T V Rajanbabu

List of Publications by Year
in descending order

82	6,432	38742 50	66911 78
papers	citations	h-index	g-index

92	92	92	3381
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Selective Generation of Free Radicals from Epoxides Using a Transition-Metal Radical. A Powerful New Tool for Organic Synthesis. Journal of the American Chemical Society, 1994, 116, 986-997.	13.7	474
2	Transition-metal-centered radicals in organic synthesis. Titanium(III)-induced cyclization of epoxy olefins. Journal of the American Chemical Society, 1988, 110, 8561-8562.	13.7	325
3	Ligand Electronic Effects in Asymmetric Catalysis: Enhanced Enantioselectivity in the Asymmetric Hydrocyanation of Vinylarenes. Journal of the American Chemical Society, 1994, 116, 9869-9882.	13.7	283
4	Asymmetric Hydrovinylation Reaction. Chemical Reviews, 2003, 103, 2845-2860.	47.7	268
5	Stereochemistry of intramolecular free-radical cyclization reactions. Accounts of Chemical Research, 1991, 24, 139-145.	15.6	253
6	First Chelated ChiralN-HeterocyclicBis-Carbene Complexes. Organic Letters, 2000, 2, 1125-1128.	4.6	185
7	Role of Electronic Asymmetry in the Design of New Ligands:Â The Asymmetric Hydrocyanation Reaction. Journal of the American Chemical Society, 1996, 118, 6325-6326.	13.7	153
8	The Hydrovinylation Reaction:Â A New Highly Selective Protocol Amenable to Asymmetric Catalysis. Journal of the American Chemical Society, 1998, 120, 459-460.	13.7	142
9	Asymmetric Hydrovinylation of Unactivated Linear 1,3-Dienes. Journal of the American Chemical Society, 2010, 132, 3295-3297.	13.7	134
10	Synergistic Effects of Hemilabile Coordination and Counterions in Homogeneous Catalysis:â€‰ New Tunable Monophosphine Ligands for Hydrovinylation Reactions. Journal of the American Chemical Society, 1999, 121, 9899-9900.	13.7	130
11	Regiodivergent Ring Opening of Chiral Aziridines. Science, 2009, 326, 1662-1662.	12.6	120
12	Stereochemical control in hex-5-enyl radical cyclizations: from carbohydrates to carbocycles. 3. Journal of the American Chemical Society, 1989, 111, 1759-1769.	13.7	112
13	In Pursuit of an Ideal Carbon-Carbon Bond-Forming Reaction: Development and Applications of the Hydrovinylation of Olefins. Synlett, 2009, 2009, 853-885.	1.8	112
14	Enantioselective Desymmetrization of <i>meso</i>â€Aziridines with TMSN₃ or TMSCN Catalyzed by Discrete Yttrium Complexes. Angewandte Chemie - International Edition, 2009, 48, 1126-1129.	13.8	110
15	Catalyzed Cyclization of Î±,Ï‰-Dienes:Â A Versatile Protocol for the Synthesis of Functionalized Carbocyclic and Heterocyclic Compounds. Journal of the American Chemical Society, 1998, 120, 8007-8008.	13.7	107
16	Nickel(0)-Catalyzed Asymmetric Hydrocyanation of 1,3-Dienes. Organic Letters, 2006, 8, 4657-4659.	4.6	107
17	Facile Pd(II)- and Ni(II)-Catalyzed Isomerization of Terminal Alkenes into 2-Alkenes. Journal of Organic Chemistry, 2009, 74, 4565-4572.	3.2	107
18	Tunable Ligands for Asymmetric Catalysis:â€‰ Readily Available Carbohydrate-Derived Diarylphosphinites Induce High Selectivity in the Hydrovinylation of Styrene Derivatives. Journal of the American Chemical Society, 2002, 124, 734-735.	13.7	104

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19	Tandem catalysis for asymmetric coupling of ethylene and enynes to functionalized cyclobutanes. Science, 2018, 361, 68-72.	12.6	100
20	Hydrovinylation of 1,3-Dienes:Â A New Protocol, an Asymmetric Variation, and a Potential Solution to the Exocyclic Side Chain Stereochemistry Problem. Journal of the American Chemical Society, 2006, 128, 54-55.	13.7	96
21	Catalytic Enantioselective Hetero-dimerization of Acrylates and 1,3-Dienes. Journal of the American Chemical Society, 2017, 139, 18034-18043.	13.7	96
22	Electronic Effects in Asymmetric Catalysis:Â Structural Studies of Precatalysts and Intermediates in Rh-Catalyzed Hydrogenation of Dimethyl Itaconate and Acetamidocinnamic Acid Derivatives UsingC2-Symmetric Diarylphosphinite Ligands. Journal of Organic Chemistry, 1999, 64, 3429-3447.	3.2	91
23	All-Carbon Quaternary Centers via Catalytic Asymmetric Hydrovinylation. New Approaches to the Exocyclic Side Chain Stereochemistry Problem. Journal of the American Chemical Society, 2006, 128, 5620-5621.	13.7	91
24	Substituent Effects of Ligands on Asymmetric Induction in a Prototypical Palladium-Catalyzed Allylation Reaction:Â Making Both Enantiomers of a Product in High Optical Purity Using the Same Source of Chirality. Journal of Organic Chemistry, 1999, 64, 7601-7611.	3.2	90
25	Heterodimerization of Olefins. 1. Hydrovinylation Reactions of Olefins That Are Amenable to Asymmetric Catalysis. Journal of Organic Chemistry, 2003, 68, 8431-8446.	3.2	90
26	Control of Selectivity through Synergy between Catalysts, Silanes, and Reaction Conditions in Cobalt-Catalyzed Hydrosilylation of Dienes and Terminal Alkenes. ACS Catalysis, 2017, 7, 2275-2283.	11.2	90
27	Catalytic Enantioselective Synthesis of Cyclobutenes from Alkynes and Alkenyl Derivatives. Journal of the American Chemical Society, 2019, 141, 15367-15377.	13.7	83
28	Highly Flexible Synthetic Routes to Functionalized Phospholanes from Carbohydrates. Journal of Organic Chemistry, 2000, 65, 900-906.	3.2	80
29	Ligand Tuning in Asymmetric Hydrovinylation of 1,3-Dienes: A Stereoselective Route to Either Steroid-C₂₀ (<i>S</i>) or -C₂₀ (<i>R</i>) Derivatives. Journal of the American Chemical Society, 2008, 130, 9000-9005.	13.7	79
30	Asymmetric Hydrovinylation of 1-Vinylcycloalkenes. Reagent Control of Regio- and Stereoselectivity. Journal of the American Chemical Society, 2012, 134, 6556-6559.	13.7	78
31	Metal-Catalyzed Acyl Transfer Reactions of Enol Esters:â€‰ Role of Y5(OiPr)13O and (thd)2Y(OiPr) as Transesterification Catalysts. Organic Letters, 2000, 2, 997-1000.	4.6	74
32	Hydrovinylation of Norbornene. Ligand-Dependent Selectivity and Asymmetric Variations. Organic Letters, 2003, 5, 4345-4348.	4.6	74
33	Efficient, Selective, and Green:â€‰ Catalyst Tuning for Highly Enantioselective Reactions of Ethylene. Organic Letters, 2008, 10, 1657-1659.	4.6	72
34	Ligand-Assisted Rate Acceleration in Transacylation by a Yttriumâˆ’Salen Complex. Demonstration of a Conceptually New Strategy for Metal-Catalyzed Kinetic Resolution of Alcohols. Organic Letters, 2002, 4, 1607-1610.	4.6	70
35	Bimetallic catalysis in the highly enantioselective ringâ€“opening reactions of aziridines. Chemical Science, 2014, 5, 1102-1117.	7.4	68
36	Nucleophilic addition of silyl enol ethers to aromatic nitro compounds: scope and mechanism of reaction. Journal of the American Chemical Society, 1985, 107, 5473-5483.	13.7	67

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37	Hydrovinylation and Related Reactions: New Protocols and Control Elements in Search of Greater Synthetic Efficiency and Selectivity. Chemistry - A European Journal, 1999, 5, 1963-1968.	3.3	67
38	Ligand Tuning in Asymmetric Catalysis:â€‰ Mono- and Bis-Phospholanes for a Prototypical Pd-Catalyzed Asymmetric Allylation Reaction. Organic Letters, 2000, 2, 199-202.	4.6	67
39	Fine-Tuning Monophosphine Ligands for Enhanced Enantioselectivity. Influence of Chiral Hemilabile Pendant Groups. Organic Letters, 2004, 6, 1515-1517.	4.6	66
40	Cationic Co(I)-Intermediates for Hydrofunctionalization Reactions: Regio- and Enantioselective Cobalt-Catalyzed 1,2-Hydroboration of 1,3-Dienes. Journal of the American Chemical Society, 2019, 141, 7365-7375.	13.7	65
41	Synthesis, Characterization, and Applicability of Neutral Polyhydroxy Phospholane Derivatives and Their Rhodium(I) Complexes for Reactions in Organic and Aqueous Media. Journal of the American Chemical Society, 2001, 123, 10207-10213.	13.7	64
42	From carbohydrates to carbocycles. 2. A free radical route to Corey lactone and other prostanoid intermediates. Journal of Organic Chemistry, 1988, 53, 4522-4530.	3.2	62
43	Electronic effects in asymmetric catalysis: Enantioselective carbon-carbon bond forming processes. Pure and Applied Chemistry, 1994, 66, 1535-1542.	1.9	61
44	Chiral Benzyl Centers through Asymmetric Catalysis. A Three-Step Synthesis of (R)-(âˆ’)-Î±-Curcumene via Asymmetric Hydrovinylation. Organic Letters, 2004, 6, 3159-3161.	4.6	61
45	Ligand Substituent Effects on Asymmetric Induction. Effect of Structural Variations of the DIOP Ligand on the Rh-Catalyzed Asymmetric Hydrogenation of Enamides. Organic Letters, 2000, 2, 4137-4140.	4.6	60
46	Ethylene in Organic Synthesis. Repetitive Hydrovinylation of Alkenes for Highly Enantioselective Syntheses of Pseudopterosins. Journal of the American Chemical Society, 2011, 133, 5776-5779.	13.7	60
47	Selective Cobalt-Catalyzed Reduction of Terminal Alkenes and Alkynes Using (EtO)2Si(Me)H as a Stoichiometric Reductant. ACS Catalysis, 2016, 6, 6318-6323.	11.2	58
48	Asymmetric Hydrovinylation of Vinylindoles. A Facile Route to Cyclopenta[<i>g</i>]indole Natural Products (+)-<i>cis</i>-Trikentrin A and (+)-<i>cis</i>-Trikentrin B. Journal of the American Chemical Society, 2012, 134, 5496-5499.	13.7	56
49	Cobalt-catalysed asymmetric hydrovinylation of 1,3-dienes. Chemical Science, 2015, 6, 3994-4008.	7.4	55
50	Water-Soluble Organometallic Catalysts from Carbohydrates. 1. Diphosphiniteâˆ’Rh Complexes. Organic Letters, 1999, 1, 1229-1232.	4.6	54
51	Catalytic Asymmetric Synthesis Using Feedstocks: An Enantioselective Route to 2-Arylpropionic Acids and 1-Arylethyl Amines via Hydrovinylation of Vinyl Arenes. Journal of Organic Chemistry, 2009, 74, 3066-3072.	3.2	50
52	Syntheses and Applications of 2-Phosphino-2â€²-alkoxy-1,1â€²-binaphthyl Ligands. Development of a Working Model for Asymmetric Induction in Hydrovinylation Reactions. Journal of Organic Chemistry, 2007, 72, 2357-2363.	3.2	48
53	Asymmetric Catalysis with Ethylene. Synthesis of Functionalized Chiral Enolates. Journal of the American Chemical Society, 2015, 137, 14268-14271.	13.7	48
54	A Theoretical Investigation of the Ni(II)-Catalyzed Hydrovinylation of Styrene. Organometallics, 2009, 28, 3552-3566.	2.3	47

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55	Stereoselective Cyclization of Functionalized 1,<i>n</i>-Diynes Mediated by [Xâˆ'Y] Reagents [Xâˆ'Y = R₃Siâˆ'SnRâ€²₃ or (R₂N)₂Bâˆ'SnRâ€²₃]: Synthesis and Properties of Atropisomeric 1,3-Dienes. Journal of the American Chemical Society, 2010, 132, 13078-13087.	13.7	45
56	Exceptionally Active Yttriumâˆ'Salen Complexes for the Catalyzed Ring Opening of Epoxides by TMSCN and TMSN3. Journal of Organic Chemistry, 2007, 72, 8648-8655.	3.2	44
57	A New Paradigm in Enantioselective Cobalt Catalysis: Cationic Cobalt(I) Catalysts for Heterodimerization, Cycloaddition, and Hydrofunctionalization Reactions of Olefins. Accounts of Chemical Research, 2021, 54, 4545-4564.	15.6	44
58	Axial Chirality in 1,4-Disubstituted (ZZ)-1,3-Dienes. Surprisingly Low Energies of Activation for the Enantiomerization in Synthetically Useful Fluxional Molecules. Journal of the American Chemical Society, 2003, 125, 15402-15410.	13.7	38
59	Reactivity and Selectivity in Hydrovinylation of Strained Alkenes. Journal of Organic Chemistry, 2010, 75, 7636-7643.	3.2	34
60	Low pressure vinylation of aryl and vinyl halides via Heckâ€"Mizoroki reactions using ethylene. Tetrahedron, 2010, 66, 1102-1110.	1.9	33
61	Triarylphosphine Ligands with Hemilabile Alkoxy Groups: Ligands for Nickel(II)â€Catalyzed Olefin Dimerization Reactions. Hydrovinylation of Vinylarenes, 1,3â€Dienes, and Cycloisomerization of 1,6â€Dienes. Advanced Synthesis and Catalysis, 2014, 356, 2281-2292.	4.3	33
62	Demystifying Cp₂Ti(H)Cl and Its Enigmatic Role in the Reactions of Epoxides with Cp₂TiCl. Organometallics, 2018, 37, 4801-4809.	2.3	32
63	Cationic Co(I) Catalysts for Regiodivergent Hydroalkenylation of 1,6-Enynes: An Uncommon <i>cis</i>-Î²-Câ€"H Activation Leads to <i>Z</i>-Selective Coupling of Acrylates. ACS Catalysis, 2021, 11, 9605-9617.	11.2	32
64	Russian Nesting Doll Complexes of Molecular Baskets and Zinc Containing TPA Ligands. Journal of the American Chemical Society, 2016, 138, 8253-8258.	13.7	31
65	Î±- and Î²-Functionalized Ketones from 1,3-Dienes and Aldehydes: Control of Regio- and Enantioselectivity in Hydroacylation of 1,3-Dienes. Journal of the American Chemical Society, 2021, 143, 12825-12835.	13.7	30
66	(R)-3-METHYL-3-PHENYL-1-PENTENE VIA CATALYTIC ASYMMETRIC HYDROVINYLATION. Organic Syntheses, 2008, 85, 248.	1.0	27
67	Highly Efficient Catalytic Dimerization of Styrenes <i>via</i> Cationic Palladium(II) Complexes. Advanced Synthesis and Catalysis, 2013, 355, 3633-3638.	4.3	20
68	Broadly Applicable Stereoselective Syntheses of Serrulatane, Amphilectane Diterpenes, and Their Diastereoisomeric Congeners Using Asymmetric Hydrovinylation for Absolute Stereochemical Control. Journal of the American Chemical Society, 2018, 140, 9868-9881.	13.7	20
69	Mechanism of Cobalt-Catalyzed Heterodimerization of Acrylates and 1,3-Dienes. A Potential Role of Cationic Cobalt(I) Intermediates. ACS Catalysis, 2020, 10, 4337-4348.	11.2	20
70	Four Mechanistic Mysteries: The Benefits of Writing a Critical Review. Angewandte Chemie - International Edition, 2021, 60, 2194-2201.	13.8	19
71	Tunable Phosphoramidite Ligands for Asymmetric Hydrovinylation: Ligands par excellence for Generation of All-Carbon Quaternary Centers. Synthesis, 2009, 2009, 2089-2100.	2.3	15
72	On the stereochemistry of acetylide additions to highly functionalized biphenylcarbaldehydes and multi-component cyclization of 1,n-diynes. Syntheses of dibenzocyclooctadiene lignans. Chemical Science, 2012, 3, 1221.	7.4	15

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73	The reaction of Î²,Î³âˆ’epoxy alcohols with titanium(III) reagents. A proposed role for intramolecular hydrogen bonding. Tetrahedron, 2019, 75, 130662.	1.9	15
74	Î³ Câ€“H Functionalization of Amines via Triple H-Atom Transfer of a Vinyl Sulfonyl Radical Chaperone. Journal of the American Chemical Society, 2022, 144, 13366-13373.	13.7	15
75	Conformation and reactivity in dibenzocyclooctadienes (DBCOD). A general approach to the total synthesis of fully substituted DBCOD lignans via borostannylative cyclization of Î±,Ï‰-diynes. Chemical Science, 2013, 4, 3979.	7.4	10
76	Examining the Scope and Thermodynamics of Assembly in Nesting Complexes Comprising Molecular Baskets and TPA Ligands. Organic Letters, 2017, 19, 4932-4935.	4.6	10
77	(R)-2,2'-BINAPHTHOYL-(S,S)-DI(1-PHENYLETHYL) AMINOPHOSPHINE. SCALABLE PROTOCOLS FOR THE SYNTHESES OF PHOSPHORAMIDITE (FERINGA) LIGANDS. Organic Syntheses, 2008, 85, 238-247.	1.0	9
78	Four Mechanistic Mysteries: The Benefits of Writing a Critical Review. Angewandte Chemie, 2021, 133, 2222-2229.	2.0	8
79	Catalytic Enantioselective Hydrovinylation of Trialkylsilyloxy and Acetoxy-1,3-Dienes: Cationic Co(I) Complexes for the Synthesis of Chiral Enolate Surrogates and Their Applications for Synthesis of Ketones and Cross-Coupling Reagents in High Enantiomeric Purity. ACS Catalysis, 2022, 12, 5094-5111.	11.2	7
80	Mechanism and Stereoselection in a Y-Catalyzed Transacylation Reaction. A Computational Modeling Study. Journal of Organic Chemistry, 2010, 75, 2369-2381.	3.2	6
81	Activator-free single-component Co(<scp>i</scp>)-catalysts for regio- and enantioselective heterodimerization and hydroacylation reactions of 1,3-dienes. New reduction procedures for synthesis of [L]Co(<scp>i</scp>)-complexes and comparison to <i>in situ</i> generated catalysts. Dalton Transactions, 2022, 51, 10148-10159.	3.3	5
82	Heterodimerization of Olefins. Part 1. Hydrovinylation Reactions of Olefins that Are Amenable to Asymmetric Catalysis.. ChemInform, 2004, 35, no.	0.0	0