Robin Noel Perutz

List of Publications by Year in descending order

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102 papers 6,972 citations

43 h-index 82 g-index

105 all docs 105 docs citations

105 times ranked 4682 citing authors

#	Article	IF	CITATIONS
1	Metathesis by Partner Interchange in Ïfâ€Bond Ligands: Expanding Applications of the Ïfâ€CAM Mechanism. Angewandte Chemie - International Edition, 2022, 61, .	7.2	36
2	Direct Evidence for Competitive C–H Activation by a Well-Defined Silver XPhos Complex in Palladium-Catalyzed C–H Functionalization. Organometallics, 2022, 41, 3175-3184.	1.1	11
3	Photochemistry of transition metal carbonyls. Chemical Society Reviews, 2022, 51, 5300-5329.	18.7	17
4	Electrocatalytic Proton Reduction by a Cobalt(III) Hydride Complex with Phosphinopyridine PN Ligands. Inorganic Chemistry, 2020, 59, 18055-18067.	1.9	5
5	Towards measuring reactivity on micro-to-millisecond timescales with laser pump, NMR probe spectroscopy. Faraday Discussions, 2019, 220, 28-44.	1.6	1
6	Photochemical Oxidative Addition of Germane and Diphenylgermane to Ruthenium Dihydride Complexes. Organometallics, 2019, 38, 626-637.	1.1	8
7	Benchmarking of Halogen Bond Strength in Solution with Nickel Fluorides: Bromine versus Iodine and Perfluoroaryl versus Perfluoroalkyl Donors. Chemistry - A European Journal, 2019, 25, 9237-9241.	1.7	13
8	Competing Pathways in the Photochemistry of Ru(H) ₂ (CO)(PPh ₃) ₃ . Organometallics, 2018, 37, 855-868.	1.1	8
9	Self-complementary nickel halides enable multifaceted comparisons of intermolecular halogen bonds: fluoride ligands <i>vs.</i> other halides. Chemical Science, 2018, 9, 3767-3781.	3.7	27
10	Hydrogen bonding vs. halogen bonding: the solvent decides. Chemical Science, 2017, 8, 5392-5398.	3.7	176
11	Coherent evolution of para hydrogen induced polarisation using laser pump, NMR probe spectroscopy: Theoretical framework and experimental observation. Journal of Magnetic Resonance, 2017, 278, 25-38.	1.2	10
12	Selectivity of Câ€"H Activation and Competition between Câ€"H and Câ€"F Bond Activation at Fluorocarbons. Chemical Reviews, 2017, 117, 8710-8753.	23.0	265
13	Photochemistry of Transition Metal Hydrides. Chemical Reviews, 2016, 116, 8506-8544.	23.0	108
14	Light-Induced Activation of a Molybdenum Oxotransferase Model within a Ru(II)–Mo(VI) Dyad. Inorganic Chemistry, 2016, 55, 12583-12594.	1.9	9
15	Platinum(0)-mediated C–O bond activation of ethers via an SN2 mechanism. Dalton Transactions, 2016, 45, 18842-18850.	1.6	4
16	Photochemical pump and NMR probe to monitor the formation and kinetics of hyperpolarized metal dihydrides. Chemical Science, 2016, 7, 7087-7093.	3.7	16
17	Detection of if-alkane complexes of manganese by NMR and IR spectroscopy in solution: (Î- ⁵ -C ₅ H ₅)Mn(CO) ₂ (ethane) and (Î- ⁵ -C ₅ H ₅)Mn(CO) ₂ (isopentane). Chemical Science, 2015, 6. 418-424.	3.7	28
18	Activation of B–H, Si–H, and C–F Bonds with Tpâ€2Rh(PMe ₃) Complexes: Kinetics, Mechanism and Selectivity. Journal of the American Chemical Society, 2015, 137, 1258-1272.	ⁿ ,6.6	39

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19	A Ruthenium Dihydrogen Germylene Complex and the Catalytic Synthesis of Digermoxane. Organometallics, 2015, 34, 4158-4163.	1.1	25
20	Electronic Fineâ€Tuning of Oxygen Atom Transfer Reactivity of <i>cis</i> â€Dioxomolybdenum(VI) Complexes with Thiosemicarbazone Ligands. European Journal of Inorganic Chemistry, 2015, 2015, 3562-3571.	1.0	16
21	The Role of Fluorine Substituents in the Regioselectivity of Intramolecular C–H Bond Functionalization of Benzylamines at Palladium(II). Organometallics, 2015, 34, 4376-4386.	1.1	17
22	The Contrasting Character of Early and Late Transition Metal Fluorides as Hydrogen Bond Acceptors. Journal of the American Chemical Society, 2015, 137, 11820-11831.	6.6	29
23	Comparison of rhenium–porphyrin dyads for CO ₂ photoreduction: photocatalytic studies and charge separation dynamics studied by time-resolved IR spectroscopy. Chemical Science, 2015, 6, 6847-6864.	3.7	81
24	Metal Hydrides Form Halogen Bonds: Measurement of Energetics of Binding. Journal of the American Chemical Society, 2014, 136, 1288-1291.	6.6	35
25	Highly fluorinated naphthalenes and bifurcated C–Hâ√F–C hydrogen bonding. CrystEngComm, 2014, 16, 9711-9720.	1.3	21
26	Oxidative addition of ether O-methyl bonds at a Pt(0) centre. Chemical Communications, 2014, 50, 3914-3917.	2.2	6
27	A solvent-resistant halogen bond. Chemical Science, 2014, 5, 4179-4183.	3.7	122
28	Photochemical Reactions of Fluorinated Pyridines at Half-Sandwich Rhodium Complexes: Competing Pathways of Reaction. Organometallics, 2014, 33, 45-52.	1.1	15
29	Photochemical Pump and NMR Probe: Chemically Created NMR Coherence on a Microsecond Time Scale. Journal of the American Chemical Society, 2014, 136, 10124-10131.	6.6	39
30	Computational Studies Explain the Importance of Two Different Substituents on the Chelating Bis(amido) Ligand for Transfer Hydrogenation by Bifunctional Cp*Rh(III) Catalysts. Organometallics, 2014, 33, 3433-3442.	1.1	39
31	Selective Photochemistry at Stereogenic Metal and Ligand Centers of <i>cis</i> -[Ru(diphosphine) ₂ (H) ₂]: Preparative, NMR, Solid State, and Laser Flash Studies. Journal of the American Chemical Society, 2012, 134, 3480-3497.	6.6	23
32	Hydrofluoroarylation of Alkynes with Ni Catalysts. Câ€"H Activation via Ligand-to-Ligand Hydrogen Transfer, an Alternative to Oxidative Addition. Organometallics, 2012, 31, 1300-1314.	1.1	161
33	Câ^'F and Câ^'H Bond Activation of Fluorobenzenes and Fluoropyridines at Transition Metal Centers: How Fluorine Tips the Scales. Accounts of Chemical Research, 2011, 44, 333-348.	7.6	430
34	Manganese Alkane Complexes: An IR and NMR Spectroscopic Investigation. Journal of the American Chemical Society, 2011, 133, 2303-2310.	6.6	84
35	Energetics of Halogen Bonding of Group 10 Metal Fluoride Complexes. Journal of the American Chemical Society, 2011, 133, 14338-14348.	6.6	64
36	Liquid injection field desorption/ionization of transition metal fluoride complexes. Journal of Fluorine Chemistry, 2010, 131, 1213-1217.	0.9	23

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37	Selective Activation of the <i>ortho</i> Câ´F Bond in Pentafluoropyridine by Zerovalent Nickel: Reaction via a Metallophosphorane Intermediate Stabilized by Neighboring Group Assistance from the Pyridyl Nitrogen. Organometallics, 2010, 29, 1824-1831.	1.1	87
38	Design and synthesis of water soluble (metallo)porphyrins with pendant arms: studies of binding to xanthine oxidase. New Journal of Chemistry, 2010, 34, 1125.	1.4	9
39	Importance of palladium–carbon bond energies in direct arylation of polyfluorinated benzenes. Dalton Transactions, 2010, 39, 10510.	1.6	54
40	Photoinduced N2 loss as a route to long-lived organometallic alkane complexes: A time-resolved IR and NMR study. Chemical Science, 2010, 1, 622.	3.7	44
41	Exceptional Sensitivity of Metalâ^'Aryl Bond Energies to <i>ortho</i> -Fluorine Substituents: Influence of the Metal, the Coordination Sphere, and the Spectator Ligands on Mâ^'C/Hâ^'C Bond Energy Correlations. Journal of the American Chemical Society, 2009, 131, 7817-7827.	6.6	172
42	A systematic approach to the generation of long-lived metal alkane complexes: combined IR and NMR study of (Tp)Re(CO)2(cyclopentane). Chemical Communications, 2009, , 1401.	2.2	27
43	Competing Câ^'F Activation Pathways in the Reaction of Pt(0) with Fluoropyridines: Phosphine-Assistance versus Oxidative Addition. Journal of the American Chemical Society, 2008, 130, 15499-15511.	6.6	101
44	Metal Fluorides Form Strong Hydrogen Bonds and Halogen Bonds: Measuring Interaction Enthalpies and Entropies in Solution. Journal of the American Chemical Society, 2008, 130, 7842-7844.	6.6	143
45	A Catalytic Foothold for Fluorocarbon Reactions. Science, 2008, 321, 1168-1169.	6.0	39
46	Stereochemical Nonrigidity of a Chiral Rhodium Boryl Hydride Complex: ÂA If -Borane Complex as Transition State for Isomerization. Journal of the American Chemical Society, 2008, 130, 4375-4385.	6.6	20
47	Sequential C–F activation and borylation of fluoropyridines via intermediate Rh(i) fluoropyridyl complexes: a multinuclear NMR investigation. Chemical Communications, 2007, , 3664.	2.2	93
48	The σ-CAM Mechanism: σâ€Complexes as the Basis of σ-Bond Metathesis at Late-Transition-Metal Centers. Angewandte Chemie - International Edition, 2007, 46, 2578-2592.	7.2	534
49	Validation of the Mâ^'C/Hâ^'C Bond Enthalpy Relationship through Application of Density Functional Theory. Journal of the American Chemical Society, 2006, 128, 8350-8357.	6.6	73
50	Photochemical Isomerization of N-Heterocyclic Carbene Ruthenium Hydride Complexes:Â In situ Photolysis, Parahydrogen, and Computational Studies. Journal of the American Chemical Society, 2006, 128, 7452-7453.	6.6	20
51	Ir-Catalyzed Borylation of CH Bonds in N-Containing Heterocycles: Regioselectivity in the Synthesis of Heteroaryl Boronate Esters. Angewandte Chemie - International Edition, 2006, 45, 489-491.	7.2	206
52	C–F Bond activation at Ni(0) and simple reactions of square planar Ni(ii) fluoride complexes. Dalton Transactions, 2005, , 3686.	1.6	62
53	Photochemical reactions of (\hat{l} -5-cyclopentadienyl)bis(t-butylacrylate) rhodium with silanes: Dynamics of isomer interconversion via Rh(\hat{l} -2-silane) species. Dalton Transactions, 2004, , 3331-3337.	1.6	16
54	Contrasting Reactivity of Fluoropyridines at Palladium and Platinum:  Câ^'F Oxidative Addition at Palladium, Pâ^'C and Câ^'F Activation at Platinum. Organometallics, 2004, 23, 6140-6149.	1.1	147

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55	Platinum Bis(tricyclohexylphosphine) Silyl Hydride Complexes. Organometallics, 2004, 23, 5744-5756.	1.1	68
56	Light-Controlled Ion Switching:  Direct Observation of the Complete Nanosecond Release and Microsecond Recapture Cycle of an Azacrown-Substituted [(bpy)Re(CO)3L]+ Complex. Journal of Physical Chemistry A, 2004, 108, 9037-9047.	1.1	29
57	A Comparison of Câ^'F and Câ^'H Bond Activation by Zerovalent Ni and Pt:Â A Density Functional Study. Journal of the American Chemical Society, 2004, 126, 5268-5276.	6.6	184
58	Synthesis and Characterization of a Siderophore-based Luminescent Sensor for Molybdate. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2003, 629, 2421-2426.	0.6	7
59	Direct Measurement of the Stability of the Supramolecular Synthon C6H6·C6F6. Journal of Physical Chemistry B, 2003, 107, 13855-13861.	1.2	42
60	cis–trans Isomerisation of CpRe(CO)2(H)(ArF) (ArF= C6FnH5Ⱂn; n = 0–5) is the rate determining step in C–H activation of fluoroarenes: a DFT study. Dalton Transactions, 2003, , 4065-4074.	1.6	53
61	Replacement of [RuH2(PMe3)4] by [RuH2(PEt3)4] switches reaction products: synthesis of fluoride-bridged diruthenium complexes. Dalton Transactions, 2003, , 2184. Bond energy M–C/H–C correlations: dual theoretical and experimental approach to the sensitivity of	1.6	17
62	Mâ€"C bond strength to substituentsElectronic supplementary information (ESI) available: methods of calculation; Fig. S1: Comparison of calculated and experimental Câ€"H bond dissociation energies for organic molecules; Table S1, comparison of calculated and experimental CO-stretching frequencies; Table S2, total energies, BDE for Reâ€"C and Hâ€"C; Table S3, NPA charges q(C) and q(aryl) for the organic	2.2	89
63	fragments C6H6âe ^e . Chemical Communications, 2003, , 490-491. Organometallic chemistry and catalysisElectronic supplementary information (ESI) available: List of Posters. See http://www.rsc.org/suppdata/dt/b3/b311889d/. Dalton Transactions, 2003, , ix.	1.6	1
64	Exchange Processes in Complexes with Two Ruthenium (î-2-Silane) Linkages:Â Role of the Secondary Interactions between Silicon and Hydrogen Atoms. Organometallics, 2002, 21, 5347-5357.	1.1	75
65	Routes to fluorinated organic derivatives by nickel mediated C–F activation of heteroaromatics. Chemical Communications, 2002, , 2749-2757.	2.2	213
66	NMR characterisation of unstable solvent and dihydride complexes generated at low temperature by in-situ UV irradiation. Chemical Communications, 2002, , 2836-2837.	2.2	26
67	Preparation of cationic cobalt phenoxide and ethoxide complexes and their reversible reaction with carbon dioxide. Dalton Transactions RSC, 2002, , 2797-2799.	2.3	12
68	Synthesis and photochemistry of free base and zinc tetraaryl porphyrins mono-substituted with tungsten pentacarbonyl via a pyridine linker. Dalton Transactions RSC, 2002, , 170.	2.3	17
69	Catalytic C–F activation of polyfluorinated pyridines by nickel-mediated cross-coupling reactions. Chemical Communications, 2001, , 2254-2255.	2.2	137
70	The reaction of the unsaturated rhenium fragment $\{Re(\hat{l}\cdot 5-C5Me5)(CO)2\}$ with 1,4-difluorobenzene. Thermal intramolecular conversion of a rhenium (difluorophenyl)(hydride) to $Re(\hat{l}\cdot 2-C6H4F2)$ and a [1,4]-metallotropic shift. Dalton Transactions RSC, 2001, , 1452-1461.	2.3	42
71	Selective signalling of molybdate by a siderophore derivativeâ€. Dalton Transactions RSC, 2001, , 2327-2329.	2.3	18
72	Synthesis, characterisation and reactivity of ruthenium bis-bifluoride, ruthenium hydride bifluoride and ruthenium hydride fluoride complexes. Dalton Transactions RSC, 2001, , 1676-1685.	2.3	38

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7 3	Proton-controlled photoisomerization: rhenium(i) tricarbonyl bipyridine linked to amine or azacrown ether groups by a styryl pyridine bridging ligand. Chemical Communications, 2000, , 1865-1866.	2.2	59
74	Chemistry of nickel tetrafluoropyridyl derivatives: their versatile behaviour with Brønsted acids and the Lewis acid BF3 â€. Dalton Transactions RSC, 2000, , 2013-2018.	2.3	60
75	Two photochemical pathways in competition: matrix isolation, time-resolved and NMR studies of cis-[Ru(PMe3)4(H)2]. Chemical Communications, 2000, , 1175-1176.	2.2	18
76	Hydrogen Bonding in Transition Metal Complexes:Â Synthesis, Dynamics, and Reactivity of Platinum Hydride Bifluoride Complexes. Journal of the American Chemical Society, 2000, 122, 8685-8693.	6.6	83
77	Structure and Dynamic Exchange in Rhodium Î-2-Naphthalene and Rhodium Î-2-Phenanthrene Complexes:Â Quantitative NOESY and EXSY Studies. Organometallics, 2000, 19, 672-683.	1.1	24
78	Nickel-Assisted Carbon-Fluorine Bond Activation of 2,4,6-Trifluoropyrimidine: Synthesis of New Pyrimidine and Pyrimidinone Derivatives. Angewandte Chemie - International Edition, 1999, 38, 3326-3329.	7.2	120
79	Photochemical reactions of [Re(\hat{i} -5-C5R5)(CO)3] (R \hat{a} €= \hat{a} €H or Me) with partially fluorinated benzenes: C \hat{a} €"H and C \hat{a} €"F activation. Journal of the Chemical Society Dalton Transactions, 1999, , 2039-2048.	1.1	38
80	Synthesis and reactions of the rhenium fulvene complexes [Re(\hat{i} -6-C5Me4CH2)(CO)2(C6F4R)] (R \hat{a} = \hat{a} F or CF products derived from initial C \hat{a} -"F activation. Journal of the Chemical Society Dalton Transactions, 1998, , 3079-3086.	⁷ 3): 1.1	41
81	Inertness of the Arylâ^F Bond toward Oxidative Addition to Osmium and Rhodium Complexes: Thermodynamic or Kinetic Origin?. Journal of the American Chemical Society, 1998, 120, 12634-12640.	6.6	90
82	Ultrafast Time-Resolved UVâ^'Visible and Infrared Absorption Spectroscopy of Binuclear Rhenium(I) Polypyridyl Complexes in Solution. Journal of Physical Chemistry A, 1998, 102, 1252-1260.	1.1	37
83	Photochemistry of Os(dmpe)2H2:  Matrix, Transient Solution, and NMR Studies of 16-Electron Os(dmpe)2 (dmpe = Me2PCH2CH2PMe2). Organometallics, 1998, 17, 5557-5564.	1.1	12
84	Ultrafast reductive elimination of hydrogen from a metal carbonyl dihydride complex; a study by time-resolved IR and visible spectroscopy. Journal of the Chemical Society Dalton Transactions, 1997, , 2857-2860.	1.1	35
85	Structure and dynamics of the η2-hexafluorobenzene complexes [Re(η5-C5H4R)(CO) 2(η2-C6F6)] (Râ€=â€H o	or) Tj ETQq 1.1	1 1 0.784 <mark>3</mark> 47
86	Synthesis, molecular structure and NMR spectroscopy of a transition-metal bifluoride complex: formation via Câ \in "F activation or reaction with Et3NA·3HF. Chemical Communications, 1997, , 187-188.	2.2	58
87	Rapid Intermolecular Carbonâ^'Fluorine Bond Activation of Pentafluoropyridine at Nickel(0): Comparative Reactivity of Fluorinated Arene and Fluorinated Pyridine Derivatives. Organometallics, 1997, 16, 4920-4928.	1.1	155
88	Transient Photochemistry, Matrix Isolation, and Molecular Structure ofcis-Ru(dmpm)2H2(dmpm =) Tj ETQq0 0 0 r	gBT /Overl	lock 10 Tf 50
89	Facile Insertion of CO2into the Ruâ^'H Bonds of Ru(dmpe)2H2(dmpe = Me2PCH2CH2PMe2):Â Identification of Three Ruthenium Formate Complexes. Organometallics, 1996, 15, 5166-5169.	1.1	7 5
90	Transition Metal Alkane Complexesâ€. Chemical Reviews, 1996, 96, 3125-3146.	23.0	481

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91	Facile intermolecular aromatic C–F bond activation reaction of [Ru(dmpe)2H2](dmpe =) Tj ETQq1 1 0.784314	4 rgBT /Ον	erlock 10 Tf 5
92	Photochemical intermolecular Câ€"H and Câ€"F insertion of rhodium into pentafluoroanisole to generate a metallacycle; conversion to a cyclic carbene complex. Chemical Communications, 1996, , 961-962.	2.2	25
93	Laser Flash Photolysis and Matrix Isolation Studies of Ru[R2PCH2CH2PR2]2H2 (R = C2H5, C6H5, C2F5): Control of Oxidative Addition Rates by Phosphine Substituents. Journal of the American Chemical Society, 1995, 117, 10047-10054.	6.6	49
94	Picosecond Photolysis of a Metal Dihydride: Rapid Reductive Elimination of Dihydrogen from Ru(dmpe)2H2 (dmpe = (CH3)2PCH2CH2P(CH3)2). The Journal of Physical Chemistry, 1994, 98, 3562-3563.	2.9	15
95	eta.2-Coordination and carbon-fluorine activation of hexafluorobenzene by cyclopentadienylrhodium and -iridium complexes. Journal of the American Chemical Society, 1993, 115, 1429-1440.	6.6	115
96	Control of .eta.2-coordination vs. carbon-hydrogen bond activation by rhodium: the role of aromatic resonance energies. Journal of the American Chemical Society, 1993, 115, 7685-7695.	6.6	97
97	Matrix isolation and transient photochemistry of ruthenium complex Ru(dmpe)2H2: characterization and reactivity of Ru(dmpe)2 (dmpe = Me2PCH2CH2PMe2). Journal of the American Chemical Society, 1992, 114, 7425-7435.	6.6	58
98	Thermal and photochemical reactions of rhodium(trialkylsilyl)hydride complexes: NMR and bonding of poly(silyl)(hydride) complexes. Journal of the Chemical Society Chemical Communications, 1991, , 28.	2.0	36
99	Inter―und intramolekulare photochemische Câ€Hâ€Aktivierung mit Aren(carbonyl)osmiumâ€Komplexen in Matrix und in Lösung. Angewandte Chemie, 1989, 101, 1721-1723.	1.6	16
100	Inter- and Intramolecular Photochemical C?H Activation in Matrices and in Solution with (?6-Arene)(carbonyl)osmium Complexes. Angewandte Chemie International Edition in English, 1989, 28, 1690-1692.	4.4	22
101	Photolysis and spectroscopy with polarized light: key to the photochemistry of pentacarbonylchromium and related species. Inorganic Chemistry, 1978, 17, 147-154.	1.9	94
102	Metathesis by partner interchange in Ïfâ€bond ligands: expanding applications of the Ïfâ€CAM mechanism. Angewandte Chemie, 0, , .	1.6	6