications, 2006, , 2510-2512.	4.1	119
4	Aryl Calcium Compounds: Syntheses, Structures, Physical Properties, and Chemical Behavior. Angewandte Chemie - International Edition, 2007, 46, 1950-1956.	13.8	102
5	Boosting Low-Valent Aluminum(I) Reactivity with a Potassium Reagent. Angewandte Chemie - International Edition, 2020, 59, 15982-15986.	13.8	99
6	A Simple Route to Calcium and Strontium Hydride Clusters. Angewandte Chemie - International Edition, 2017, 56, 11880-11884.	13.8	91
7	Strongly reducing magnesium(0) complexes. Nature, 2021, 592, 717-721.	27.8	86
8	Nucleophilic Aromatic Substitution at Benzene with Powerful Strontium Hydride and Alkyl Complexes. Angewandte Chemie - International Edition, 2019, 58, 5396-5401.	13.8	85
9	Low Valent Magnesium Chemistry with a Super Bulky β -Diketiminato Ligand. Angewandte Chemie - International Edition, 2019, 58, 607-611.	13.8	75
10	Facile Benzene Reduction by a Ca ²⁺ /Al ^I Lewis Acid/Base Combination. Angewandte Chemie - International Edition, 2018, 57, 14169-14173.	13.8	74
11	Calcium-Catalyzed Arene C-H Bond Activation by Low-Valent Al ^I . Angewandte Chemie - International Edition, 2019, 58, 15496-15503.	13.8	68
12	Highly Active Superbulky Alkaline Earth Metal Amide Catalysts for Hydrogenation of Challenging Alkenes and Aromatic Rings. Angewandte Chemie - International Edition, 2020, 59, 9102-9112.	13.8	56
13	An Efficient General Synthesis of Halide-Free Diarylcalcium. Angewandte Chemie - International Edition, 2009, 48, 5741-5744.	13.8	52
14	Boosting Low-Valent Aluminum(I) Reactivity with a Potassium Reagent. Angewandte Chemie, 2020, 132, 16116-16120.	2.0	49
15	Syntheses and Structures of Alkaline Earth Metal Bis(diphenylamides). Inorganic Chemistry, 2007, 46, 5118-5124.	4.0	48
16	Heavier Group 2 Grignard Reagents of the Type Aryl-Ae(L) _n -X (Post-Grignard Reagents). Topics in Organometallic Chemistry, 2013, , 29-72.	0.7	48
17	1,4-Dioxane Adducts of Grignard Reagents: Synthesis, Ether Fragmentation Reactions, and Structural Diversity of Grignard Reagent/1,4-Dioxane Complexes. Organometallics, 2009, 28, 5814-5820.	2.3	43
18	Synthesis and crystal structures of bis(diphenylphosphanyl)methanides of lithium and calcium as well as of their borane adducts. Dalton Transactions, 2009, , 2951.	3.3	43

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19	Postâ€Grignard Reagents: Influence of the Coligands $\langle i \rangle L \langle /i \rangle$ on the Molecular Structures of Phenylcalcium Iodides [$\langle i \rangle L \langle /i \rangle \langle i \rangle \langle sub \rangle n \langle /sub \rangle \langle /i \rangle Ca \langle i \rangle R \langle /i \rangle I$] and Calcium Diiodides [$\langle i \rangle L \langle /i \rangle \langle i \rangle \langle sub \rangle n \langle /sub \rangle \langle /i \rangle Ca \langle sub \rangle 2 \langle /sub \rangle \langle /i \rangle \text{Å}$]. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2010, 636, 1190-1198.	1.2	42
20	Facile Benzene Reduction by a Ca^{2+}/Al^{3+} Lewis Acid/Base Combination. Angewandte Chemie, 2018, 130, 14365-14369.	2.0	40
21	Arylcalcium Iodides in Tetrahydropyran: Solution Stability in Comparison to Aryllithium Reagents. Organometallics, 2012, 31, 6172-6182.	2.3	38
22	Switching between Inner- and Outer-Sphere PCET Mechanisms of Small-Molecule Activation: Superoxide Dismutation and Oxygen/Superoxide Reduction Reactivity Deriving from the Same Manganese Complex. Journal of the American Chemical Society, 2017, 139, 1472-1484.	13.7	37
23	A Simple Route to Calcium and Strontium Hydride Clusters. Angewandte Chemie, 2017, 129, 12042-12046.	2.0	37
24	Access to a Labile Monomeric Magnesium Radical by Ballâ€Milling. Angewandte Chemie - International Edition, 2022, 61, .	13.8	37
25	A new set of nickelacyclic carboxylates (â€nickelalactonesâ€) containing pyridine as supporting ligand: synthesis, structures and application in Câ€Câ€ and Câ€Sâ€ linkage reactions. Journal of Organometallic Chemistry, 2004, 689, 2952-2962.	1.8	33
26	Reinvestigation of the reaction of strontium and barium with iodobenzene and molecular structure of the heavy Grignard reagent [$((thf)2BaPh2)4 \cdot (thf)BaO$] with an oxygen-centered square Ba_5 pyramid. Inorganic Chemistry Communication, 2007, 10, 1001-1004.	3.9	32
27	Heteroleptic Heavier Alkaline Earth Metal Amide Complexes Stabilized by a Superbulky \hat{I}^2 -Diketimate Ligand. Organometallics, 2019, 38, 2485-2493.	2.3	32
28	Nucleophilic Aromatic Substitution at Benzene with Powerful Strontium Hydride and Alkyl Complexes. Angewandte Chemie, 2019, 131, 5450-5455.	2.0	32
29	Organic heterobimetallic complexes of the alkaline earth metals (Ae = Ca, Sr, Ba) with tetrahedral metallate anions of three-valent metals (M = B, Al, Ga, and V). New Journal of Chemistry, 2010, 34, 1667.	2.8	31
30	Selfâ€Assembly of Magnesium Hydride Clusters Driven by Chameleonâ€Type Ligands. Angewandte Chemie - International Edition, 2017, 56, 5021-5025.	13.8	30
31	dâ€d Dative Bonding Between Iron and the Alkalineâ€Earth Metals Calcium, Strontium, and Barium. Angewandte Chemie - International Edition, 2020, 59, 14615-14620.	13.8	30
32	Calciumâ€Catalyzed Arene $C \text{~} H$ Bond Activation by Lowâ€Valent Al^{3+} . Angewandte Chemie, 2019, 131, 15642-15649.	2.0	28
33	Mgâ€Mg bond polarization induced by a superbulky \hat{I}^2 -diketimate ligand. Chemical Communications, 2020, 56, 11402-11405.	4.1	27
34	Stability and Reactivity of Phenylstrontium Compounds in Solution. Organometallics, 2010, 29, 2034-2039.	2.3	26
35	Ãœbergangsmetallorganische Reaktionskaskaden zum Aufbau hÃ¶her aggregierter Systeme: Nickelacyclische Carboxylate als Precursoren fÃ¼r die Synthese eines Oxinato-Nickel(II)-Tetramers. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2005, 631, 2719-2726.	1.2	25
36	Reversible CO_2 Fixation by Iridium(I) Complexes Containing Me_2PhP as Ligand. Organometallics, 2010, 29, 1642-1651.	2.3	25

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37	Coordination Behavior of Calcocene and Its Use as a Synthone for Heteroleptic Organocalcium Compounds. <i>Organometallics</i> , 2011, 30, 1359-1365.	2.3	25
38	Multiple π -Porphyrin Functionalized Hexabenzocoronenes. <i>Chemistry - A European Journal</i> , 2019, 25, 15083-15090.	3.3	25
39	Ligand Effects in Calcium Catalyzed Ketone Hydroboration. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 1728-1735.	2.0	24
40	Saturated and unsaturated nickelalactones with N-heterocyclic carbene ligands: Synthesis and structures. <i>Journal of Organometallic Chemistry</i> , 2006, 691, 4874-4881.	1.8	22
41	Low-Valent Nickel and Palladium Complexes with 1,1'-Bis(phosphanyl)ferrocenes: Syntheses and Structures of Acrylic Acid and Ethylene Complexes. <i>European Journal of Inorganic Chemistry</i> , 2007, 2007, 2257-2264.	2.0	22
42	1-Alkenylcalcium Iodide: Synthesis and Stability. <i>Chemistry - A European Journal</i> , 2014, 20, 5237-5239.	3.3	22
43	Low Valent Magnesium Chemistry with a Super Bulky β -Diketiminato Ligand. <i>Angewandte Chemie</i> , 2019, 131, 617-621.	2.0	22
44	Porphyrin-Hexaphenylbenzene Conjugates via Mixed Cyclotrimerization Reactions. <i>Journal of Organic Chemistry</i> , 2019, 84, 1489-1499.	3.2	22
45	Organometallic Nickelamacrocycles of the Type $[(R_2R^aP)Ni(C_2H_4COO)]_n$: Synthesis and Self-Assembly to Form Different Molecular Architectures Tuned by the Phosphine. <i>Organometallics</i> , 2005, 24, 272-279.	2.3	21
46	Phenylcalcium iodides with silyl substituents in para-position. <i>Inorganic Chemistry Communication</i> , 2007, 10, 853-855.	3.9	21
47	Solution Stability of Organocalcium Compounds in Ethereal Media. <i>Organometallics</i> , 2014, 33, 6381-6388.	2.3	21
48	A new synthesis for thermolabile low-valent palladium complexes by electron transfer reactions from nickel(0) to palladium(II) compounds. <i>Journal of Organometallic Chemistry</i> , 2006, 691, 4868-4873.	1.8	20
49	Stabilization and Reactivity of the Lewis Acidic Solvated Phenylcalcium Cation. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 3507-3510.	13.8	20
50	4-Biphenylcalcium Iodide and 9-Phenanthrylcalcium Bromide: Grignard-Type Reagents of Polycyclic Aromatic Hydrocarbons. <i>Chemistry - A European Journal</i> , 2013, 19, 10497-10500.	3.3	20
51	A Soft Grip: Magnesium Complexes with a Phosphine-Modified Phosphonium Dilydric Lewis Base. <i>Chemistry - A European Journal</i> , 2016, 22, 17425-17435.	3.3	20
52	Magnesium-halobenzene bonding: mapping the halogen sigma-hole with a Lewis-acidic complex. <i>Chemical Science</i> , 2021, 12, 2410-2418.	7.4	20
53	Coordination Behavior and Coligand-Dependent cis/trans Isomerism of Calcium Bis(diphenylphosphanides). <i>European Journal of Inorganic Chemistry</i> , 2011, 2011, 3002-3007.	2.0	18
54	Cationic Aluminium Complexes as Catalysts for Imine Hydrogenation. <i>Chemistry - A European Journal</i> , 2021, 27, 7756-7763.	3.3	18

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55	Synthesis and Molecular Structures of Meta-Substituted Arylcalcium Iodides. <i>Organometallics</i> , 2012, 31, 8647-8653.	2.3	17
56	Nickel(I)-Komplexe mit 1,1-Bis(phosphino)ferrocenen als Liganden. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2007, 633, 557-562.	1.2	16
57	Halide-Free Diarylcalcium Complexes: Syntheses, Structures, and Stability. <i>Chemistry - A European Journal</i> , 2014, 20, 3154-3161.	3.3	16
58	RuBisCO-Inspired CO ₂ Activation and Transformation by an Iridium(I) Complex. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 2455-2458.	13.8	16
59	Alkaline Earth Metal Aluminates as Catalysts for Imine Hydrogenation. <i>Organometallics</i> , 2020, 39, 4238-4246.	2.3	16
60	Unsupported Mg-Alkene Bonding. <i>Chemistry - A European Journal</i> , 2021, 27, 2513-2522.	3.3	16
61	Comparison of Magnesium and Zinc in Cationic η^6 -Arene and Halobenzene Complexes. <i>Organometallics</i> , 2021, 40, 448-457.	2.3	16
62	Low-valent Mg(I) complexes by ball-milling. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2022, 648, .	1.2	16
63	A C-H activation-CO ₂ -carboxylation reaction sequence mediated by an Iridium(dppm) species. Formation of the anionic ligand (Ph ₂ P) ₂ C-COOH. <i>Chemical Communications</i> , 2008, , 4822.	4.1	15
64	Nickelacyclic Carboxylates with Pyridine-Based Ligand Sets: From Mononuclear Complexes to Supramolecular Architectures by Hydrogen Bonding. <i>European Journal of Inorganic Chemistry</i> , 2010, 2010, 275-281.	2.0	14
65	Phosphanides of calcium and their oxidation products. <i>Coordination Chemistry Reviews</i> , 2013, 257, 1049-1066.	18.8	14
66	Formation of a Ph ₂ PCH(BH ₃)P(BH ₃)Ph ₂ ligand via formal 1,2-borane migration. <i>Chemical Communications</i> , 2013, 49, 1121.	4.1	14
67	Lewis acidic alkaline earth metal complexes with a perfluorinated diphenylamide ligand. <i>Dalton Transactions</i> , 2019, 48, 6757-6766.	3.3	14
68	Large decanuclear calcium and strontium hydride clusters. <i>Chemical Communications</i> , 2020, 56, 9178-9181.	4.1	14
69	Cationic Heterobimetallic Mg(Zn)/Al(Ga) Combinations for Cooperative C-F Bond Cleavage. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 16492-16499.	13.8	14
70	Nickelacyclic carboxylates derived from 3-hexyne and CO ₂ and their application in the synthesis of a new muconic acid derivative. <i>Polyhedron</i> , 2012, 32, 60-67.	2.2	13
71	Self-Assembly of Magnesium Hydride Clusters Driven by Chameleon-Type Ligands. <i>Angewandte Chemie</i> , 2017, 129, 5103-5107.	2.0	12
72	Arylcalcium halides as substrates in Kumada-type cross-coupling reactions. <i>Journal of Organometallic Chemistry</i> , 2014, 751, 563-567.	1.8	11

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73	Nickelalactones with an allyl subunit – the effect of penta-coordination on structures and stability. Dalton Transactions, 2014, 43, 13988-14000.	3.3	10
74	Dibenzotropyliene Substituted Ligands for Early Main Group Metal–Alkene Bonding. European Journal of Inorganic Chemistry, 2020, 2020, 2582-2595.	2.0	10
75	Highly Active Superbulky Alkaline Earth Metal Amide Catalysts for Hydrogenation of Challenging Alkenes and Aromatic Rings. Angewandte Chemie, 2020, 132, 9187-9197.	2.0	10
76	Lewis Acidic Cationic Strontium and Barium Complexes. European Journal of Inorganic Chemistry, 2021, 2021, 2643-2653.	2.0	10
77	Heterometallic Mg–Ba Hydride Clusters in Hydrogenation Catalysis. ChemCatChem, 2021, 13, 4567-4577.	3.7	10
78	Dppm stabilized nickelacyclic carboxylates as building blocks of oligonuclear nickel complexes. Inorganic Chemistry Communication, 2010, 13, 488-490.	3.9	9
79	An iridium-mediated C–H activation/CO ₂ -carboxylation reaction of 1,1-bisdiphenylphosphinomethane. Dalton Transactions, 2010, 39, 7813.	3.3	9
80	RuBisCO–inspirierte CO ₂ -Aktivierung und Umwandlung durch einen Iridium(I)-Komplex. Angewandte Chemie, 2018, 130, 2480-2483.	2.0	9
81	Carbon–Halogen Bond Activation with Powerful Heavy Alkaline Earth Metal Hydrides. European Journal of Inorganic Chemistry, 2021, 2021, 3731-3741.	2.0	8
82	Calcium catalyzed enantioselective intramolecular alkene hydroamination with chiral C ₂ -symmetric bis-amide ligands. Dalton Transactions, 2021, 50, 3178-3185.	3.3	8
83	Homoleptic Tris(<i>i</i> -alkanedyl)yttrates of the Type [Li(dme)] ₃ {Y(CH ₂ -X-CH ₂) ₃ } (X =) Tj ETQq1 1 0.784314 rgBTJ [Overlock 10 Tf 50 2.3	2.3	7
84	Low-coordinate Monomeric Zinc Hydride Complexes with Encapsulating Dipyromethene Ligands and Reactivity with B(C ₆ F ₅) ₃ . Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2020, 646, 593-602.	1.2	7
85	d–d Dative Bonding Between Iron and the Alkaline–Earth Metals Calcium, Strontium, and Barium. Angewandte Chemie, 2020, 132, 14723-14728.	2.0	7
86	Silyl group migration in a P-silylated phosphonium ylide derived from dppm – A combined experimental and theoretical study. Inorganic Chemistry Communication, 2013, 32, 28-31.	3.9	6
87	Syntheses and Structures of Potassium Complexes Containing Bis(diphenylphosphanyl)methanide Anions. European Journal of Inorganic Chemistry, 2014, 2014, 1413-1420.	2.0	5
88	Synthesis, characterization and reactivity of potassium and barium complexes containing phosphane–borane stabilized methanides. Dalton Transactions, 2014, 43, 458-468.	3.3	5
89	An unsymmetrical phosphonium diylide with a fluorenylidene subunit and its lithium complexes. Journal of Coordination Chemistry, 2015, 68, 3302-3316.	2.2	5
90	Magnesiacycloalkanes with Different Ring Sizes. Organometallics, 2016, 35, 587-594.	2.3	5

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91	Paramagnetic Chromium(II) Complexes and Chromium(IV) Nitrides with Bulky Alkylcyclopentadienyl Ligands. <i>European Journal of Inorganic Chemistry</i> , 2018, 2018, 4472-4480.	2.0	5
92	Chromium(II) Alkylcyclopentadienyl Complexes with Carbon or Hydride Donor Ligands. <i>Organometallics</i> , 2021, 40, 2951-2969.	2.3	5
93	Access to a Labile Monomeric Magnesium Radical by Ball-Milling. <i>Angewandte Chemie</i> , 2022, 134, .	2.0	5
94	Formation and Reactivity of Non-Stabilized Monomeric Alumoxane Intermediates. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2022, 648, .	1.2	5
95	Five- and Six-Membered Nickelacyclic Carboxylates as Reagents for the Facile Synthesis of α -Ketocarboxylic Acids, Isocoumarins, and 1,3-Dicarbonyl Derivatives of Benzoic Acid. <i>Synthesis</i> , 2006, 2006, 2697-2706.	2.3	4
96	Structural diversity and solution behavior of low-valent iridium complexes bearing 1,4-diazabutadiene ligands. <i>Inorganic Chemistry Communication</i> , 2011, 14, 1612-1615.	3.9	4
97	Lithium and Potassium Complexes with dbn- and dbu-Based Enamido Phosphine Ligands: Syntheses and Applications. <i>European Journal of Inorganic Chemistry</i> , 2017, 2017, 2671-2681.	2.0	4
98	Chromium(III) and Chromium(II) Phenolate Complexes with Bulky Alkylcyclopentadienyl Ligands. <i>European Journal of Inorganic Chemistry</i> , 2019, 2019, 2742-2749.	2.0	4
99	Intramolecular Alkene Hydroamination with Hybrid Catalysts Consisting of a Metal Salt and a Neutral Organic Base. <i>European Journal of Inorganic Chemistry</i> , 2020, 2020, 3387-3394.	2.0	4
100	Application of a Stable and Soluble Dibenzylbarium Reagent in the Synthesis of a Barium Imido Cluster. <i>Organometallics</i> , 2021, 40, 1395-1401.	2.3	4
101	Dppm-derived phosphonium salts and ylides as ligand precursors for s-block organometallics. <i>Arkivoc</i> , 2012, 2012, 210-225.	0.5	4
102	Ir(IV) Sulfoxide-Pincer Complexes by Three-Electron Oxidative Additions of Br_2 and I_2 . Unprecedented Trap-Free Reductive Elimination of I_2 from a formal d^{s+5} Metal. <i>Inorganic Chemistry</i> , 2022, 61, 1236-1248.	4.0	4
103	Retro-Diels-Alder decomposition of norbornadiene mediated by a cationic magnesium complex. <i>Chemical Communications</i> , 2021, 57, 5278-5281.	4.1	3
104	Dinuclear Zn Complex: Phenoxy Radical Formation Driven by Superoxide Coordination. <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2021, 647, 809-814.	1.2	3
105	Cationic Heterobimetallic Mg(Zn)/Al(Ga) Combinations for Cooperative C-F Bond Cleavage. <i>Angewandte Chemie</i> , 2021, 133, 16628-16635.	2.0	3
106	Bis(η^4 -1,2-bis(diphenylphosphino)methane) η^2 -bis(η^2 -ethene)nickel(0) toluene disolvate. <i>Acta Crystallographica Section E: Structure Reports Online</i> , 2008, 64, m412-m412.	0.2	3
107	Oxygen-rich tetrahedral surface phase on high-temperature rutile. https://doi.org/10.1002/anie.202115000 V_2O_5 single crystals. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 15000-15005.	2.4	3
108	Tris(borane) Adducts of Diphosphanylmethanides: The $[\text{H}_3\text{BCH}(\text{PPh}_2)_2\text{BH}_3]^-$ Anion and Its Alkali Metal Complexes. <i>European Journal of Inorganic Chemistry</i> , 2014, 2014, 5940-5947.	2.0	2

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109	Alkaline Earth Metal Imido Complexes with Doubly Deprotonated Amidine and β -diketimine Ligands. European Journal of Inorganic Chemistry, 2020, 2020, 3573-3579.	2.0	2