

DONNA G. BLACKMOND – PUBLICATIONS

1. Deng, M.; Yu, J.; Blackmond, D.G. Kinetic resolution as a general approach to enantioenrichment in prebiotic chemistry. *Acc Chem Res* **2024**. PMID: 39115809.
2. Blackmond, D.G.; Emmert, M.; Huryn, D.M.; Neidig, M.L.; Schaub, T.; Topczewski, J.J.; Bravo-Altamirano, K.; Buchan, Z.; Cabrera, P.J. Academia or industry: Lessons on choosing career paths—There may be more than one fork in the road ahead. *Org Lett* **2024**, 26 (14), 2682-2685. PMID: 38606472.
3. Yu, J.; Darú, A.; Deng, M.; Blackmond, D.G. Prebiotic access to enantioenriched amino acids via peptide-mediated transamination reactions. *Proc Natl Acad Sci USA* **2024**, 121 (7), e2315447121. PMID: 38315856.
4. Deng, M.; Yu, J.; Blackmond, D.G. Symmetry breaking and chiral amplification in prebiotic ligation reactions. *Nature* **2024**, 626 (8001), 1019-1024. PMID: 38418914.
5. Burés, J.; Armstrong, A.; Blackmond, D.G. A tutorial on kinetic-assisted mechanistic analysis in asymmetric aminocatalysis. In: *Asymmetric organocatalysis: New strategies, catalysts, and opportunities*. Eds. L. Albrecht; A. Albrecht; L. Dell'Amico. Wiley VCH Verlag GmbH, **2023**; pp. 657-678.
6. de Gombert, A.; Darù, A.; Ahmed, T.S.; Haibach, M.C.; Li-Matsuura, R.; Yang, C.; Henry, R.F.; Cook, S.P.; Shekhar, S.; Blackmond, D.G. Mechanistic insight into Cu-catalyzed C–N coupling of hindered aryl iodides and anilines using a pyrrol-ol ligand enables development of mild and homogeneous reaction conditions. *ACS Catal* **2023**, 13 (5), 2904-2915.
7. Wei, B.; Sharland, J.C.; Blackmond, D.G.; Musaev, D.G.; Davies, H.M.L. In-situ kinetic studies of Rh(II)-catalyzed C-H functionalization to achieve high catalyst turnover numbers. *ACS Catal* **2022**, 12 (21), 13400-13410. PMID: 37274060.
8. Ali, C.; Blackmond, D.G.; Burés, J. Kinetic rationalization of nonlinear effects in asymmetric catalytic cascade reactions under Curtin-Hammett conditions. *ACS Catal* **2022**, 12 (10), 5776-5785. PMID: 35633899.
9. Hao, W.; Joe, C.L.; Darù, A.; Ayers, S.; Ramirez, A.; Sandhu, B.; Daley, R.A.; Chen, J.S.; Schmidt, M.A.; Blackmond, D.G. Kinetic and thermodynamic considerations in the Rh-catalyzed enantioselective hydrogenation of 2-pyridyl-substituted alkenes. *ACS Catal* **2022**, 12 (10), 5961-5969. PMID: 37727697.

10. Gnaim, S.; Bauer, A.; Zhang, H.J.; Chen, L.; Gannett, C.; Malapit, C.A.; Hill, D.E.; Vogt, D.; Tang, T.; Daley, R.A.; Hao, W.; Zeng, R.; Quertenmont, M.; Beck, W.D.; Kandahari, E.; Vantourout, J.C.; Echeverria, P.G.; Abruna, H.D.; Blackmond, D.G.; Minteer, S.D.; Reisman, S.E.; Sigman, M.S.; Baran, P.S. Cobalt-electrocatalytic HAT for functionalization of unsaturated C-C bonds. *Nature* **2022**, 605 (7911), 687-695. PMID: 35614246.
11. Hao, W.; Joe, C.L.; Ayers, S.; Darù, A.; Daley, R.A.; Chen, J.S.; Domanski, M.; Schmidt, M.A.; Blackmond, D.G. Ru-catalyzed enantioselective hydrogenation of 2-pyridyl-substituted alkenes and substrate-mediated H/D exchange. *ACS Catal* **2022**, 12 (2), 1150-1160. PMID: 36386561.
12. Ragan, J.A.; Chen, K.; Blackmond, D.G.; Tadross, P.M. Excellence in industrial organic synthesis 2021. *J Org Chem* **2022**, 87 (4), 1879. PMID: 35176854.
13. Huang, Y.; Knouse, K.W.; Qiu, S.; Hao, W.; Padial, N.M.; Vantourout, J.C.; Zheng, B.; Mercer, S.E.; Lopez-Ogalla, J.; Narayan, R.; Olson, R.E.; Blackmond, D.G.; Eastgate, M.D.; Schmidt, M.A.; McDonald, I.M.; Baran, P.S. A P(V) platform for oligonucleotide synthesis. *Science* **2021**, 373 (6560), 1265-1270. PMID: 34516793.
14. Legnani, L.; Darù, A.; Jones, A.X.; Blackmond, D.G. Mechanistic insight into the origin of stereoselectivity in the ribose-mediated Strecker synthesis of alanine. *J Am Chem Soc* **2021**, 143 (20), 7852-7858. PMID: 33979125.
15. Burés, J.; Armstrong, A.; Blackmond, D.G. Downstream paradigm in enamine catalysis: Comment on “On stereocontrol in organo-catalytic α -chlorinations of aldehydes”. *ChemRxiv* **2021**.
16. Gao, Y.; Hill, D.E.; Hao, W.; McNicholas, B.J.; Vantourout, J.C.; Hadt, R.G.; Reisman, S.E.; Blackmond, D.G.; Baran, P.S. Electrochemical Nozaki-Hiyama-Kishi coupling: Scope, applications, and mechanism. *J Am Chem Soc* **2021**, 143 (25), 9478-9488. PMID: 34128671.
17. Barton, L.M.; Chen, L.; Blackmond, D.G.; Baran, P.S. Electrochemical borylation of carboxylic acids. *Proc Natl Acad Sci USA* **2021**, 118 (34), e2109408118. PMID: 34404720.
18. Yu, J.; Jones, A.X.; Legnani, L.; Blackmond, D.G. Prebiotic access to enantioenriched glyceraldehyde mediated by peptides. *Chem Sci* **2021**, 12 (18), 6350-6354. PMID: 34084433.
19. Hu, J.; Cochrane, W.G.; Jones, A.X.; Blackmond, D.G.; Paegel, B.M. Chiral lipid bilayers are enantioselectively permeable. *Nat Chem* **2021**, 13 (8), 786-791. PMID: 34112989.

20. Hao, W.; Bay, K.L.; Harris, C.F.; King, D.S.; Guzei, I.A.; Aristov, M.M.; Zhuang, Z.; Plata, R.E.; Hill, D.E.; Houk, K.N.; Berry, J.F.; Yu, J.-Q.; Blackmond, D.G. Probing catalyst speciation in Pd-MPAAM-catalyzed enantioselective C(sp³)–H arylation: Catalyst improvement via destabilization of off-cycle species. *ACS Catal* **2021**, *11* (17), 11040-11048.
21. Matsuura, R.; Karunanananda, M.K.; Liu, M.; Nguyen, N.; Blackmond, D.G.; Engle, K.M. Mechanistic studies of Pd(II)-catalyzed E/Z isomerization of unactivated alkenes: evidence for a monometallic nucleopalladation pathway. *ACS Catal* **2021**, *11* (7), 4239-4246. PMID: 34422450.
22. Hill, D.E.; Yu, J.Q.; Blackmond, D.G. Insights into the role of transient chiral mediators and pyridone ligands in asymmetric Pd-catalyzed C-H functionalization. *J Org Chem* **2020**, *85* (21), 13674-13679. PMID: 32991170.
23. Schmidt, O.P.; Blackmond, D.G. Temperature-scanning reaction protocol offers insights into activation parameters in the Buchwald–Hartwig Pd-catalyzed amination of aryl halides. *ACS Catal* **2020**, *10* (15), 8926-8932.
24. Jones, A.X.; Wen, L.; Legnani, L.; Chen, J.; Blackmond, D.G. Asymmetric amplification in peptide-catalyzed formation of tetrose sugars from nearly racemic amino acids. *J Syst Chem* **2020**, *8*, 63-72.
25. Murray, J.I.; Sanders, J.N.; Richardson, P.F.; Houk, K.N.; Blackmond, D.G. Isotopically directed symmetry breaking and enantioenrichment in attrition-enhanced deracemization. *J Am Chem Soc* **2020**, *142* (8), 3873-3879. PMID: 32027134.
26. Blackmond, D.G. Autocatalytic models for the origin of biological homochirality. *Chem Rev* **2020**, *120* (11), 4831-4847. PMID: 31797671. — Invited contribution to a special issue on “Prebiotic Chemistry”
27. Wei, B.; Sharland, J.C.; Lin, P.; Wilkerson-Hill, S.M.; Fullilove, F.A.; McKinnon, S.; Blackmond, D.G.; Davies, H.M.L. In situ kinetic studies of Rh(II)-catalyzed asymmetric cyclopropanation with low catalyst loadings. *ACS Catal* **2020**, *10* (2), 1161-1170.
28. Xiang, J.; Shang, M.; Kawamata, Y.; Lundberg, H.; Reisberg, S.H.; Chen, M.; Mykhailiuk, P.; Beutner, G.; Collins, M.R.; Davies, A.; Del Bel, M.; Gallego, G.M.; Spangler, J.E.; Starr, J.; Yang, S.; Blackmond, D.G.; Baran, P.S. Hindered dialkyl ether synthesis with electrogenerated carbocations. *Nature* **2019**, *573* (7774), 398-402. PMID: 31501569.

29. Schmidt, O.P.; Dechert-Schmitt, A.M.; Garnsey, M.R.; Wisniewska, H.M.; Blackmond, D.G. Kinetic analysis of catalytic organic reactions using a temperature scanning protocol. *ChemCatChem* **2019**, 11 (16), 3808-3813. — Invited contribution for special issue “Women of Catalysis”
30. Hawbaker, N.A.; Blackmond, D.G. Energy threshold for chiral symmetry breaking in molecular self-replication. *Nat Chem* **2019**, 11 (10), 957-962. PMID: 31548669.
31. Wisniewski, S.R.; Savage, S.A.; Romero, E.O.; Eastgate, M.D.; Tan, Y.; Simmons, E.M.; Plata, R.E.; Sowa, J.R., Jr.; Blackmond, D.G. Utilizing native directing groups: Mechanistic understanding of a direct arylation leads to formation of tetracyclic heterocycles via tandem intermolecular, intramolecular C-H activation. *J Org Chem* **2019**, 84 (12), 7961-7970. PMID: 31117568.
32. Dechert-Schmitt, A.-M.; Garnsey, M.R.; Wisniewska, H.M.; Murray, J.I.; Lee, T.; Kung, D.W.; Sach, N.; Blackmond, D.G. Highly modular synthesis of 1,2-diketones via multicomponent coupling reactions of isocyanides as CO equivalents. *ACS Catal* **2019**, 9 (5), 4508-4515.
33. Blackmond, D.G. The origin of biological homochirality. *Cold Spring Harb Perspect Biol* **2019**, 11 (3), a032540. PMID: 30824575.
34. Wang, J.; Shang, M.; Lundberg, H.; Feu, K.S.; Hecker, S.J.; Qin, T.; Blackmond, D.G.; Baran, P.S. Cu-Catalyzed decarboxylative borylation. *ACS Catal* **2018**, 8 (10), 9537-9542. PMID: 30505624.
35. Hawbaker, N.A.; Blackmond, D.G. Rationalization of asymmetric amplification via autocatalysis triggered by isotopically chiral molecules. *ACS Cent Sci* **2018**, 4 (6), 776-780. PMID: 29974074.
36. Mower, M.P.; Blackmond, D.G. In-situ monitoring of enantiomeric excess during a catalytic kinetic resolution. *ACS Catal* **2018**, 8 (7), 5977-5982.
37. Wang, J.; Lundberg, H.; Asai, S.; Martín-Acosta, P.; Chen, J.S.; Brown, S.; Farrell, W.; Dushin, R.G.; O'Donnell, C.J.; Ratnayake, A.S.; Richardson, P.; Liu, Z.; Qin, T.; Blackmond, D.G.; Baran, P.S. Kinetically guided radical-based synthesis of C(sp³))-C(sp³) linkages on DNA. *Proc Natl Acad Sci USA* **2018**, 115 (28), E6404-E6410. PMID: 29946037.
38. Hill, D.E.; Pei, Q.-I.; Zhang, E.-X.; Gage, J.R.; Yu, J.-Q.; Blackmond, D.G. A General protocol for addressing speciation of the active catalyst applied to ligand-accelerated enantioselective C(sp³)-H Bond Arylation. *ACS Catal* **2018**, 8 (2), 1528-1531.

39. Hill, D.E.; Bay, K.L.; Yang, Y.F.; Plata, R.E.; Takise, R.; Houk, K.N.; Yu, J.Q.; Blackmond, D.G. Dynamic ligand exchange as a mechanistic probe in Pd-catalyzed enantioselective C-H functionalization reactions using monoprotected amino acid ligands. *J Am Chem Soc* **2017**, 139 (51), 18500-18503. PMID: 29215885.
40. Gallagher, W.P.; Soumeillant, M.; Chen, K.; Fox, R.J.; Hsiao, Y.; Mack, B.; Iyer, V.; Fan, J.; Zhu, J.; Beutner, G.; Silverman, S.M.; Fanfair, D.D.; Glace, A.W.; Freitag, A.; Sweeney, J.; Ji, Y.; Blackmond, D.G.; Eastgate, M.D.; Conlon, D.A. Preparation of the HIV attachment inhibitor BMS-663068. Part 7. Development of a regioselective Ullmann–Goldberg–Buchwald reaction. *Org Process Res Dev* **2017**, 21 (8), 1156-1165.
41. Plata, R.E.; Hill, D.E.; Haines, B.E.; Musaev, D.G.; Chu, L.; Hickey, D.P.; Sigman, M.S.; Yu, J.Q.; Blackmond, D.G. A Role for Pd(IV) in catalytic enantioselective C-H functionalization with monoprotected amino acid ligands under mild conditions. *J Am Chem Soc* **2017**, 139 (27), 9238-9245. PMID: 28605190.
42. Liu, W.B.; Schuman, D.P.; Yang, Y.F.; Toutov, A.A.; Liang, Y.; Klare, H.F.T.; Nesnas, N.; Oestreich, M.; Blackmond, D.G.; Virgil, S.C.; Banerjee, S.; Zare, R.N.; Grubbs, R.H.; Houk, K.N.; Stoltz, B.M. Potassium tert-butoxide-catalyzed dehydrogenative C-H silylation of heteroaromatics: A combined experimental and computational mechanistic study. *J Am Chem Soc* **2017**, 139 (20), 6867-6879. PMID: 28403611.
43. Wagner, A.J.; Zubarev, D.Y.; Aspuru-Guzik, A.; Blackmond, D.G. Chiral sugars drive enantioenrichment in prebiotic amino acid synthesis. *ACS Cent Sci* **2017**, 3 (4), 322-328. PMID: 28470050.
44. Gherase, D.; Hazen, R.M.; Krishnamurthy, R.; Blackmond, D.G. Mineral-induced enantioenrichment of tartaric acid. *Synlett* **2017**, 28 (01), 89-92. — Cluster on Prebiotic Chemistry, invited submission
45. Wagner, A.J.; Blackmond, D.G. The future of prebiotic chemistry. *ACS Cent Sci* **2016**, 2 (11), 775-777. PMID: 27924306. — invited First Reactions Essay
46. Shi, Q.; Mower, M.P.; Blackmond, D.G.; Rebek, J., Jr. Water-soluble cavitands promote hydrolyses of long-chain diesters. *Proc Natl Acad Sci USA* **2016**, 113 (33), 9199-203. PMID: 27482089.
47. Stich, M.; Ribó, J.M.; Blackmond, D.G.; Hochberg, D. Necessary conditions for the emergence of homochirality via autocatalytic self-replication. *J Chem Phys* **2016**, 145 (7), 074111. PMID: 27544091.
48. Masseroni, D.; Mosca, S.; Mower, M.P.; Blackmond, D.G.; Rebek, J., Jr. Cavitands as reaction vessels and blocking groups for selective reactions in water. *Angew Chem Int Ed Engl* **2016**, 55 (29), 8290-3. PMID: 27254667.

49. Burés, J.; Armstrong, A.; Blackmond, D.G. Explaining anomalies in enamine catalysis: "Downstream species" as a new paradigm for stereocontrol. *Acc Chem Res* **2016**, 49 (2), 214-22. PMID: 26830669.
50. Elsila, J.E.; Aponte, J.C.; Blackmond, D.G.; Burton, A.S.; Dworkin, J.P.; Glavin, D.P. Meteoritic amino acids: Diversity in compositions reflects parent body histories. *ACS Cent Sci* **2016**, 2 (6), 370-9. PMID: 27413780.
51. O'Brien, A.G.; Luca, O.R.; Baran, P.S.; Blackmond, D.G. In situ FTIR spectroscopic monitoring of electrochemically controlled organic reactions in a recycle reactor. *React Chem Eng* **2016**, 1 (1), 90-95. PMID: 27069673.
52. Hawbaker, N.; Wittgrove, E.; Christensen, B.; Sach, N.; Blackmond, D.G. Dispersion in compartmentalized flow systems: Influence of flow patterns on reactivity. *Org Process Res Dev* **2016**, 20 (2), 465-473.
53. Baxter, R.D.; Liang, Y.; Hong, X.; Brown, T.A.; Zare, R.N.; Houk, K.N.; Baran, P.S.; Blackmond, D.G. Mechanistic insights into two-phase radical C-H arylations. *ACS Cent Sci* **2015**, 1 (8), 456-462. PMID: 26640819.
54. Ji, Y.; Plata, R.E.; Regens, C.S.; Hay, M.; Schmidt, M.; Razler, T.; Qiu, Y.; Geng, P.; Hsiao, Y.; Rosner, T.; Eastgate, M.D.; Blackmond, D.G. Mono-oxidation of bidentate bis-phosphines in catalyst activation: Kinetic and mechanistic studies of a Pd/xantphos-catalyzed C-H functionalization. *J Am Chem Soc* **2015**, 137 (41), 13272-81. PMID: 26461028.
55. Blackmond, D.G. Kinetic profiling of catalytic organic reactions as a mechanistic tool. *J Am Chem Soc* **2015**, 137 (34), 10852-66. PMID: 26285166. — invited Perspective article
56. Ruiz-Castillo, P.; Blackmond, D.G.; Buchwald, S.L. Rational ligand design for the arylation of hindered primary amines guided by reaction progress kinetic analysis. *J Am Chem Soc* **2015**, 137 (8), 3085-92. PMID: 25651374.
57. Mower, M.P.; Blackmond, D.G. Mechanistic rationalization of unusual sigmoidal kinetic profiles in the Machetti-De Sarlo cycloaddition reaction. *J Am Chem Soc* **2015**, 137 (6), 2386-91. PMID: 25611219.
58. Ji, Y.; Benkovics, T.; Beutner, G.L.; Sfouggatakis, C.; Eastgate, M.D.; Blackmond, D.G. Mechanistic insights into the vanadium-catalyzed Achmatowicz rearrangement of furfrol. *J Org Chem* **2015**, 80 (3), 1696-702. PMID: 25562708.
59. O'Brien, A.G.; Maruyama, A.; Inokuma, Y.; Fujita, M.; Baran, P.S.; Blackmond, D.G. Radical C-H functionalization of heteroarenes under electrochemical control. *Angew Chem Int Ed Engl* **2014**, 53 (44), 11868-71. PMID: 25209429. — Hot Paper

60. Burés, J.; Dingwall, P.; Armstrong, A.; Blackmond, D.G. Rationalization of an unusual solvent-induced inversion of enantiomeric excess in organocatalytic selenylation of aldehydes. *Angew Chem Int Ed Engl* **2014**, 53 (33), 8700-4. PMID: 25044727.
61. Ji, Y.; Blackmond, D.G. The role of reversibility in the enantioselective conjugate addition of α,α -disubstituted aldehydes to nitro-olefins catalyzed by primary amine thioureas. *Catal Sci Technol* **2014**, 4 (10), 3505-3509.
62. Gherase, D.; Conroy, D.; Matar, O.K.; Blackmond, D.G. Experimental and theoretical study of the emergence of single chirality in attrition-enhanced deracemization. *Crystl Growth Des* **2014**, 14 (3), 928-937.
63. O'Hara, F.; Blackmond, D.G.; Baran, P.S. Radical-based regioselective C-H functionalization of electron-deficient heteroarenes: scope, tunability, and predictability. *J Am Chem Soc* **2013**, 135 (32), 12122-34. PMID: 23859263.
64. Burés, J.; Armstrong, A.; Blackmond, D.G. The interplay of thermodynamics and kinetics in dictating organocatalytic reactivity and selectivity. *Pure Appl Chem* **2013**, 85 (10), 1919-1934.
65. Baxter, R.D.; Blackmond, D.G. In situ kinetic studies of the trifluoromethylation of caffeine with $Zn(SO_2CF_3)_2$. *Tetrahedron* **2013**, 69 (27), 5604-5608.
66. Hein, J.E.; Gherase, D.; Blackmond, D.G. Chemical and physical models for the emergence of biological homochirality. *Top Curr Chem* **2013**, 333, 83-108. PMID: 23271377.
67. Hein, J.E.; Cao, B.H.; Viedma, C.; Kellogg, R.M.; Blackmond, D.G. Pasteur's tweezers revisited: On the mechanism of attrition-enhanced deracemization and resolution of chiral conglomerate solids. *J Am Chem Soc* **2012**, 134 (30), 12629-36. PMID: 22779695.
68. Gehring, T.; Quaranta, M.; Odell, B.; Blackmond, D.G.; Brown, J.M. Observation of a transient intermediate in Soai's asymmetric autocatalysis: insights from 1H NMR turnover in real time. *Angew Chem Int Ed Engl* **2012**, 51 (38), 9539-42. PMID: 22936384.
69. Burés, J.; Armstrong, A.; Blackmond, D.G. Curtin-Hammett paradigm for stereocontrol in organocatalysis by diarylprolinol ether catalysts. *J Am Chem Soc* **2012**, 134 (15), 6741-50. PMID: 22452319.
70. Baxter, R.D.; Sale, D.; Engle, K.M.; Yu, J.Q.; Blackmond, D.G. Mechanistic rationalization of unusual kinetics in Pd-catalyzed C-H olefination. *J Am Chem Soc* **2012**, 134 (10), 4600-6. PMID: 22324814.

71. Hein, J.E.; Blackmond, D.G. On the origin of single chirality of amino acids and sugars in biogenesis. *Acc Chem Res* **2012**, *45* (12), 2045-54. PMID: 22353168.
72. Fujiwara, Y.; Dixon, J.A.; Rodriguez, R.A.; Baxter, R.D.; Dixon, D.D.; Collins, M.R.; Blackmond, D.G.; Baran, P.S. A new reagent for direct difluoromethylation. *J Am Chem Soc* **2012**, *134* (3), 1494-7. PMID: 22229949.
73. Burés, J.; Armstrong, A.; Blackmond, D.G. Kinetic correlation between aldehyde/enamine stereoisomers in reactions between aldehydes with α -stereocenters and chiral pyrrolidine-based catalysts. *Chem Sci* **2012**, *3* (4), 1273-1277.
74. Hein, J.E.; Burés, J.; Lam, Y.H.; Hughes, M.; Houk, K.N.; Armstrong, A.; Blackmond, D.G. Enamine carboxylates as stereodetermining intermediates in proline catalysis. *Org Lett* **2011**, *13* (20), 5644-7. PMID: 21958394.
75. Hein, J.E.; Tse, E.; Blackmond, D.G. A route to enantiopure RNA precursors from nearly racemic starting materials. *Nat Chem* **2011**, *3* (9), 704-6. PMID: 21860459.
76. Hein, J.E.; Armstrong, A.; Blackmond, D.G. Kinetic profiling of proline-catalyzed α -amination of aldehydes. *Org Lett* **2011**, *13* (16), 4300-3. PMID: 21761822.
77. Ji, Y.; Brueckl, T.; Baxter, R.D.; Fujiwara, Y.; Seiple, I.B.; Su, S.; Blackmond, D.G.; Baran, P.S. Innate C-H trifluoromethylation of heterocycles. *Proc Natl Acad Sci USA* **2011**, *108* (35), 14411-5. PMID: 21844378.
78. Burés, J.; Armstrong, A.; Blackmond, D.G. Mechanistic rationalization of organocatalyzed conjugate addition of linear aldehydes to nitro-olefins. *J Am Chem Soc* **2011**, *133* (23), 8822-5. PMID: 21568340.
79. Blackmond, D.G. The origin of biological homochirality. *Philos Trans R Soc Lond B Biol Sci* **2011**, *366* (1580), 2878-84. PMID: 21930578.
80. Ferretti, A.C.; Brennan, C.; Blackmond, D.G. Reservoir catalysis: Rationalization of anomalous reaction orders in Pd-catalyzed amination of aryl halides. *Inorg Chim Acta* **2011**, *369* (1), 292-295.
81. Quaranta, M.; Gehring, T.; Odell, B.; Brown, J.M.; Blackmond, D.G. Unusual inverse temperature dependence on reaction rate in the asymmetric autocatalytic alkylation of pyrimidyl aldehydes. *J Am Chem Soc* **2010**, *132* (43), 15104-7. PMID: 20942400.
82. Blackmond, D.G.; Moran, A.; Hughes, M.; Armstrong, A. Unusual reversal of enantioselectivity in the proline-mediated alpha-amination of aldehydes induced by tertiary amine additives. *J Am Chem Soc* **2010**, *132* (22), 7598-9. PMID: 20465280.

83. Blackmond, D.G. Kinetic aspects of non-linear effects in asymmetric synthesis, catalysis, and autocatalysis. *Tetrahedron: Asymmetry* **2010**, 21 (11), 1630-1634.
84. Blackmond, D.G. The origin of biological homochirality. *Cold Spring Harb Perspect Biol* **2010**, 2 (5), a002147. PMID: 20452962.
85. Valera, F.E.; Quaranta, M.; Moran, A.; Blacker, J.; Armstrong, A.; Cabral, J.T.; Blackmond, D.G. The flow's the thing... Or is it? Assessing the merits of homogeneous reactions in flask and flow. *Angew Chem Int Ed Engl* **2010**, 49 (14), 2478-85. PMID: 20187051.
86. Viedma, C.; Verkuijl, B.J.; Ortiz, J.E.; de Torres, T.; Kellogg, R.M.; Blackmond, D.G. Solution-phase racemization in the presence of an enantiopure solid phase. *Chemistry* **2010**, 16 (16), 4932-7. PMID: 20358554.
87. Zotova, N.; Moran, A.; Armstrong, A.; Blackmond, D.G. A coherent mechanistic rationale for additive effects and autoinductive behaviour in proline-mediated reactions. *Adv Synth Catal* **2009**, 351 (17), 2765-2769.
88. Zotova, N.; Broadbelt, L.J.; Armstrong, A.; Blackmond, D.G. Kinetic and mechanistic studies of proline-mediated direct intermolecular aldol reactions. *Bioorg Med Chem Lett* **2009**, 19 (14), 3934-7. PMID: 19362473.
89. Blackmond, D.G. An examination of the role of autocatalytic cycles in the chemistry of proposed primordial reactions. *Angew Chem Int Ed Engl* **2009**, 48 (2), 386-90. PMID: 19053125.
90. Blackmond, D.G. "If pigs could fly" chemistry: A tutorial on the principle of microscopic reversibility. *Angew Chem Int Ed Engl* **2009**, 48 (15), 2648-54. PMID: 19117002.
91. Blackmond, D.G. Challenging the concept of "recycling" as a mechanism for the evolution of homochirality in chemical reactions. *Chirality* **2009**, 21 (3), 359-62. PMID: 18570293.
92. Klussmann, M.; Blackmond, D.G. Origin of homochirality. In: *Chemical evolution II: From the origins of life to modern society*. American Chemical Society, **2009**; Vol. 1025, pp. 133-145.
93. Izumi, T.; Blackmond, D.G. The double solubility rule holds for racemizing enantiomers. *Chemistry* **2009**, 15 (13), 3065-8. PMID: 19222072.
94. Viedma, C.; Ortiz, J.E.; de Torres, T.; Izumi, T.; Blackmond, D.G. Evolution of solid phase homochirality for a proteinogenic amino acid. *J Am Chem Soc* **2008**, 130 (46), 15274-5. PMID: 18954052.

95. Blackmond, D.G. Response to “Comment on ‘A re-examination of reversibility in reaction models for the spontaneous emergence of homochirality’”. *J Phys Chem B* **2008**, 112 (31), 9553-9555.
96. Blackmond, D.G.; Matar, O.K. Re-examination of reversibility in reaction models for the spontaneous emergence of homochirality. *J Phys Chem B* **2008**, 112 (16), 5098-104. PMID: 18370430.
97. Ferretti, A.C.; Mathew, J.S.; Ashworth, I.; Purdy, M.; Brennan, C.; Blackmond, D.G. Mechanistic inferences derived from competitive catalytic reactions: Pd(binap)-catalyzed amination of aryl halides. *Adv Synth Catal* **2008**, 350 (7-8), 1007-1012.
98. Noorduin, W.L.; Izumi, T.; Millemaggi, A.; Leeman, M.; Meekes, H.; Van Enckevort, W.J.; Kellogg, R.M.; Kaptein, B.; Vlieg, E.; Blackmond, D.G. Emergence of a single solid chiral state from a nearly racemic amino acid derivative. *J Am Chem Soc* **2008**, 130 (4), 1158-9. PMID: 18173274.
99. Zotova, N.; Mathew, S.P.; Iwamura, H.; Blackmond, D.G. Reaction progress kinetic analysis: A powerful methodology for streamlining pharmaceutical reaction steps. In: *Process chemistry in the pharmaceutical industry*. Eds. K. Gadamesetti; T. Braish. CRC Press, New York, **2008**; Vol. 2 - Challenges in an Ever Changing Climate, pp. 455-464.
100. Zotova, N.; Franzke, A.; Armstrong, A.; Blackmond, D.G. Clarification of the role of water in proline-mediated aldol reactions. *J Am Chem Soc* **2007**, 129 (49), 15100-1. PMID: 18001021.
101. Blackmond, D.G. Response to “Comments on a possible transition to solid-phase homochirality”. *Chem Eur J* **2007**, 13 (36), 10306-10311.
102. Klussmann, M.; Izumi, T.; White, A.J.; Armstrong, A.; Blackmond, D.G. Emergence of solution-phase homochirality via crystal engineering of amino acids. *J Am Chem Soc* **2007**, 129 (24), 7657-60. PMID: 17530759.
103. Ferretti, A.C.; Mathew, J.S.; Blackmond, D.G. Reaction calorimetry as a tool for understanding reaction mechanisms: application to Pd-catalyzed reactions. *Ind Eng Chem Res* **2007**, 46 (25), 8584-8589.
104. Blackmond, D.G.; Armstrong, A.; Coombe, V.; Wells, A. Water in organocatalytic processes: Debunking the myths. *Angew Chem Int Ed Engl* **2007**, 46 (21), 3798-800. PMID: 17361975.
105. Blackmond, D.G.; Klussmann, M. Spoilt for choice: Assessing phase behavior models for the evolution of homochirality. *Chem Commun (Camb)* **2007**, (39), 3990-6. PMID: 17912393.

106. Blackmond, D.G. "Chiral amnesia" as a driving force for solid-phase homochirality. *Chemistry* **2007**, 13 (12), 3290-5. PMID: 17366493.
107. Phua, P.H.; Mathew, S.P.; White, A.J.; de Vries, J.G.; Blackmond, D.G.; Hii, K.K. Elucidating the mechanism of the asymmetric aza-Michael reaction. *Chemistry* **2007**, 13 (16), 4602-13. PMID: 17352437.
108. Blackmond, D.G. Kinetic investigations of the Soai autocatalytic reaction. In: *Asymmetric synthesis: The essentials*. Eds. M. Christmann; S. Bräse. Wiley, New York, **2007**; pp. 181-185.
109. Blackmond, D.G.; Klussmann, M. Investigating the evolution of biomolecular homochirality. *AIChE Journal* **2007**, 53 (1), 2-8.
110. Klussmann, M.; Iwamura, H.; Mathew, S.P.; Wells, D.H., Jr.; Pandya, U.; Armstrong, A.; Blackmond, D.G. Thermodynamic control of asymmetric amplification in amino acid catalysis. *Nature* **2006**, 441 (7093), 621-3. PMID: 16738656.
111. Klussmann, M.; White, A.J.; Armstrong, A.; Blackmond, D.G. Rationalization and prediction of solution enantiomeric excess in ternary phase systems. *Angew Chem Int Ed Engl* **2006**, 45 (47), 7985-9. PMID: 16986192.
112. Klussmann, M.; Mathew, S.P.; Iwamura, H.; Wells, D.H., Jr.; Armstrong, A.; Blackmond, D.G. Kinetic rationalization of nonlinear effects in asymmetric catalysis based on phase behavior. *Angew Chem Int Ed Engl* **2006**, 45 (47), 7989-92. PMID: 17061299.
113. Mathew, S.P.; Klussmann, M.; Iwamura, H.; Wells, D.H., Jr.; Armstrong, A.; Blackmond, D.G. A mechanistic rationalization of unusual kinetic behavior in proline-mediated C-O and C-N bond-forming reactions. *Chem Commun (Camb)* **2006**, 41, 4291-3. PMID: 17047844.
114. Blackmond, D.G.; Schultz, T.; Mathew, J.S.; Loew, C.; Rosner, T.; Pfaltz, A. Comprehensive kinetic screening of palladium catalysts for Heck reactions. *Synlett* **2006**, 2006 (18), 3135-3139.
115. Blackmond, D.G.; Hodnett, N.S.; Lloyd-Jones, G.C. Mechanistic implications of pseudo zero order kinetics in kinetic resolutions. *J Am Chem Soc* **2006**, 128 (23), 7450-1. PMID: 16756293.
116. Mathew, J.S.; Klussmann, M.; Iwamura, H.; Valera, F.; Futran, A.; Emanuelsson, E.A.; Blackmond, D.G. Investigations of Pd-catalyzed ArX coupling reactions informed by reaction progress kinetic analysis. *J Org Chem* **2006**, 71 (13), 4711-22. PMID: 16776495.

117. Shekhar, S.; Ryberg, P.; Hartwig, J.F.; Mathew, J.S.; Blackmond, D.G.; Strieter, E.R.; Buchwald, S.L. Reevaluation of the mechanism of the amination of aryl halides catalyzed by BINAP-ligated palladium complexes. *J Am Chem Soc* **2006**, 128 (11), 3584-91. PMID: 16536531.
118. Blackmond, D.G. Mechanistic study of the Soai autocatalytic reaction informed by kinetic analysis. *Tetrahedron: Asymmetry* **2006**, 17 (4), 584-589.
119. Blackmond, D.G.; Ropic, M.; Stefinovic, M. Kinetic studies of the asymmetric transfer hydrogenation of imines with formic acid catalyzed by Rh-diamine catalysts. *Org Process Res Dev* **2006**, 10 (3), 457-463.
120. Blackmond, D.G. Kinetic investigations of the role of catalysis in the origin of biological Homochirality. *Strem Chemiker* **2005**, XXII (1), 14-23.
121. Blackmond, D.G. Reaction progress kinetic analysis: A powerful methodology for mechanistic studies of complex catalytic reactions. *Angew Chem Int Ed Engl* **2005**, 44 (28), 4302-20. PMID: 15997457.
122. Mathew, S.P.; Gunathilagan, S.; Roberts, S.M.; Blackmond, D.G. Mechanistic insights from reaction progress kinetic analysis of the polypeptide-catalyzed epoxidation of chalcone. *Org Lett* **2005**, 7 (22), 4847-50. PMID: 16235904.
123. Reetz, M.T.; Meiswinkel, A.; Mehler, G.; Angermund, K.; Graf, M.; Thiel, W.; Mynott, R.; Blackmond, D.G. Why are BINOL-based monophosphites such efficient ligands in Rh-catalyzed asymmetric olefin hydrogenation? *J Am Chem Soc* **2005**, 127 (29), 10305-13. PMID: 16028942.
124. Arseniyadis, S.; Subhash, P.V.; Valleix, A.; Mathew, S.P.; Blackmond, D.G.; Wagner, A.; Mioskowski, C. Tuning the enantioselective N-acetylation of racemic amines: A spectacular salt effect. *J Am Chem Soc* **2005**, 127 (17), 6138-9. PMID: 15853296.
125. Strieter, E.R.; Blackmond, D.G.; Buchwald, S.L. The role of chelating diamine ligands in the Goldberg reaction: A kinetic study on the copper-catalyzed amidation of aryl iodides. *J Am Chem Soc* **2005**, 127 (12), 4120-1. PMID: 15783164.
126. Iwamura, H.; Wells, D.H., Jr.; Mathew, S.P.; Klussmann, M.; Armstrong, A.; Blackmond, D.G. Probing the active catalyst in product-accelerated proline-mediated reactions. *J Am Chem Soc* **2004**, 126 (50), 16312-3. PMID: 15600319.
127. Iwamura, H.; Mathew, S.P.; Blackmond, D.G. In situ catalyst improvement in the proline-mediated alpha-amination of aldehydes. *J Am Chem Soc* **2004**, 126 (38), 11770-1. PMID: 15382893.

128. Mathew, S.P.; Iwamura, H.; Blackmond, D.G. Amplification of enantiomeric excess in a proline-mediated reaction. *Angew Chem Int Ed Engl* **2004**, 43 (25), 3317-21. PMID: 15213963.
129. Blackmond, D.G. Asymmetric autocatalysis and its implications for the origin of homochirality. *Proc Natl Acad Sci USA* **2004**, 101 (16), 5732-6. PMID: 15067112.
130. Buono, F.G.; Iwamura, H.; Blackmond, D.G. Physical and chemical rationalization for asymmetric amplification in autocatalytic reactions. *Angew Chem Int Ed Engl* **2004**, 43 (16), 2099-103. PMID: 15083455.
131. Nielsen, L.P.; Stevenson, C.P.; Blackmond, D.G.; Jacobsen, E.N. Mechanistic investigation leads to a synthetic improvement in the hydrolytic kinetic resolution of terminal epoxides. *J Am Chem Soc* **2004**, 126 (5), 1360-2. PMID: 14759192.
132. LeBars, J.; Dini, S.; Hawkins, J.M.; Blackmond, D.G. Mechanistic insights into anomalous kinetic behaviour in the hydrogenation of a substituted nitrobenzene. *Adv Synth Catal* **2004**, 346 (8), 943-946.
133. Richards, S.; Ropic, M.; Blackmond, D.; Walmsley, A. Quantitative determination of the catalysed asymmetric transfer hydrogenation of 1-methyl-6,7-dimethoxy-3,4-dihydroisoquinoline using in situ FTIR and multivariate curve resolution. *Anal Chim Acta* **2004**, 519 (1), 1-9.
134. Strieter, E.R.; Blackmond, D.G.; Buchwald, S.L. Insights into the origin of high activity and stability of catalysts derived from bulky, electron-rich monophosphinobiaryl ligands in the Pd-catalyzed C-N bond formation. *J Am Chem Soc* **2003**, 125 (46), 13978-80. PMID: 14611232.
135. Buono, F.G.; Blackmond, D.G. Kinetic evidence for a tetrameric transition state in the asymmetric autocatalytic alkylation of pyrimidyl aldehydes. *J Am Chem Soc* **2003**, 125 (30), 8978-9. PMID: 15369330.
136. Singh, U.K.; Strieter, E.R.; Blackmond, D.G.; Buchwald, S.L. Mechanistic insights into the Pd(BINAP)-catalyzed amination of aryl bromides: kinetic studies under synthetically relevant conditions. *J Am Chem Soc* **2002**, 124 (47), 14104-14. PMID: 12440909.
137. Buono, F.; Walsh, P.J.; Blackmond, D.G. Rationalization of anomalous nonlinear effects in the alkylation of substituted benzaldehydes. *J Am Chem Soc* **2002**, 124 (46), 13652-3. PMID: 12431076.
138. Blackmond, D.G. Requiem for the reaction rate equation? *Catal Letters* **2002**, 83 (3), 133-136.

139. Blackmond, D.G. Description of the condition for asymmetric amplification in autocatalytic reactions. *Adv Synth Catal* **2002**, 344 (2), 156-158.
140. Blackmond, D.G.; McMillan, C.R.; Ramdeehul, S.; Schorm, A.; Brown, J.M. Origins of asymmetric amplification in autocatalytic alkylzinc additions. *J Am Chem Soc* **2001**, 123 (41), 10103-4. PMID: 11592892.
141. Blackmond, D.G. Kinetic resolution using enantioimpure catalysts: Mechanistic considerations of complex rate laws. *J Am Chem Soc* **2001**, 123 (4), 545-53. PMID: 11456566.
142. Rosner, T.; Pfaltz, A.; Blackmond, D.G. Observation of unusual kinetics in Heck reactions of aryl halides: The role of non-steady-state catalyst concentration. *J Am Chem Soc* **2001**, 123 (19), 4621-2. PMID: 11457257.
143. Rosner, T.; Le Bars, J.; Pfaltz, A.; Blackmond, D.G. Kinetic studies of Heck coupling reactions using palladacycle catalysts: Experimental and kinetic modeling of the role of dimer species. *J Am Chem Soc* **2001**, 123 (9), 1848-55. PMID: 11456804.
144. Le Bars, J.; Häußner, T.; Lang, J.; Pfaltz, A.; Blackmond, D.G. A scale-transparent reaction calorimetric assay for rapid catalyst selection. *Adv Synth Catal* **2001**, 343 (2), 207-214.
145. Rosner, T.; Sears, P.J.; Nugent, W.A.; Blackmond, D.G. Kinetic investigations of product inhibition in the amino alcohol-catalyzed asymmetric alkylation of benzaldehyde with diethylzinc. *Org Lett* **2000**, 2 (16), 2511-3. PMID: 10956534.
146. Blackmond, D.G. Kinetic aspects of nonlinear effects in asymmetric catalysis. *Acc Chem Res* **2000**, 33 (6), 402-11. PMID: 10891058.
147. Blackmond, D.G.; Lightfoot, A.; Pfaltz, A.; Rosner, T.; Schnider, P.; Zimmermann, N. Enantioselective hydrogenation of olefins with phosphinoxazoline-iridium catalysts. *Chirality* **2000**, 12 (5-6), 442-9. PMID: 10824167.
148. Blackmond, D.G.; Rosner, T.; Neugebauer, T.; Reetz, M.T. Kinetic influences on enantioselectivity for non-diastereopure catalyst mixtures. *Angew Chem Int Ed Engl* **1999**, 38 (15), 2196-2199. PMID: 10425479.
149. Le Bars, J.; Specht, U.; Bradley, J.S.; Blackmond, D.G. A catalytic probe of the surface of colloidal palladium particles using Heck coupling reactions. *Langmuir* **1999**, 15 (22), 7621-7625.
150. Blackmond, D.G.; Rosner, T.; Pfaltz, A. Comprehensive kinetic screening of catalysts using reaction calorimetry. *Org Process Res Dev* **1999**, 3 (4), 275-280.

151. Blackmond, D.G. Kinetic implications of nonlinear effects in asymmetric synthesis. *J Am Chem Soc* **1998**, *120* (51), 13349-13353.
152. Blackmond, D.G. Reflections on asymmetric catalysis: A kinetic view of enantioselectivity. *CaTTech* **1998**, *3*, 17-30.
153. Siedlaczek, G.; Schwickardi, M.; Kolb, U.; Bogdanovic, B.; Blackmond, D.G. Diastereoselective reductive amination reactions using novel metal–carbon catalysts prepared from inorganic Grignard reagents. *Catal Letters* **1998**, *55* (2), 67-72.
154. Blackmond, D.G. Non-linear effects in asymmetric catalysis: Implications for organic synthesis strategies. In: *Catalysis of organic reactions*. Ed. F.E. Herkes. Marcel Dekker, Inc., New York, **1998**; pp. 455-466.
155. Blackmond, D.G. Comments on “Nature of initial transient period during enantioselective hydrogenation on Pt and Pd” by T. Mallat, Z. Bodnar, B. Minder, K. Borszky, and A. Baiker. *J Catal* **1998**, *176* (1), 267-270.
156. Bohnen, F.M.; Gamez, A.; Blackmond, D.G. On the implications of hemiketal formation during ethyl pyruvate hydrogenation in alcohol solvents. *J Catal* **1998**, *179* (2), 335-338.
157. Blackmond, D.G. Mathematical models of nonlinear effects in asymmetric catalysis: New insights based on the role of reaction rate. *J Am Chem Soc* **1997**, *119* (52), 12934-12939.
158. Sun, Y.; Wang, J.; LeBlond, C.; Reamer, R.A.; Laquidara, J.; Sowa, J.R.; Blackmond, D.G. Kinetic influences on enantioselectivity in asymmetric catalytic hydrogenation. *J Organomet Chem* **1997**, *548* (1), 65-72.
159. Wang, J.; LeBlond, C.; Orella, C.F.; Sun, Y.; Bradley, J.S.; Blackmond, D.G. Modeling of kinetically coupled selective hydrogenation reactions: Kinetic rationalization of pressure effects on enantioselectivity. In: *Studies in surface science and catalysis*. Eds. H.U. Blaser; A. Baiker; R. Prins. Elsevier, **1997**; Vol. 108, pp. 183-190.
160. Sun, Y.; Wang, J.; LeBlond, C.; Landau, R.N.; Joseph, L.; Sowa, J.R.; Blackmond, D.G. Kinetic influences on enantioselectivity in asymmetric catalytic hydrogenation. *J Mol Catal A Chem* **1997**, *115* (3), 495-502.
161. Blackmond, D. Book review of “Principles and practice of heterogeneous catalysis” by J. M. Thomas and W. J. Thomas. *J Catal* **1997**, *171* (1), 349-350.

162. Sun, Y.; Landau, R.N.; Wang, J.; LeBlond, C.; Blackmond, D.G. A re-examination of pressure effects on enantioselectivity in asymmetric catalytic hydrogenation. *J Am Chem Soc* **1996**, *118* (6), 1348-1353.
163. Wang, J.; Sun, Y.; LeBlond, C.; Landau, R.N.; Blackmond, D.G. Asymmetric hydrogenation of ethyl pyruvate: Relationship between conversion and enantioselectivity. *J Catal* **1996**, *161* (2), 752-758.
164. Sun, Y.; Wang, J.; LeBlond, C.; Landau, R.N.; Blackmond, D.G. Asymmetric hydrogenation of ethyl pyruvate: Diffusion effects on enantioselectivity. *J Catal* **1996**, *161* (2), 759-765.
165. LeBlond, C.; Wang, J.; Larsen, R.D.; Orella, C.J.; Forman, A.L.; Landau, R.N.; Laquidara, J.; Sowa, J.R.; Blackmond, D.G.; Sun, Y.K. Reaction calorimetry as an in-situ kinetic tool for characterizing complex reactions. *Thermochim Acta* **1996**, *289* (2), 189-207.
166. Sun, Y.; LeBlond, C.; Wang, J.; Blackmond, D.G.; Laquidara, J.; Sowa, J.R., Jr. Observation of a $[\text{RuCl}_2((S)-(-)\text{-tol-binap})]_2\cdot\text{N}(\text{C}_2\text{H}_5)_3$ -catalyzed isomerization-hydrogenation network. *J Am Chem Soc* **1995**, *117* (50), 12647-12648.
167. Landau, R.N.; Singh, U.; Gortsema, F.; Sun, Y.K.; Gomolka, S.C.; Lam, T.; Futran, M.; Blackmond, D.G. A reaction calorimetric investigation of the hydrogenation of a substituted pyrazine. *J Catal* **1995**, *157* (1), 201-208.
168. Singh, U.K.; Landau, R.N.; Sun, Y.K.; Leblond, C.; Blackmond, D.G.; Tanielyan, S.K.; Augustine, R.L. Enantioselective catalysis: Influence of conversion and bulk diffusion limitations on selectivity in the hydrogenation of ethyl pyruvate. *J Catal* **1995**, *154* (1), 91-97.
169. Wang, J.; Oukaci, R.; Wender, I.; Blackmond, D.G. Alcohol synthesis from CO/H₂ over Co/Cu/ZnO/Al₂O₃: In-situ addition of CH₃NO₂. *J Catal* **1995**, *153* (1), 100-107.
170. Blackmond, D.G.; Waghray, A. The Role of alkali promoters in the selective hydrogenation of 3-methyl 2-butenal. In: *Catalysis of organic reactions*. Eds. M.G. Scaros; M.L. Prunier. Marcel Dekker, Inc., New York, **1995**; pp. 295-305.
171. Landau, R.N.; Blackmond, D.G.; Tung, H.-H. Calorimetric investigation of an exothermic reaction: Kinetic and heat flow modeling. *Ind Eng Chem Res* **1994**, *33* (4), 814-820.
172. Landau, R.N.; Blackmond, D.G. Scale up heat transfer based on reaction calorimetry. *Chem Eng Prog* **1994**, *90* (11), 43-48.

173. Waghray, A.; Oukaci, R.; Blackmond, D.G. Selective hydrogenation of α,β -unsaturated aldehydes over supported Ru. In: *Studies in surface science and catalysis*. Eds. L. Guczi; F. Solymosi; P. Tétényi. Elsevier, **1993**; Vol. 75, pp. 2479-2482.
174. Waghray, A.; Blackmond, D.G. Infrared spectroscopic studies of the adsorption and reaction of 3-methyl-2-butenal over alkali-promoted ruthenium/silica catalysts. *J Phys Chem* **1993**, 97 (22), 6002-6006.
175. Waghray, A.; Oukaci, R.; Blackmond, D.G. Selective hydrogenation of unsaturated aldehydes over silica- and zeolite-supported metals. In: *Catalysis of organic reactions*. Eds. J.R. Kosak; T.A. Johnson. Marcel Dekker, Inc., New York, **1993**; pp. 569-574.
176. Waghray, A.; Wang, J.; Oukaci, R.; Blackmond, D.G. Influence of alkali promoters in the selective hydrogenation of 3-methyl-2-butenal over ruthenium/silica catalysts. *J Phys Chem* **1992**, 96 (14), 5954-5959.
177. Waghray, A.; Oukaci, R.; Blackmond, D.G. Diffusion effects in the hydrogenation of 3-methyl crotonaldehyde over zeolite-supported Ru. *Catal Letters* **1992**, 14 (1), 115-122.
178. Oukaci, R.; Blackmond, D.G.; Goodwin, J.G., Jr.; Gallaher, G.R. Steady-state isotopic transient kinetic analysis investigation of CO-O₂ and CO-NO reactions over a commercial automotive catalyst. In: *Catalytic control of air pollution: Mobile and stationary sources*. Eds. R.G. Silver; J.E. Sawyer; J.C. Summers. ACS, **1992**; Vol. 495, pp. 61-72.
179. Blackmond, D.G.; Oukaci, R.; Blanc, B.; Gallezot, P. Geometric and electronic effects in the selective hydrogenation of α,β -unsaturated aldehydes over zeolite-supported metals. *J Catal* **1991**, 131 (2), 401-411.
180. Blackmond, D.G.; Waghray, A.; Oukaci, R.; Blanc, B.; Gallezot, P. Selective hydrogenation of unsaturated aldehydes over zeolite-supported metals. In: *Studies in surface science and catalysis*. Eds. M. Guisnet; J. Barrault; C. Bouchoule; D. Duprez; G. Pérot; R. Maurel; C. Montassier. Elsevier, **1991**; Vol. 59, pp. 145-152.
181. Cavalcanti, F.A.P.; Oukaci, R.; Wender, I.; Blackmond, D.G. CH₃NO₂ addition to CO hydrogenation over a Ru/KY catalyst. *J Catal* **1991**, 128 (2), 311-319.
182. Cavalcanti, F.A.P.; Oukaci, R.; Wender, I.; Blackmond, D.G. Probe molecule studies of CO hydrogenation over Ru/SiO₂. *J Catal* **1990**, 123 (1), 260-269.
183. Cavalcanti, F.A.P.; Oukaci, R.; Wender, I.; Blackmond, D.G. Nitroethane as a probe molecule for CO hydrogenation over Ru/SiO₂. *J Catal* **1990**, 123 (1), 270-274.

184. Blackmond, D.G.; Swid, K.P.; Davis, M.E.; Gallezot, P. The nature of Rh-CO interactions on SAPO-5-supported Rh. *J Catal* **1990**, *122* (2), 247-255.
185. Blackmond, D.G.; Sayari, A.; Wender, I. Chemical trapping of CO /H₂ surface species. *Chem Comm Hungarian Acad Sci* **1989**, *70*, 89-96.
186. Blackmond, D.G. Book review of "Metal clusters in catalysis" by B.C. Gates, L. Guczi, and H. Knoezinger ("Studies in Surface Science and Catalysis" series, Vol. 29, Elsevier Science Publ.). *AIChE Journal* **1988**, *34* (1), 173-174.
187. Erdem-Senatalar, A.; Blackmond, D.G.; Wender, I. The effect of the addition of alkylating agents on model supported metal clusters. In: *Catalysis: Theory to practice - Proceedings 9th International Congress on Catalysis, Calgary, 1988*. Eds. M.J. Phillips; M. Ternan. Chemical Institute of Canada, **1988**; Vol. 2 (C1 Chemistry), pp. 792-799.
188. Blackmond, D.G.; Kesraoui, S. The effects of alkali promoters on the adsorptive properties of supported Rh catalysts. In: *Studies in surface science and catalysis*. Ed. J.W. Ward. Elsevier, **1988**; Vol. 38, pp. 33-42.
189. Cavalcanti, F.A.P.; Blackmond, D.G.; Oukaci, R.; Sayari, A.; Erdem-Senatalar, A.; Wender, I. In situ chemical trapping of CO/H₂ surface species. *J Catal* **1988**, *113* (1), 1-12.
190. Ciocco, M.V.; Blackmond, D.G. Support and alkali promotion effects on the surface chemistry of nickel/silica catalysts. *Appl Catal* **1988**, *44*, 105-116.
191. Oukaci, R.; Blackmond, D.G.; Sayari, A.; Goodwin, J.G., Jr.; Stevenson, S.A.; Raupp, G.B.; Dumesic, J.A.; Tauster, S.J.; Baker, R.T.K. Metal-support interactions on "nonreducible" oxides. In: *Metal-support interactions in catalysis, sintering and redispersion* Eds. S.A. Stevenson; J.A. Dumesic; R.T.K. Baker; E. Ruckenstein. Van Nostrand Reinhold Co., Inc., New York, **1987**; pp. 112-120.
192. Oukaci, R.; Blackmond, D.G.; Sayari, A.; Goodwin, J.G., Jr. Chemisorption studies: Implications of metal-support interactions on chemisorption characterization of supported metal catalysts. In: *Metal-support interactions in catalysis, sintering and redispersion*. Eds. S.A. Stevenson; J.A. Dumesic; R.T.K. Baker; E. Ruckenstein. Van Nostrand Reinhold Co. Inc., New York, **1987**; pp. 19-33.
193. Kesraoui, S.; Oukaci, R.; Blackmond, D.G. Adsorption and reaction of CO and H₂ on K-promoted Rh/SiO₂ catalysts. *J Catal* **1987**, *105* (2), 432-444.
194. Williams, J.A.; Blackmond, D.G.; Wender, I. Chemical trapping of CO/H₂ surface species. *ACS Div Fuel Chem, Preprints* **1986**, *31* (3), 5-10.

195. Blackmond, D.G.; Williams, J.A.; Kesraoui, S.; Blazewick, D.S. The effects of Cs promotion on RhAl₂O₃ catalysts. *J Catal* **1986**, *101* (2), 496-504.
196. Blackmond, D.G.; Ko, E.I. Carbon monoxide adsorption as a chemical probe of supported nickel catalysts: The role of carbonyl formation and support effects. *J Catal* **1985**, *94* (2), 343-352.
197. Blackmond, D.G.; Ko, E.I. Structural sensitivity of CO adsorption and H₂/CO coadsorption on Ni/SiO₂ catalysts. *J Catal* **1985**, *96* (1), 210-221.
198. Blackmond, D.G.; Ko, E.I. Preparation and characterization of well-defined Ni/SiO₂ catalysts. *Appl Catal* **1984**, *13* (1), 49-68.
199. Blackmond, D.G.; Rogan, R.H.; Ko, E.I. In: *Reduction characteristics of supported Ni catalysts*, Proceedings, 12th Annual Conference of the North American Thermal Society, Williamsburg, VA, **1983**; pp 412-415.
200. Blackmond, D.G.; Goodwin, J.G., Jr.; Lester, J.E. In situ Fourier transform infrared spectroscopy study of HY cracking catalysts: Coke formation and the nature of the active sites. *J Catal* **1982**, *78* (1), 34-43.
201. Blackmond, D.G.; Goodwin, J.G., Jr.; Lester, J.E. The effect of hydrogen on the adsorption and reaction of 1-hexene over HY cracking catalysts. *J Catal* **1982**, *78* (1), 247-252.
202. Goodwin, J.G., Jr.; Blackmond, D.G.; Lester, J.E. Application of Fourier transform infrared spectroscopy to studies of coke formation on cracking catalysts. In: *Progress in catalyst deactivation - Proceedings of the NATO Advanced Study Institute on catalyst deactivation, Algarve, Portugal, May 18–29, 1981*. Ed. J.L. Figueiredo. Martinus Nijhoff Publishers, The Hague, **1982**; pp. 93-102.
203. Blackmond, D.G.; Goodwin, J.G., Jr. Zeolite support effects on CO–Ru interactions. *J Chem Soc, Chem Commun* **1981**, *3*, 125-126.