

CURRICULUM VITAE

John J. Kozak

DePaul University, 243 South Wabash Avenue, Chicago, Illinois 60604-2301

(312) 362-8876

kozak@depaul.edu

Education:

Case Western Reserve University B.S. (Chemistry) 1961

Princeton University Ph.D. (Physical Chemistry) 1966

(thesis supervisor: Walter Kauzmann)

Fellowship/Research Appointments:

National Institutes of Health Postdoctoral Fellow, 1965-1967

Université libre de Bruxelles (with Ilya Prigogine)

Research Associate, 1967-1968

University of Chicago (with Stuart A. Rice)

Academic Appointments:

Assistant Professor (1968-1973), Associate Professor (1973-1978),

Professor of Chemistry, University of Notre Dame, 1978-1988

Professor of Chemistry, University of Georgia, 1988-1992

Professor of Chemistry, Iowa State University, 1992-2003

Professor of Chemistry, DePaul University, 2003 - present

University Professor, DePaul University, 2005 - present

Visiting Professor, James Franck Institute, University of Chicago, 2006 - present

Administrative Appointments:

Chairman, Program in Unified Science, University of Notre Dame, 1970-1988

Co-Director Honors Program, University of Notre Dame, 1983-1988

Assistant Dean, College of Science, University of Notre Dame, 1983-1987

Associate Dean, College of Science, University of Notre Dame, 1987-1988

Dean, Franklin College of Arts and Sciences, University of Georgia, 1988-1992

Provost, Iowa State University, 1992-1998

Executive Vice President for Academic Affairs, DePaul University, 2003-2005

Record of Scholarship:

1. "Diffuse Phase Transitions: Specific-Heat Anomaly."
A.V. Tobolsky, John J. Kozak and N.H. Canter
Phys Rev. 138, A651-A660 (1965)
2. "Quasiphonons in an Isotopically Substituted Crystal."
Cl. George and John J. Kozak
Phys. Letters, 25A, 220-222 (1967)
3. "Solute-Solute Interactions in Aqueous Solution."
John J. Kozak, William S. Knight and Walter Kauzmann
J. Chem. Phys. 48, 675-690 (1968)
4. "Elementary Description of the Equation of State of a Simple Fluid."
John J. Kozak and Stuart A. Rice
J. Chem. Phys. 48, 1226-1230 (1968)
5. "Analytic Approach to the Theory of Phase Transitions."
John D. Weeks, Stuart A. Rice and John J. Kozak
J. Chem. Phys. 52, 2416-2426 (1970)
6. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. I. A Study of Spontaneous Emission."
Russell Davidson and John J. Kozak
J. Math. Phys. 11, 189-202 (1970)
7. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. II. Finite Systems."
Russell Davidson and John J. Kozak
J. Math. Phys. 11, 1420-1436 (1970)
8. "Analytic Approach to the Theory of Phase Transitions. II. A Model Equation."
John J. Kozak, S.A. Rice and J.D. Weeks
Physica 54, 573-592 (1971)
9. "Application of Conformal Solution Theory to Gas-Gas Equilibria."
Paulino Y. Tan, Kraemer D. Luks and John J. Kozak
J. Chem. Phys. 55, 1012-1015 (1971)
10. "Analysis of the Barker-Henderson Local Compressibility Approximation."
Marshall J. Moffat and John J. Kozak
J. Chem. Phys. 55, 3794-3809 (1971)

11. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. III. The Quantum-Mechanical Solution."
Russell Davidson and John J. Kozak
J. Math. Phys. 12, 903-917 (1971)
12. "Comparative Study of Spontaneous Emission and Spin Lattice Relaxation at T=0."
Henry Douglas Kutz, Russell Davidson and John J. Kozak
Phys. Rev. B4, 1471-1484 (1971)
13. "Interactions between Oppositely-Charged Nonspherical Ions."
Patrick Fenton Hay and John J. Kozak
J. Chem. Phys. 56, 1246-1252 (1972)
14. "The Square-Well Potential. II. Some Comments on Critical Point Behavior and Scaling Laws."
John J. Kozak, I.B. Schrodt and K.D. Luks
J. Chem. Phys. 57, 206-209 (1972)
15. "Application of the Theory of Orlicz Space to Statistical Mechanics. I. Integral Equations."
Ing-Yih S. Cheng and John J. Kozak
J. Math. Phys. 13, 51-58 (1972)
16. "On the Relaxation of Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. IV. Exact Solution for Finite Systems."
Russell Davidson and John J. Kozak
J. Math. Phys. 14, 414-421 (1973)
17. "On the Relaxation of Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. V. Exact Solution for Infinite Systems."
Russell Davidson and John J. Kozak
J. Math. Phys. 14, 423-431 (1973)
18. "Analysis of the Barker-Henderson Local-Compressibility Approximation. II. Comparison with Other Theories of Liquids."
M.J. Moffat and John J. Kozak
J. Chem. Phys. 58, 876-889 (1973)
19. "Modern Interpretation of the Average-Potential-Model Theory of Solutions."
M.J. Moffat and John J. Kozak
Physica 65, 485-504 (1973)
20. "On the Relationship between Bifurcation Points of the Kirkwood-Salsburg Equation and Phase Transitions."
Ing-Yih S. Cheng and John J. Kozak
J. Math. Phys. 14, 632-637 (1973)

21. "A Study of the Asymptotic Behavior of the D-Dimensional Ising Model."
R.A. Goldstein and John J. Kozak
Physica 71, 267-293 (1974)
22. "Phase Transitions in D-Dimensional Ising Lattices."
R.A. Goldstein and John J. Kozak
(in) Global Analysis and its Applications.
(International Atomic Energy Agency, Vienna, 1974), Vol. II, pp. 245-261.
23. "The Square-Well Potential. IV. Use of a Modification of the Kirkwood Superposition Approximation."
I.B. Schrodtt, John J. Kozak, and K.D. Luks
J. Chem. Phys. 60, 170-175 (1974)
24. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. VI. Influence of the Coupling Function on the Dynamics."
Janilla Jyy-Wen Yang, Russell Davidson and John J. Kozak
J. Math. Phys. 15, 491-501 (1974)
25. "Energy Transfer in Radiation Chemistry. I. Dynamics of the Electron-Oscillators System."
Henry Douglas Kutz and John J. Kozak
J. Math. Phys. 15, 508-519 (1974)
26. "Denaturation: An Example of Catastrophe."
John J. Kozak and Craig J. Benham
Proc. Natl. Acad. Sci (U.S.A.) 71, 1977-1981 (1974)
27. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. VII. Emission in a Finite System in the Presence of an Extra Photon."
Russell Davidson and John J. Kozak
J. Math. Phys. 16, 1013-1022 (1975)
28. "Relaxation of the Continuum Approximation in the Theory of Electrolytes. I. Formal Results."
Ronald A. Goldstein and John J. Kozak
J. Chem. Phys. 62, 276-284 (1975)
29. "On the Relaxation of the Continuum Approximation in the Theory of Electrolytes. II. Ion Distributions."
Ronald A. Goldstein, Patrick Fenton Hay and John J. Kozak
J. Chem. Phys. 62, 285-291 (1975)
30. "Perturbation Theory using the Yvon-Born-Green Equation for the Square-Well Fluid."
W.W. Lincoln, John J. Kozak and K.D. Luks
J. Chem. Phys. 62, 1116-1121 (1975)

31. "Electron Reactions and Electron Transfer Reactions Catalyzed by Micellar Systems."
M. Gratzel, John J. Kozak and J.K. Thomas
J. Chem. Phys. 62, 1632-1640 (1975)
32. "Properties of Solutions to the Yvon-Born-Green Equation for the Square-Well Fluid."
William W. Lincoln, John J. Kozak and Kraemer D. Luks
J. Chem. Phys. 62, 2171-2182 (1975)
33. "Study of the Structure of Molecular Complexes. IX. The Hartree-Fock Energy Surface for the H₂O-Li-F Complex."
James W. Kress, E. Clementi, John J. Kozak and Maurice E. Schwartz
J. Chem. Phys. 63, 3907-3928 (1975)
33. "Spectator-Ion Effect on the Passage of Ions through Membranes."
John J. Kozak
Proc. Natl. Acad. Sci. (U.S.A.) 72, 683-687 (1975)
34. "Denaturation: An Example of a Catastrophe. II. Two-State Transitions."
Craig J. Benham and John J. Kozak
J. Theor. Biol. 63, 125-149 (1976)
36. "On the Reduction of Dimensionality in Radical Decay Kinetics Induced by Micellar Systems."
A. J. Frank, M. Gratzel and John J. Kozak
J. Am. Chem Soc. 98, 3317-3321 (1976)
37. "Exact Dynamics of a Model for a Three-Level Atom."
Russell Davidson and John J. Kozak
J. Math. Phys. 17, 1692-1702 (1976)
38. "Estimate of the Intermolecular Polarization Contribution to the Static Dielectric Constant of Water."
James W. Kress and John J. Kozak
J. Chem. Phys. 64, 1706-1719 (1976)
39. "Comments on the Behavior of the Yvon-Born-Green Equation for the Square-Well Fluid Near the Critical Point."
King U. Co, John J. Kozak and Kraemer D. Luks
J. Chem. Phys. 64, 2197-2201 (1976)
40. "Solutions of the Yvon-Born-Green Equation for the Square-Well Fluid at Very High Densities."
King U. Co, John J. Kozak and Kraemer D. Luks
J. Chem. Phys. 65, 2327-2332 (1976)

41. "Solutions of the Yvon-Born-Green and Kirkwood Equations for Hard-Spheres at Very High Densities."
King U. Co, John J. Kozak and Kraemer D. Luks
J. Chem. Phys. 66, 581-585 (1977)
42. "The Molecular Structure of a Liquid-Vapor Interface: Comments on the Integral Equation Approach."
K. U. Co, John J. Kozak and K. D. Luks
J. Chem. Phys. 66, 1002-1005 (1977)
43. "Application of Complementary Variational Principles to the Kirkwood Equation for Hard Spheres at Very High Densities."
King U. Co, John J. Kozak and Kraemer D. Luks
J. Chem. Phys. 66, 4306-4308 (1977)
44. "Determination of the Pair-Polarizability Tensor for the Ne Diatom."
James W. Kress and John J. Kozak
J. Chem. Phys. 66, 4516-4519 (1977)
45. "Effect of Relaxing the Continuum Dielectric Approximation on Poisson-Boltzmann Thermodynamics."
Donald G. Knox and John J. Kozak
Mol. Phys. 33, 811-831 (1977)
46. "Denaturation: An Example of Catastrophe. III. Phase Diagrams for Multistate Transformations."
Craig J. Benham and John J. Kozak
J. Theor. Biol. 66, 679-693 (1977)
47. "Statistical Mechanics of the Square-Well Fluid."
Kraemer D. Luks and John J. Kozak
Adv. Chem. Phys. [John Wiley & Sons, New York, 1978], Vol. 37, pp. 139-201
48. "On the Relaxation to Quantum-Statistical Equilibrium of the Wigner-Weisskopf Atom in a One-Dimensional Radiation Field. VIII. Emission in an Infinite System in the Presence of an Extra Photon."
Russell Davidson and John J. Kozak
J. Math. Phys. 19, 1074-1086 (1978)
49. "Catastrophes in Statistical Biophysics."
Craig J. Benham and John J. Kozak
Behavioral Sci. 23, 355-359 (1978)
50. "Solutions of the Yvon Born-Green Equation for a System of Square-Well Molecules at a Temperature Below the Triple Point."
King U. Co, Kraemer D. Luks and John J. Kozak
Mol. Phys. 36, 1883-1896 (1978)

51. "Nonequilibrium Phenomena in the Kinetics of Photochemical Ozone Production."
John J. Kozak, G. Nicolis, J. W. Kress and M. Sanglier
J. Non-Equilib. Thermodyn. 4, 67-74 (1979)
52. "Phase Transitions as a Problem in Bifurcation Theory." (Invited Lecture)
John J. Kozak
Anal. N. Y. Acad. Sci. 316, 417-432 (1979)
53. "Precise Determination of the Critical Exponent for the Yvon-Born-Green Square-Well Fluid."
K. A. Green, K. D. Luks and John J. Kozak
Phys. Rev. Lett. 42, 985-988 (1979)
54. "Nonlinear Problems in the Theory of Phase Transitions."
John J. Kozak
Adv. Chem. Phys. [John Wiley & Sons, New York, 1979], Vol. 40, pp. 229-368
55. "Role of Dimensionality and Spatial Extent in Influencing Intracellular Kinetic Processes."
Michael D. Hatlee, John J. Kozak, Guido Rothenberger, Pierre P. Infelta and Michael Gratzel
J. Phys. Chem. 84, 1508-1519 (1980)
56. "Random Walks on Finite Lattices with Traps."
Michael D. Hatlee and John J. Kozak
Phys. Rev. B 21, 1400-1407 (1980)
57. "A Stochastic Approach to the Theory of Intracellular Kinetics. I. Master Equation for Irreversible Reactions."
Michael D. Hatlee and John J. Kozak
J. Chem. Phys. 72, 4358-4367 (1980)
58. "Nonclassical Critical Behavior of the Square-Well Fluid."
K. A. Green, K. D. Luks, Eok Lee and John J. Kozak
Phys. Rev. A 21, 356-361 (1980)
59. "Monomer-Eximer Dynamics in Spread Monolayers. I. Lateral Diffusion of Pyrene Dodecanoic Acid at the Air-Water Interface."
Thomas Loughran, Michael D. Hatlee, L. K. Patterson and John J. Kozak
J. Chem. Phys. 72, 5791-5797 (1980)
60. "Electrostatic Focusing in Micellar and Microelectrode Kinetic Processes."
Mei Hsu Dung, Donald G. Knox and John J. Kozak
Ber. Bunsenges. Phys. Chem. 84, 789-795 (1980)

61. "Stability of Photochemical Mechanisms for Photogalvanic Cells."
Mei Hsu Dung and John J. Kozak
J. Photochem. 14, 205-232 (1980)
62. "Isopiestic Determination of Water Binding by Fish Antifreeze Glycoproteins."
John G. Duman, Jean L. Patterson, John J. Kozak and Arthur L. Devries
Biochim. Biophys. Acta 626, 332-336 (1980)
63. "A Dynamic Model for in vivo Virus Replication."
J. E. MacCarthy and John J. Kozak
J. Theor. Biol. 90, 265-281 (1981)
64. "A Stochastic Approach to the Theory of Intracellular Kinetics.
II. Master Equation for Reversible Reactions."
Michael D. Hatlee and John J. Kozak
J. Chem. Phys. 74, 1098-1109 (1981)
65. "Random Walks on Finite Lattices with Traps. II. The Case of a Partially Absorbing Trap."
Michael D. Hatlee and John J. Kozak
Phys. Rev. B 23, 1713-1718 (1981)
66. "Stochastic Flows in Integral and Fractal Dimensions and Morphogenesis."
Michael D. Hatlee and John J. Kozak
Proc. Natl. Acad. Sci (U.S.A.) 78, 972-975 (1981)
67. "Solutions of the Yvon-Born-Green Equation for Hard Disks at Very High Densities."
K. A. Green, K.D. Luks and John J. Kozak
Mol. Phys. 43, 685-696 (1981)
68. "A Stochastic Approach to the Theory of Intracellular Kinetics. III. The Homogeneous-System Limit."
Michael D. Hatlee and John J. Kozak
J. Chem. Phys. 74, 5627-5635 (1981)
69. "Analysis of Mechanisms for the Cyclic Cleavage of Water by Visible Light."
Mei Hsu Dung and John J. Kozak
J. Photochem. 16, 121-145 (1981)
70. "The Critical Correlations of the Yvon-Born-Green Equation."
Gerald L. Jones, John J. Kozak, E. Lee, Shmuel Fishman and Michael E. Fisher
Phys. Rev. Lett. 46, 795-798 (1981)

71. "Pattern Formation in the Schlögl Model of Nonlinear Kinetics."
Mei Hsu Dung and John J. Kozak
Physica 180A, 63-76 (1981)
72. "A Variational Approach to the Statistical Mechanics of Hard Disks and Hard Spheres."
John E. MacCarthy, John J. Kozak, K. A. Green and K. D. Luks
Mol. Phys. 44, 17-31 (1981)
73. "Nonclassical Critical Behavior of the Square-Well Fluid. II. The Specific Heat Function C_v and its Exponent."
K.A. Green, K. D. Luks and John J. Kozak
Phys. Rev. A 24, 2093-2095 (1981)
74. "Statistical Mechanics via the Method of Complementary Variational Principles. I. Application to Classical, Two-Dimensional Systems."
John E. MacCarthy and John J. Kozak
Mol. Phys. 44, 761-781 (1981)
75. "An Exact Algorithm for d-Dimensional Walks on Finite and Infinite Lattices with Traps."
Cecilia A. Walsh and John J. Kozak
Phys. Rev. Lett. 47, 1500-1502 (1981)
76. "On the Interplay between Geometry and Mobility in Intracellular Kinetics."
Michael D. Hatlee, John J. Kozak and Michael Gratzel
Ber. Bunsenges. Phys. Chem. 86, 157-161 (1982)
77. "Effects of Ionic Strength on the Kinetics of Ionic and Micellar Reactions in Aqueous Solution."
Mei Hsu Dung and John J. Kozak
J. Chem. Phys. 76, 984-996 (1982)
78. "The Influence of Closure on the Behavior of the Yvon-Born-Green Equation for a System of Hard Rods."
K. A. Green, K. D. Luks, John E. MacCarthy and John J. Kozak
Mol. Phys. 45, 897-913 (1982)
79. "Observations on the Criticality of the Yvon-Born-Green Equation."
K. A. Green, K. D. Luks, G. L. Jones, E. Lee and John J. Kozak
Phys. Rev. A 25, 1060-1064 (1982)
80. "The Critical Behavior of the Yvon-Born-Green Equation. Effects of Dimensionality."
Gerald L. Jones, Eok K. Lee and John J. Kozak
Phys. Rev. Lett. 48, 447-450 (1982)

81. "Weak Mixing in a Quantum System."
John J. Kozak and O. E. RöSSLer
Z. Naturforsch. 37a, 33-38 (1982)
82. "Photoinduced Structural Transformations in Mixed Monolayer Assemblies."
L. K. Patterson, J. E. MacCarthy and John J. Kozak
Chem. Phys. Lett. 89, 435-437 (1982)
83. "Efficiency of Light-Energy Conversion in Photogalvanic Cells and Water Cleavage Systems."
Mei Hsu Dung and John J. Kozak
J. Chem. Phys. 77, 3246-3257 (1982)
84. "Statistical Mechanics via the Method of Complementary Variational Principles.
II. Application to d-Dimensional Ionic and Dipolar Fluids."
B. L. Tembe and John J. Kozak
Mol. Phys. 47, 753-769 (1982)
85. "Lateral Diffusion in Fluid Systems."
John E. MacCarthy and John J. Kozak
J. Chem. Phys. 77, 2214-2216 (1982)
86. "Exact Algorithm for d-Dimensional Walks on Finite and Infinite Lattices with Traps.
II. General Formulation and Application to Diffusion-Controlled Reactions."
Cecilia A. Walsh and John J. Kozak
Phys. Rev. B 26, 4166-4189 (1982)
87. "Chaos, Periodic Chaos and the Random Walk Problem."
John J. Kozak, Matthew K. Musho and Michael D. Hatlee
Phys. Rev. Lett. 49, 1801-1804 (1982)
88. "Stochastic Flows, Reaction-Diffusion Processes and Morphogenesis." (Invited Lecture)
John J. Kozak, Michael D. Hatlee, Matthew K. Musho, Philip A. Politowicz and Cecilia A. Walsh
J. Stat. Phys. 30, 263-271 (1983)
89. "Exact Dynamics of a Model for a Three-Level Quantum System Interacting with a Continuous Spectrum."
Russell Davidson and John J. Kozak
J. Math. Phys. 24, 1911-1922 (1983)
90. "Numerical and Analytical Studies of the Long-ranged Solutions of the Yvon-Born-Green Equation."
Gerald L. Jones, Eok K. Lee and John J. Kozak
J. Chem. Phys. 79, 459-468 (1983)

91. "Non-Nearest Neighbor Random Walks in Reaction-Diffusion Processes."
Matthew K. Musho and John J. Kozak
J. Chem. Phys. 79, 1942-1947 (1983)
92. "Transition Phenomena in Monolayers at the Air-Water Interface."
Bhalachandra L. Tembe, John E. MacCarthy and John J. Kozak
J. Phys. Chem. 87, 4562-4563 (1983)
93. "Exact Algorithm for d-Dimensional Walks on Finite and Infinite Lattices with Traps. III. Role of Lattice Valency in Influencing the Efficiency of Diffusion-Controlled Reactions."
Philip A. Politowicz and John J. Kozak
Phys. Rev. B 28, 5549-5569 (1983)
94. "Lattice Theory of Reaction Efficiency in Compartmentalized Systems."
Matthew K. Musho and John J. Kozak
J. Chem. Phys. 80, 159-169 (1984)
95. "Lattice Theory of Reaction Efficiency in Compartmentalized Systems. II. Reduction of Dimensionality."
Pil H. Lee and John J. Kozak
J. Chem. Phys. 80, 705-713 (1984)
96. "Factors Affecting the Efficiency of Photochemical Water Cleavage Systems. The Reaction between O₂ and the Reduced Electron Acceptor."
Thomas W. Ebbesen, Bhalachandra L. Tembe and John J. Kozak
J. Phys. Chem. 88, 683-688 (1984)
97. "Perturbation Theory for Square-Well Fluids in d=2,3."
Bhalachandra L. Tembe and John J. Kozak
Mol. Phys. 51, 825-834 (1984)
98. "Thermodynamically Consistent Truncations for Distribution Function Hierarchies."
Gerald L. Jones, John J. Kozak and Eok K. Lee
J. Chem. Phys. 80, 2092-2101 (1984)
99. "Characteristics of the Probability Function for Three Random-Walk Models of Reaction-Diffusion Processes."
Matthew K. Musho and John J. Kozak
J. Chem. Phys. 81, 3229-3238 (1984)
100. "The Kirkwood Superposition Approximation for Hard Rods at High Pressures."
Paul Siders and John J. Kozak
J. Chem. Phys. 81, 4594-4602 (1984)

101. "Linear Chaos."
O.E. Rössler, John J. Kozak and D. Hoffman
Physica IID, 416 (1984)
102. "Exact Calculation of the Lineshape and Scattering Operator for a Model of a Two-Level Atom Interacting with a Continuous Spectrum of Radiation."
Russell Davidson and John J. Kozak
J. Math. Phys. 26, 556-565 (1985)
103. "Thermodynamic Self-Consistency for Hard Spheres at Low Density."
Paul Siders and John J. Kozak
J. Chem. Phys. 82, 4257-4263 (1985)
104. "Theory of Intramolecular Electron Transfer Reactions in Anion Radicals of Nitrobenzyl Halides."
Kristine E. Miller and John J. Kozak
J. Phys. Chem. 89, 401-403 (1985)
105. "Reply to the Comment on 'Factors Affecting the Efficiency of Photochemical Water Cleavage Systems. The Reaction between O₂ and the Reduced Electron Acceptor.'"
T.W. Ebbesen, P. Lenoir and John J. Kozak
J. Phys. Chem. 89, 553 (1985)
106. "Influence of Structure on Reaction Efficiency in Surface Catalysis. I. Sensitivity to Multiplet Concentration and Configuration."
Philip A. Politowicz and John J. Kozak
Langmuir 1, 429-443 (1985)
107. "Influence of Structure on Reaction Efficiency in Surface Catalysis. II. Reactivity at Terraces, Ledges and Kinks."
G. Joseph Staten, Matthew K. Musho and John J. Kozak
Langmuir 1, 443-452 (1985)
108. "Random Walks on Finite High-Dimensional Cubic Lattices with a Single Trap."
Philip A. Politowicz, John J. Kozak and George H. Weiss
Chem. Phys. Lett. 120, 388-392 (1985)
109. "Relative Importance of Lattice Valency versus System Dimensionality in Markovian Models of Diffusion-Controlled Processes."
Philip A. Politowicz and John J. Kozak
Chem. Phys. Lett. 127, 257-262 (1986)
110. "Simulated Dynamics of Photochemical Water Splitting."
Pierre M. Lenoir, John J. Kozak and Thomas W. Ebbesen
Aust. J. Chem. 39, 1865-1875 (1986)

111. "Computer Simulations of Photochemical Water Cleavage Systems.
1. A Kinetic Model for the Production of Hydrogen on a Colloidal Catalyst."
Richard E. Sassoon, Pierre M. Lenoir and John J. Kozak
J. Phys. Chem. 90, 4654-4663 (1986)
112. "Theoretical Investigation of Fluorescence Concentration Quenching in Two-Dimensional Disordered Systems. Application to Chlorophyll a in Monolayers of Dioleoylphosphidylcholine."
Laurent G. Boulou, Larry K. Patterson, J.P. Chauvet and John J. Kozak
J. Chem. Phys. 86, 503-507 (1987)
113. "Calculation of the Tortuosity Factor in Single-Phase Transport through a Structured Medium."
Pil H. Lee and John J. Kozak
J. Chem. Phys. 86, 4617-4627 (1987)
114. "Surface Site Diffusion and Reaction on Molecular Organizates and Colloidal Catalysts: A Geometrical Perspective."
Philip A. Politowicz and John J. Kozak
Proc. Nati. Acad. Sci. (U.S.A.) 84, 8175-8179 (1987)
115. "Simulations of Energy Transfer and Trapping in Two-Dimensional Disordered Systems."
Laurent G. Boulou and John J. Kozak
Mol. Phys. 62, 1449-1465 (1987)
116. "Influence of Channel Geometry on Sorption in Zeolites."
Philip A. Politowicz and John J. Kozak
Mol. Phys. 62, 939-960 (1987)
117. "Multipolar Correlations between Reactants in Crystalline and Semiamorphous Zeolites."
Joseph B. Mandeville, Joshua Golub and John J. Kozak
J. Phys. Chem. 92, 1575-1584 (1988)
118. "Sequestering and the Influence of Domain Structure on Excimer Formation in Spread Monolayers."
Philip A. Politowicz and John J. Kozak
Langmuir 4, 305-320 (1988)
119. "Correlation Effects on Reaction Efficiency in Monolayer Domains."
Joseph B. Mandeville, Joshua Golub and John J. Kozak
Chem. Phys. Lett. 143, 117-122 (1988)
120. "Pattern Development in Cellular Automata Triggered by Site-Specific Reactive Processes."
Gregory D. Abowd, Roberto A. Garza-López and John J. Kozak
Phys. Lett. A 127, 155-159 (1988)

121. "Computer Simulations of Photochemical Water Cleavage Systems. 2. Effects of Particle Size and Ion Concentration on the Production of Hydrogen from Water Mediated with a Colloidal Catalyst."
Pierre M. Lenoir, Richard E. Sassoon and John J. Kozak
J. Phys. Chem. 92, 2526-2536 (1988)
122. "Simulations of Fluorescence Quenching Using Theoretical Models of Energy and Electron Transfer in Random Arrays. Applications to Experiments on Monolayers of Chlorophylls and Quinones."
Laurent G. Boulu and John J. Kozak
Mol. Phys. 65, 193-207 (1988)
123. "Influence of Swelling on Reaction Efficiency in Intercalated Clay Minerals."
Philip A. Politowicz and John J. Kozak
J. Phys. Chem. 92, 6078-6081 (1988)
124. "Influence of Swelling on Reaction Efficiency in Intercalated Clay Minerals. 2. Pillared Clays."
Philip A. Politowicz, Linda Bik San Leung and John J. Kozak
J. Phys. Chem. 93, 923-926 (1989)
125. "Influence of Surface Structure on the Kinetics of Diffusion-Controlled Reactive Processes on Molecular Organizates and Colloidal Catalysts."
Philip A. Politowicz, Roberto A. Garza-López, David E. Hurtubise and John J. Kozak
J. Phys. Chem. 93, 3728-3735 (1989)
126. "Influence of Multipolar Correlations and Surface Imperfections on the Efficiency of Diffusion Controlled Reactive Processes on Molecular Organizates and Colloidal Catalysts."
Joseph B. Mandeville, David E. Hurtubise, Richard Flint and John J. Kozak
J. Phys. Chem. 93, 7876-7887 (1989)
127. "Pattern Development in Cellular Automata Triggered by Site-Specific Reactive Processes."
Roberto A. Garza-López and John J. Kozak
Phys. Rev A. 40, 7325-7333 (1989)
128. "Simulations of Energy Transfer and Trapping in Two-Dimensional Disordered Systems."
L. G. Boulu and John J. Kozak
(in) Spatial Inhomogeneities and Transient Behavior in Chemical Kinetics,
P. Gray, G. Nicolis, F. Baras, P. Borckmans and S. K. Scott, Eds.
(University of Manchester Press, Manchester, 1990) pp. 679-681.
129. "Influence of Structure on Reaction Efficiency in Surface Catalysis. III. Entropic and Dynamical Aspects."
Philip A. Politowicz and John J. Kozak
J. Phys. Chem. 94, 7272-7279 (1990)
130. "Kinetic Changes Arising from Surface Defects and Inhomogeneities."
Roberto A. Garza-López, J. K. Rudra, Russell Davidson and John J. Kozak
J. Phys. Chem. 94, 8315-8322 (1990)

131. "Diffusion of a Dimer through a Structured Medium."
Roberto A. Garza-López, Jayanta K. Rudra and John J. Kozak
Chem. Phys. Lett. 174, 278-282 (1990)
132. "Spectral Dimension of Regular and Fractal Lattices."
Jayanta K. Rudra and John J. Kozak
Bull. Amer. Phys. Soc. 35, 825 (1990);
Phys. Lett. A 151, 429-432 (1990)
133. "Calculation of the Effective Dimensionality of Layered Diffusion Spaces. Application to Diffusion Controlled Processes in Smectite Clays."
Roberto A. Garza-López and John J. Kozak
J. Phys. Chem. 95, 3278-3281 (1991)
134. "Analytic Solution for Random Walks on Finite d-Dimensional Lattices with a Single Trap."
John J. Kozak
Phys. Rev. A 44, 3519-3524 (1991)
135. "Reduction of Dimensionality in Zeolite Catalysis."
Joseph B. Mandeville and John J. Kozak
J. Phys. Chem. 96, 796-804 (1992)
136. "Effective Dimensionality of Layered Diffusion Spaces."
Roberto A. Garza-López and John J. Kozak
J. Phys. Chem. 96, 6027-6030 (1992)
137. "Correlation Effects and Reduction of Dimensionality in Interfacial Reactions."
Joseph B. Mandeville and John J. Kozak
J. Am. Chem. Soc. 114, 6139-6145 (1992)
138. "Sieving of Linear r-mers through a Structured Medium."
Roberto A. Garza-López and John J. Kozak
J. Phys. Chem. 96, 9457-9461 (1992).
139. "Reaction Efficiency of Diffusion-Controlled Processes on Finite, Planar Arrays."
Roberto A. Garza-López and John J. Kozak
Phys. Rev. E 49, 1049-1060 (1994).
140. "Kinetic Transitions in Diffusion-Reaction Space."
John J. Kozak and Russell Davidson
J. Chem. Phys. 101, 6101-6110 (1994).

141. "Influence of Swelling on Reaction Efficiency in Intercalated Clay Minerals. 3. Ion-Dipole Reactant Pairs."
John J. Kozak and Joseph B. Mandeville
J. Phys. Chem. 99, 12933-12940 (1995).
142. "Order-Disorder Phenomena in a Diffusion-Reaction Model of Interacting Dipoles on a Surface."
Roberto A. Garza-López, Daniel Byun, Kevin Orellana, Arthur Partikian, David Siew, Anne Yu and John J. Kozak
J. Chem. Phys. 103, 9413-9417 (1995).
143. "Random Walks on the Menger Sponge."
John J. Kozak
Chem. Phys. Lett. 275, 199-202 (1997).
144. "Transition Behavior on Lattices with Ladders."
Roberto A. Garza-López, David Bae, Lewis Naya and John J. Kozak
Chem. Phys. Lett. 286, 369-374 (1998).
145. "A Stochastic Approach to the Study of Atomistic Processes in the Early Stages of Thin-Film Growth."
Russell Davidson and John J. Kozak
J. Phys. Chem. 102, 7393-7399 (1998).
146. "A Stochastic Approach to the Study of Atomistic Processes in the Early Stages of Thin-Film Growth. 2. Island Formation."
Russell Davidson and John J. Kozak
J. Phys. Chem. 102, 7400-7405 (1998).
147. "Kinetic Transitions in Diffusion-Reaction Space. II. Geometrical Effects."
John J. Kozak
J. Chem. Phys. 110, 3056-3062 (1999).
148. "Recurrence and Trapping on a Fractal Solid."
Roberto A. Garza-López, Minh Ngo, Erica Delgado and John J. Kozak
Chem. Phys. Lett. 306, 411-415 (1999).
149. "Reaction Efficiency on the Surface of a Porous Catalyst."
Roberto A. Garza-López and John J. Kozak
J. Phys. Chem. 103, 9200-9204 (1999).
150. "Tortuosity Factor for Permeant Flow Through a Fractal Solid."
Robert A. Garza-López, Lewis Naya and John J. Kozak
J. Chem. Phys. 112, 9956-9960 (2000).

151. "Chemical Reactions and Reaction Efficiency in Compartmentalized Systems."
John J. Kozak
Adv. Chem. Phys. [John Wiley & Sons, New York, 2000], Vol. 115, pp. 245-406.
152. "Efficiency of Encounter-Controlled Reaction between Diffusing Reactants in a Finite Lattice."
John J. Kozak, K. Nicolis and C. Nicolis
J. Chem. Phys. 113, 8168-8174 (2000).
153. "Random Walks on Fractal Solids."
John J. Kozak
J. Stat. Phys. 101, 405-414 (2000).
154. "Encounter-Controlled Reactions between Interacting Walkers in Finite Lattices: Complex Kinetics and Many-Body Effects."
C. Nicolis, John J. Kozak and G. Nicolis
J. Chem. Phys. 115, 663-670 (2001).
155. "Modelling Diffusion-Reaction Processes Involving Geminate Radical Pairs."
John J. Kozak, C. Nicolis, G. Nicolis and Nicolas J. Turro
J. Phys. Chem. A 105, 10949-10951 (2001).
156. "Analytic Expression for the Mean Time to Absorption for a Random Walker on the Sierpinski Gasket."
John J. Kozak and V. Balakrishnan
Phys. Rev. E 65, 021105 (1-5) (2002).
157. "Diffusion-Reaction Processes Involving Interacting Dipoles on Euclidean vs. Fractal Architectures."
Roberto A. Garza-López, Christopher H. Lee, David Lin, Gerardo Lopez-Mena, David Liu and John J. Kozak
Chem. Phys. Lett. 356, 313-317 (2002).
158. "Exact Formula for the Mean Length of a Random Walk on the Sierpinski Tower."
John J. Kozak and V. Balakrishnan
Int. J. Bifurcation and Chaos 12, 2379-2385 (2002).
159. "Influence of Geometry on Light Harvesting in Dendrimeric Systems."
Jonathan L. Bentz, Fatemeh Niroomand and John J. Kozak
Chem. Phys. Lett. 370, 319-326 (2003).
160. "Invariance Relations for Random Walks on Hexagonal Lattices."
Roberto A. Garza-López and John J. Kozak
Chem. Phys. Lett. 371, 365-370 (2003).

161. "Geometrical Factors in Protein Nucleation."
John J. Kozak, V. Basios and G. Nicolis
Biophysical Chemistry 105, 495-503 (2003).
162. "A Lattice Model of the Early Stages of Electrification of a Cloud."
C. Nicolis, G. Nicolis and John J. Kozak
Phys. Rev. E 67, 061104; 1-10 (2003).
163. "Efficiency of Encounter-Controlled Reaction between Diffusing Reactants in a Finite Lattice: Topology and Boundary Effects."
Jonathan L. Benz, John J. Kozak, E. Abad and G. Nicolis
Physica A 326, 55-68 (2003).
164. "Synchronous vs. Asynchronous Dynamics of Diffusion-Controlled Reactions."
E. Abad, G. Nicolis, Jonathan L. Benz and John J. Kozak
Physica A 326, 69-87 (2003).
165. "Efficiency of Encounter-Controlled Reaction between Diffusing Reactants in a Finite Lattice: Non-Nearest Neighbor Effects."
Jonathan L. Benz, John J. Kozak and Gregoire Nicolis
Physica A 353, 73-84 (2005).
166. "Invariance Relations for Random Walks on Square Planar Lattices."
Roberto A. Garza-López and John J. Kozak
Chem. Phys. Lett. 406, 38-43 (2005).
167. "Influence of Geometry on Light Harvesting in Dendrimeric Systems. II. nth-Nearest Neighbor Effects and the Onset of Percolation."
Jonathan L. Benz and John J. Kozak
J. Lumin. 121, 62-74 (2006).
168. "Aggregation of Dipolar Colloidal Particles: Geometric Effects."
Jonathan L. Benz and John J. Kozak
Phys. Rev. E 73, 011414: 1-7 (2006).
169. "Invariance Relations for Random Walks on Simple Cubic Lattices."
Roberto A. Garza-Lopez, Anthony Linares, Alice Yoo, Greg Evans and John J. Kozak
Chem. Phys. Lett. 421, 287-294 (2006).
170. "Inverted Regions Induced by Geometric Constraints on a Classical Encounter-Controlled Binary Reaction."
E. Abad and John J. Kozak
Physica A 370, 501-524 (2006).

171. "Ionic Liquid – Alkane Association in Dilute Solutions."
Alain Berthod, John J. Kozak, Jared L. Anderson, Jie Ding, and Daniel W. Armstrong
Theo. Chem.. Acc. 117, 127-135 (2007)
172. "alpha-Synuclein Tertiary Contact Dynamics."
Jennifer C. Lee, Bert T. Lai, John J. Kozak, Harry B. Gray and Jay R. Winkler
J. Phys. Chem. 111, 2107-2112 (2007)
173. "Modeling the Early Stages of Self-Assembly in Nanophase Materials."
John J. Kozak, C. Nicolis and G. Nicolis
J. Chem. Phys. 126, 154701-154701-8 (2007)
174. "Fluctuation Assisted Diffusion through Ion Channels."
E. Abad and John J. Kozak
Physica A 380, 172-190 (2007);
- See also: "Fluctuation Assisted Diffusion through Ion Channels."
E. Abad and John J. Kozak
23rd International Conference on Statistical Physics (Genova, Italy), p. 372 (2007).
175. "Kinetics of Docking in Post-Nucleation Stages of Self Assembly"
Roberto A. Garza-Lopez, Philippe Bouchard, Gregoire Nicolis, Mike Sleutel,
Jack Brzezinski and John J. Kozak
J. Chem. Phys. 128, 114701 (1-13) (2008).
176. "Reaction Efficiency of Diffusion-Controlled Processes on Finite,
Aperiodic Planar Arrays"
Roberto A. Garza-Lopez, Aaron Kaufman, Reena Patel, Joseph Chang,
Jack Brzezinski and John J. Kozak
Chem. Phys. Letts. 459, 137-140 (2008).
177. "A Conjecture Concerning the Symmetries of Planar Nets and the Hard Disc Freezing
Transition."
John J. Kozak, Jack Brzezinski and Stuart A. Rice
J. Phys. Chem. B 112, 16059-16069 (2008).
178. "Synchronous vs Asynchronous Chain Motion in alpha-Synuclein Contact Dynamics."
Kristopher G. Urie, David Angelo, Jennifer C. Lee, John J. Kozak, Harry B. Gray and Jay R. Winkler
J. Phys. Chem. B 113, 522-530 (2009).
179. "Reaction Efficiency of Diffusion-Controlled Processes on Finite Planar Arrays. II.
Aperiodic Lattices."
John J. Kozak, Jack Brzezinski and Roberto A. Garza-Lopez
Phys. Rev. (submitted).