

John L. Falconer

Mel and Virginia Clark Professor
President's Teaching Scholar

Department of Chemical and Biological Engineering
University of Colorado, Boulder, Colorado 80309-0424

Telephone: Office (303) 492-8005; Home (303) 444-4249; FAX: (303) 492-4341

Electronic mail: john.falconer@colorado.edu

Web Site: <http://www.colorado.edu/che/faculty/falconer.html>

Date and Place of Birth: August 2, 1946 in Baltimore, Maryland

Education: Ph.D. (Chemical Engineering), Stanford University 1974 (1971-74), M.S. 1968
B.E.S. (Chemical Engineering), The Johns Hopkins University, 1967

Research Interests: Zeolite membrane preparation, characterization, and applications. Heterogeneous catalysis on oxides and supported metals. Photocatalysis. Carbon nanotube membranes. Transient techniques in catalysis and membranes.

Teaching Interests: Thermodynamics, Reaction Kinetics, Reactor Engineering, Catalysis, Research Methods, Active learning with ConcepTests and in-class transmitters

Professional Experience: Chair of Chemical and Biological Engineering, 7/2007-

Mel and Virginia Clark Professor, 7/2007-

Associate Chair of Chemical and Biological Engineering, 7/2005-6/2007

Visiting Professor, Technical University of Delft, Netherlands, 1/98 - 3/98

co-director: NSF-Research Experiences for Undergraduates Program in Membrane and Thin Film Science, 1993 – 2001, in Functional Materials 2003 - 2009

James and Catherine Patten Professor, 1992 - 96

Professor of Chemical Engineering, University of Colorado, 1985-present

Associate Professor, 1980 - 1985. Assistant Professor, 1975 - 1980.

Postdoctoral Fellow, Stanford Research Institute, Menlo Park, CA, 9/74 - 8/75

Process Research Engineer, Fairchild Semiconductor R & D Lab, Palo Alto, CA, 5/69- 8/69

Military Service: Petroleum Laboratory Technician, U. S. Army, Fort Rucker, AL, 8/69 - 6/71

Awards: Hazel Barnes Prize 2008 (highest faculty recognition for teaching and research given by the University of Colorado)

College of Engineering Max S. Peters Outstanding Service Award (2008)

University of Colorado CRCW Faculty Fellowships (2004-05, 1997-98, 1990-91)

2005 ASEE Annual Conference Best Zone Paper Award (with J. deGrazia, A. Weimer)

University of Colorado President's Teaching Scholar (the University's highest teaching recognition, a lifetime appointment, 2000-)

Boulder Faculty Assembly Excellence in Research, Scholarly, and Creative Work Award (1999)

Chemical Manufacturers Association National Catalyst Award for Excellence in Teaching (1997)

ASEE Rocky Mountain Section Outstanding Teaching Award (1997)

Departmental Outstanding Teaching Awards (1988, 1994, 1995, 1997, 1999, 2000)

ACS Colorado Section Award in Chemistry (1992)

College of Engineering Outstanding Advisor Award (1992)

College of Engineering Research Award (1991)

Charles Hutchinson Memorial Teaching Award, College of Engineering (1990)

University of Colorado Summer Research Initiation Fellowship (1975)

Professional Engineer: State of Colorado Reg. Number 16909

Society Memberships and Boards: ACS-Petroleum Research Fund Advisory Board, 2008-2011; AIChE (a director of the Catalysis and Reaction Engineering Division, 2007-2010); American Chemical Society; North American Catalysis Society; American Society of Engineering Education; 4th International Zeolite Membrane Meeting Scientific Committee (2007)

Short Course Instructor: Polymer Reactor Engineering, Center for Professional Advancement: 1992-1998 (9 times): Amsterdam, The Netherlands; East Brunswick, NJ; Houston, TX

Consultant: Chemical and Metals Industry, Hudson, CO, 2005; Intellectual Capital Management Group, Palo Alto, CA, 2004-2005; Boulder Center for Science and Policy, Boulder, CO, 1996,1997,1999; TDA Research, Wheatridge, CO, 1995; Weyerhaeuser, St. Louis, MO, 1994; Bend Research, Inc.; Bend, OR,

1989-1992; Econalytic Systems, Boulder, CO, 1989, 1991; Elkem Metals; Norway, 1989, New York, 1987, 1989; Solar Energy Research Institute; Colorado, Texas, 1987; 3M Corp.; St Paul, MN, 1983-84

Journal Publications: (*cited more than 6000 times, h-index=41*)

1. McCarty, J., Falconer, J. L., and Madix, R. J., "Decomposition of Formic Acid on Ni(110) I. Flash Decomposition from the Clean Surface and Flash Desorption of Reaction Products", **J. Catalysis** **30**, 235-249 (1973). (121 citations)
2. Madix, R. J., Falconer, J. L., and McCarty, J. G. "Surface Microcatalysis: The Enhanced Selectivity of Ni(110) (4x5)C for Dehydrogenation of Formic Acid", **J. Catalysis** **31**, 316-318 (1973).
3. Falconer, J. L., McCarty, J. G., and Madix, R. J., "Surface Explosion: HCOOH on Ni(110)", **Surface Science** **42**, 329-330 (1974).
4. Falconer, J. L. and Madix, R. J., "The Kinetics and Mechanism of the Autocatalytic Decomposition of HCOOH on Clean Ni(110)", **Surface Science** **46**, 473-504 (1974). (140 citations)
5. Falconer, J. L., McCarty, J. G., and Madix, R. J., "The Explosive Decomposition of Formic Acid on Clean Ni(110)", **Jap. J. App. Phys. Suppl.** **2**, 525-528 (1974).
6. Falconer, J. L. and Madix, R. J., "Flash Desorption Activation Energies: DCOOH Decomposition and CO Desorption from Ni(110)", **Surface Science** **48**, 393-405 (1975). (184 citations)
7. Falconer, J. L. and Madix, R. J., "Surface Stabilized Reaction Intermediate: Formic Anhydride", **Surface Science** **51**, 546-548 (1975).
8. Madix, R. J., Falconer, J. L., and Susko, A., "The Autocatalytic Decomposition of Acetic Acid on Ni(110)", **Surface Science** **54**, 6-20 (1976).
9. Falconer, J. L. and Wise, H., "Temperature Programmed Desorption Spectroscopy of N₂H₄ Decomposition on Al₂O₃ Supported Ir Catalyst", **J. Catalysis** **43**, 220-233 (1976).
10. Falconer, J. L., Wentreck, P. R., and Wise, H., "Surface Interactions on Alumina Supported Iridium Catalysts: Oxygen and Carbon Monoxide", **J. Catalysis** **45**, 248-255 (1976).
11. Falconer, J. L. and Madix, R. J., "Desorption Rate Isotherms in Flash Desorption Analysis", **J. Catalysis** **48**, 262-268 (1977). (145 citations)
12. Falconer, J. L. and Madix, R. J., "The Desorption Kinetics of Water and Formic Acid from Ni(110) Following Low Temperature Adsorption", **J. Catalysis** **51**, 47-63 (1978).
13. Zagli, A. E., Falconer, J. L., and Keenan, C. A., "Methanation on Supported Nickel Catalysts Using Temperature Programmed Heating", **J. Catalysis** **56**, 453-467 (1979). (64 citations)
14. Falconer, J. L. and Zagli, A. E., "Adsorption and Methanation of Carbon Dioxide on a Nickel/Silica Catalyst", **J. Catalysis** **62**, 280-285 (1980). (80 citations)
15. Zagli, A. E. and Falconer, J. L., "Carbon Dioxide Adsorption and Methanation on Ruthenium", **J. Catalysis** **69**, 1-8 (1981).
16. Zagli, A. E. and Falconer, J. L., "Catalyst Preparation for Highly-Dispersed and Highly-Reduced Nickel Catalysts", **Applied Catalysis** **4**, 135-143 (1982).
17. Frank, T. C. and Falconer, J. L., "Surface Composition of Copper-Silicon Alloys", **Applications of Surface Science** **14**, 359-374 (1983).
18. Falconer, J. L. and Schwarz, J. A., "Temperature-Programmed Desorption and Reaction: Applications to Supported Catalysts", **Catalysis Reviews** **25**, 141-227 (1983). (343 citations)
19. Falconer, J. L., Bischke, S. D., and Hanna, G. J., "Electron-Enhanced CO₂ Adsorption and Stabilization on Aluminum Films", **Surface Science** **131**, 455-462 (1983).
20. Ozdogan, S. Z., Gochis, P. D., and Falconer, J. L., "Carbon and Carbon Monoxide Hydrogenation on Nickel; Support Effects", **J. Catalysis** **83**, 257-266 (1983).
21. Saber, J. M., Falconer, J. L., and Brown L. F., "Carbon-Catalyzed Exchange of Carbon Dioxide and Potassium Carbonate", **JCS Chemical Communications** **6**, 376-378 (1984).
22. Pitts, J. R., Bischke, S. D., Falconer J. L., and Czanderna, A. W., "Oxide Formation on Aluminum in the Presence of keV Electrons and CO₂", **J. Vacuum Science and Technology** **A2**, 1000-1003 (1984).
23. Kester, K. B. and Falconer, J. L., "CO Methanation on Low Weight Loading Ni/Al₂O₃: Multiple Reaction Sites", **J. Catalysis** **89**, 380-391 (1984).
24. Saber, J. M., Falconer, J. L., and Brown, L. F., "Carbon Dioxide Gasification of Carbon: Isotope Study of Carbonate Catalysis", **J. Catalysis** **90**, 65-74 (1984).
25. Bischke, S. D., Oen, A. C., and Falconer, J. L., "CO₂ Oxidation of Aluminum: Electron Beam Effects", **Appl. Surface Science** **20**, 97-108 (1984).

26. Frank, T. C., Kester, K. B., and Falconer, J. L., "Catalytic Formation of Silanes on Copper-Silicon Alloys", **J. Catalysis** **91**, 44-53 (1985).
27. Frank, T. C. and Falconer, J. L., "Silane Formation on Silicon: Reaction Kinetics and Surface Analysis", **Langmuir** **1**, 104-110 (1985).
28. Bischke, S. D., Goodman, D. W., and Falconer, J. L., "Carbon Monoxide Methanation over Nickel/Alumina Thin-Film Model Catalysts", **Surface Science** **150**, 351-357 (1985).
29. Chai, G. Y., and Falconer, J. L., "Alkali Promoters on Supported Nickel: Effect of Support, Preparation and Alkali Concentration", **J. Catalysis** **93**, 152-160 (1985).
30. Frank, T. C., Kester, K. B., and Falconer, J. L., "Surface Analysis of Methylchlorosilane Formation Catalysts", **J. Catalysis** **95**, 396-405 (1985).
31. Britten, J. A., Brown, L. F., and Falconer, J. L., "Effect of Nonreacting Gases on the Desorption of Reaction-created CO from Graphite", **Carbon** **23**, 627-633 (1985).
32. Erolmaz, C. and Falconer, J. L., "Gasification of Carbon with BaCO₃", **Fuel** **65**, 400-406 (1986).
33. Kester, K. B., Zagli, E. and Falconer, J. L., "Methanation of CO and CO₂ on Ni/Al₂O₃ Catalysts: Effects of Ni Loading", **Applied Catalysis** **22**, 311-319 (1986).
34. Ramirez, W. F., Oen, A. C., Strobel, J. F., Falconer, J. L. and Evans, H. E., "Surface Composition of Berea Sandstone", **SPEFE Journal**, p. 23-30, February (1986).
35. Saber, J. M., Falconer, J. L. and Brown, L. F., "Interaction of Potassium Carbonate with Surface Oxides of Carbon," **Fuel** **65**, 1356-1359 (1986).
36. Falconer, J. L., Burger, L. C., Corfa, I. P., and Wilson, K. G., "Temperature-Programmed Decomposition of Deuterated Formic Acid on Ni/SiO₂," **J. Catalysis** **104**, 424-433 (1987).
37. Saber, J. M., Falconer, J. L., and Brown, L. F., "Isotope Exchange and the Sodium-Catalyzed CO₂ Gasification of Carbon," **JCS Chemical Comm.** 445-447 (1987).
38. Agarwala, J. P. and Falconer, J. L., "Kinetics of Methylchlorosilane Formation on Zn-Promoted Cu₃Si," **Int. J. Chemical Kinetics** **19**, 519-537 (1987).
39. Shi, Q.-C., Falconer, J. L., and Chen, T. P., "Chrysocolla as a Methanation Catalyst," **Applied Catalysis** **36**, 95-107 (1988).
40. Saber, J. M., Kester, K. B., Falconer, J. L. and Brown, L. F., "A Mechanism for Sodium Catalyzed CO₂ Gasification of Carbon," **J. Catalysis** **109**, 329-346 (1988).
41. Corn, S. H., Falconer, J. L., and Czanderna, A. W., "The Copper-Silicon Interface: Composition and Interdiffusion," **J. Vacuum Science and Technology A** **6**, 1012-1016 (1988).
42. Glugla, P. G., Bailey, K. M., and Falconer, J. L., "Isotopic Identification of Surface Site Transfer on Ni/Al₂O₃ Catalysts," **J. Physical Chemistry** **92**, 4474-4478 (1988).
43. Sen, B. and Falconer, J. L., "Detection of Activated Adsorption Sites and a CO-H Surface Complex on Ru/Al₂O₃," **J. Catalysis** **113**, 444-452 (1988).
44. Glugla, P. G., Bailey, K. M., and Falconer, J. L., "Activated Formation of a H-CO Complex on Ni/Al₂O₃ Catalysts," **J. Catalysis** **115**, 24-33 (1989).
45. Sen, B. and Falconer, J.L., "Spillover Sites on a 19% Ni/Al₂O₃ Catalyst," **J. Catalysis** **117**, 404-415 (1989).
46. Campbell, T. C. and Falconer, J. L., "Carbon Dioxide Hydrogenation on Potassium-Promoted Nickel Catalysts," **Applied Catalysis**, **50**, 189-198 (1989).
47. Magrini, K. M., Falconer, J. L., and Koel, B. E., "Direct Formation of (CH₃)₂HSiCl from Si and CH₃Cl," **J. Physical Chemistry** **93**, 5563-5568 (1989).
48. Chang, J. S., Adcock, J. P., Lauderback, L. L., and Falconer, J. L., "TPR and SIMS Studies of CaCO₃ Catalyzed CO₂ Gasification of Carbon," **Carbon** **27**, 593-602 (1989).
49. Bailey, K. M., Campbell, T. K., and Falconer, J. L., "Potassium Promotion of Ni/Al₂O₃ Catalysts," **Applied Catalysis** **54**, 159-175 (1989).
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51. Sen, B. and Falconer, J. L., "Site Transfer and a Support-Bound H-CO Complex on Ni/TiO₂", **J. Catalysis** **122**, 68-79 (1990).
52. Schwarz, J. A. and Falconer, J. L., "Application of Transient Techniques: Methanation on Supported Nickel Catalysts", **Catalysis Today** **7**, 1-92 (1990).
53. Mao, T.F. and Falconer, J.L., "Methanation Sites on a Pt/TiO₂ Catalyst," **J. Catalysis** **123**, 443-455 (1990).

54. Sen, B. and Falconer, J. L., "Effect of H₂ Pressure on TPR on Supported Ni Catalysts", **J. Catalysis** **125**, 35-44 (1990).
55. Sen, B., Falconer, J. L., Mao, T.-F., Yu, M., and Flesner R. L., "Spillover of CO and H₂ onto Al₂O₃ Surfaces," **J. Catalysis** **126**, 465-476 (1990).
56. Chen, B., Falconer, J. L., Bailey, K. M., and Sen, B., "Methanation Sites on a Low Loading Ni/Al₂O₃ Catalyst," **Applied Catalysis** **66**, 283-300 (1990).
57. Chen, B., Falconer, J. L., and Chang, L., "Formation and Decomposition of a Methoxy Species on a Ni/Al₂O₃ Catalyst", **J. Catalysis** **127**, 732-743 (1991).
58. Chang, J.-S., Lauderback, L. L., and Falconer, J. L., "AES and SIMS Analysis of Potassium/ Graphite Surfaces", **Carbon** **29**, 645-652 (1991).
59. Magrini, K. A., Gebhard, S. C., Koel, B. E., and Falconer, J. L., "Methyl Chloride and Trichlorosilane Adsorption on Cu(110)", **Surface Science**, **248**, 93-103 (1991).
60. Hsiao, E. C. and Falconer, J. L., "Adsorption Sites on Pd/Al₂O₃", **J. Catalysis** **132**, 145-156 (1991).
61. Flesner, R. L. and Falconer, J. L., "Influence of Adsorbed CH₃O on CO Desorption from Ni/Al₂O₃", **J. Catalysis** **133**, 515-526 (1992).
62. Chen, B. and Falconer, J. L., "Spillover Rate from Pd to Al₂O₃", **J. Catalysis** **134**, 737-741 (1992).
63. Jiang, L. Q., Koel, B. E. and Falconer, J. L., "Effects of Surface Modifiers (K_(a), O_(a), H_(a)) on the Adsorption Kinetics of CO on Pt(111)", **Surface Science** **273**, 273-284 (1992).
64. Kester, K. B., Chen, B., and Falconer, J. L., "Temperature-Programmed Methanation on Pd/La₂O₃ and Pd/SiO₂ Catalysts", **J. Catalysis** **138**, 294-305 (1992).
65. Flesner, R. L. and Falconer, J. L., "The Role of Spillover in Carbon Monoxide Hydrogenation over Alumina-Supported Platinum", **J. Catalysis** **139**, 421-434 (1993).
66. Gokhale, Y. V., Noble, R. D., and Falconer, J. L., "Analysis of a Catalytic Membrane Reactor for Butane Dehydrogenation", **J. Membrane Science**, **77**, 197-206 (1993).
67. Noble, R. D., Falconer, J. L., Jia, M. D., and Perkins, T. W., "Separations of Methanol-Hydrogen Mixtures using Inorganic Membranes", **J. Membrane Science** **79**, 123-125 (1993).
68. Chen, B. and Falconer, J. L., "Trapping of CH₃O Formed from CO and H₂", **Catalysis Letters**, **19**, 55-65 (1993).
69. Chen, B. and Falconer, J. L., "Alcohol Decomposition by Reverse Spillover", **J. Catalysis**, **144**, 214-226 (1993).
70. Jiang, L. Q., Avoyan, A., Koel, B. E., and Falconer, J. L., "Methylcyclohexane to Benzene Conversion over K-Promoted Pt(111)", **J. American Chemical Society** **115**, 12,106-12,110 (1993).
71. Chen, B. and Falconer, J. L., "Hydrogenation of Organic Oxygenates on Ni/Al₂O₃ and Ni/SiO₂", **J. Catalysis** **147**, 72-81 (1994).
72. Potochnik, S. J. and Falconer, J. L., "The Effect of Zinc Promoter on Enhanced Diffusion During Catalytic Formation of Methylchlorosilanes", **J. Catalysis** **147**, 101-106 (1994).
73. Jia, M.-D., Chen, B., Noble, R. D., and Falconer, J. L., " Ceramic-Zeolite Composite Membranes and their Application for separation of Vapor/Gas Mixtures", **J. Membrane Science**, **90**, 1-10 (1994). (145 citations)
74. Floquet, N., Yilmaz, S., and Falconer, J. L., "Interaction of Copper Catalysts and Si(100) for the Direct Synthesis of Methylchlorosilanes", **J. Catalysis** **148**, 348-368 (1994).
75. Larson, S. A. and Falconer, J. L., "Characterization of TiO₂ Photocatalysts used in Trichloroethene Oxidation", **Applied Catalysis B: Environmental** **4**, 325-342 (1994).
76. Bell, D. A., Falconer, J. L., Lu, Z., and McConica, C. M., "Electron Beam-Induced Deposition of Tungsten", **J. Vacuum Science and Technology B**, **12**, 2976-2679 (1994).
77. Flesner, R. L. and Falconer, J. L., "Hydrogen Exchange with Adsorbed Methanol and Methoxy on Nickel/Alumina", **J. Catalysis** **150**, 301-310 (1994).
78. Bell, D. A., Falconer, J. L., Lu, Z., and McConica, C. M., "Corrosion of Reactor Wall Surfaces by WF₆", **J. Electrochem. Society** **141**, 2884-2888 (1994).
79. Conner, W. C. Jr. and Falconer, J. L., "Spillover in Heterogeneous Catalysis", **Chemical Reviews** **95**, 759-788 (1995). (231 citations)
80. Bell, D. A., Falconer, J. L., and McConica, C. M., "Desorption of Tungsten Fluorides from Tungsten", **J. Electrochem. Society** **142**, 2401-2404 (1995).

81. Gokhale, Y., Noble, R. D., and Falconer, J. L., "Effect of Reactant Loss and Membrane Selectivity on a Dehydrogenation Reaction in a Membrane-Enclosed Catalytic Reactor", **J. Membrane Science** **103**, 235-242 (1995).
82. Noble, R.D. and Falconer, J.L., "Silicalite-1 Composite Membranes" **Catalysis Today** **25**, 209-212 (1995).
83. Bai, C., Jia, M. D., Falconer, J. L., and Noble, R. D., "Preparation and Separation Properties of Silicalite Composite Membranes", **J. Membrane Science** **105**, 79-87 (1995). (117 citations)
84. Larson, S. A., Widegren, J. A., and Falconer, J. L. "Transient Studies of 2-Propanol Photocatalytic Oxidation on Titania", **J. Catalysis** **157**, 611-625 (1995). (69 citations)
85. Yilmaz, S., Floquet, N., and Falconer, J. L., "Effect of Silicon Oxide Thickness on the Direct Reaction of Dimethyldichlorosilane", **J. Catalysis** **159**, 31-40 (1996).
86. Funke, H. H., Kovalchick, M. G. Falconer, J. L. and Noble, R. D., "Separation of Hydrocarbon Isomer Vapors with Silicalite Zeolite Membranes", **Ind. Eng. Chem. Research** **35**, 1575-1582 (1996). (96 citations)
87. Cordi, E. M. and Falconer, J. L., "Decomposition and Oxidation Of $\text{CH}_3^{13}\text{CH}_2\text{OH}$ on Al_2O_3 , $\text{Pd}/\text{Al}_2\text{O}_3$, and $\text{PdO}/\text{Al}_2\text{O}_3$ Catalysts", **Catalysis Letters** **38**, 45-51 (1996).
88. Baertsch, C. D., Funke, H. H., Falconer, J. L., and Noble, R. D., "Permeation of Aromatic Hydrocarbon Vapors through Silicalite Zeolite Membranes", **J. Physical Chemistry** **100**, 7676-7679 (1996). (68 citations)
89. Smetana, J. F., Falconer, J. L., and Noble, R. D., "Separation of Methyl Ethyl Ketone from Water by Pervaporation Using a Silicalite Membrane", **J. Membrane Science** **114**, 127-130 (1996).
90. Funke, H. H., Argo, A. M., Baertsch, C. D., Falconer, J. L., and Noble, R. D., "Separation of Close-Boiling Hydrocarbons with Silicalite Zeolite Membranes", **J. Chem. Soc., Faraday Transactions** **92**, 2499-2502 (1996).
91. Liu, Q., Noble, R. D., Falconer, J. L., and Funke, H. H., "Organics/Water Separation by Pervaporation with a Zeolite Membranes", **J. Membrane Science** **117**, 163-174 (1996). (107 citations)
92. Cordi, E. M. and Falconer, J. L., "Oxidation of Volatile Organic Compounds on Al_2O_3 , $\text{Pd}/\text{Al}_2\text{O}_3$, and $\text{PdO}/\text{Al}_2\text{O}_3$ Catalysts", **J. Catalysis** **162**, 104-117 (1996). 61 citations)
93. Muggli, D. S., Larson S. A., and Falconer, J. L., "Photocatalytic Oxidation of Ethanol using Transient Reaction", **J. Physical Chemistry** **100**, 15,886-15,889 (1996).
94. Liu, Q., Rogut, J., Chen, B., Falconer, J. L., and Noble, R. D., "Improved Yield of CH_3OH from CH_4 Oxidation in a Non-Isothermal Reactor", **Fuel** **75**, 1748-1754 (1996).
95. Funke, H. H., Argo, A. M., Falconer, J. L., and Noble, R.D., "Separations of Cyclic, Branched, and Linear Hydrocarbons Mixtures through Silicalite Membranes", **Ind. Eng. Chem. Research** **36**, 137-143 (1997). (91 citations)
96. Cordi, E. M. and Falconer, J. L., "Oxidation of Volatile Organic Compounds on a $\text{Ag}/\text{Al}_2\text{O}_3$ Catalyst", **Applied Catalysis A** **151**, 179-191 (1997).
97. Larson, S. A. and Falconer, J. L., "Initial Reaction Steps in Photocatalytic Oxidation of Aromatics", **Catalysis Letters** **44**, 57-65 (1997).
98. Coronas, J., Falconer, J. L., and Noble, R.D., "Characterization and Permeation Properties of ZSM-5 Composite Membranes", **AIChE Journal** **43**, 1797-1812 (1997). (145 citations)
99. Funke, H. H., Fender, K. R., Green, K. M., Wilwerding, J. L., Sweitzer, B. A., Falconer, J. L., and Noble, R. D. "Influence of Adsorbed Molecules on The Permeation Properties of Silicalite Membranes", **J. Membrane Science** **129**, 77-82 (1997)
100. Cordi, E. M., O'Neill, P.J., and Falconer, J. L., "Oxidation of Volatile Organic Compounds on $\text{CuO}/\text{Al}_2\text{O}_3$ Catalysts", **Applied Catalysis B: Environmental** **14**, 23-36 (1997).
101. Coronas, J., Noble, R.D. and Falconer, J. L., "Separations of C_4 and C_6 Isomers in ZSM-5 Tubular Membranes", **Ind. Eng. Chem. Research** **37**, 166-176 (1998). (90 citations)
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103. Muggli, D.S. and Falconer, J.L., "Catalyst Design to Change Selectivity of Photocatalytic Oxidation", **J. Catalysis** **175**, 213-219 (1998).
104. Falconer, J.L. and Magrini-Bair, K.A. "Photocatalytic and Thermal Catalytic Oxidation of Acetaldehyde on Pt/TiO_2 ", **J. Catalysis** **179**, 171-178 (1998). (58 citations)
105. Cook, K.D., Bennett, K.H., Haddix, M.L., Keator, E.A., Falconer, J.L., and Seebach, G.L., "Process Mass Spectrometric Monitoring of Isomer Hydrocarbon Gases", **J. Process Analytical Spectroscopy** **3**, 115-124 (1998).

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108. Muggli, D.S., Keyser, S.A., and Falconer, J.L., "Photocatalytic Decomposition of Acetic Acid on TiO₂", **Catalysis Letters** **55**, 129-132 (1998).
109. Muggli, D.S., Lowery, K. H., and Falconer, J. L., "Identification of Adsorbed Species during Steady-State Photocatalytic Oxidation of Ethanol on TiO₂", **J. Catalysis** **180**, 111-122 (1998).
110. Muggli, D.S. and Falconer, J.L., "UV-Enhanced Exchange of O₂ with H₂O Adsorbed on TiO₂", **J. Catalysis** **181**, 155-159 (1999).
111. Bennett, K.H., Cook, K. D., Falconer, J. L., and Noble, R.D., Time-Dependent Permeance of Gas Mixtures Through Zeolite Membranes, **Analytical Chemistry** **71**, 1016-1020 (1999).
112. Luo, S. and Falconer, J.L. "Aldol Condensation of Acetaldehyde to form High Molecular Weight Compounds on TiO₂", **Catalysis Letters** **57**, 89-93 (1999).
113. Poshusta, J.C., Falconer, J.L., and Noble, R.D., "Temperature and Pressure Effects on CO₂ and CH₄ Permeation through MFI Zeolite Membranes", **J. Membrane Science** **160**, 115-125 (1999).
114. Gump, C.J., Noble, R.D., and Falconer, J.L., "Separation of Hexane Isomers through Nonzeolite Pores in ZSM-5 Zeolite Membranes", **Ind. Eng. Chem. Research** **38**, 2775-2781 (1999).
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