

List of Publications of Richard Bersohn

1. Andrew, E. R.; Bersohn, R. "Nuclear magnetic resonance line shape for a triangular configuration of nuclei". *J. Chem. Phys.* **1950**, *18*, 159–61.
2. Bersohn, R. "The quadrupole coupling of three nuclei in a rotating molecule". *J. Chem. Phys.* **1950**, *18*, 1124–5.
3. Bersohn, R.; Weneser, J.; Kroll, N. M. "A fourth-order radiative correction to atomic energy levels". *Phys. Rev.* **1952**, *86*, 596.
4. Bersohn, R. "Nuclear electric-quadrupole spectra in solids". *J. Chem. Phys.* **1952**, *20*, 1505–9.
5. Weneser, J.; Bersohn, R.; Kroll, N. M. "Fourth-order radiative corrections to atomic-energy levels". *Phys. Rev.* **1953**, *91*, 1257–62.
6. Bersohn, R. "Double-bond character of conjugated carbon-chlorine bonds". *J. Chem. Phys.* **1954**, *22*, 2078–83.
7. Bersohn, R.; Gutowsky, H. S. "Proton magnetic resonance in an ammonium chloride single crystal". *J. Chem. Phys.* **1954**, *22*, 651–8.
8. Gutowsky, H. S.; Pake, G. E.; Bersohn, R. "Structural investigations by means of nuclear magnetism. III. Ammonium halides". *J. Chem. Phys.* **1954**, *22*, 643–50.
9. Das, T. P.; Bersohn, R. "Quadrupole polarization of charge-clouds in ions". *Phys. Rev.* **1955**, *100*, 1792.
10. Bersohn, R.; Das, T. P. "Ground state of Mn²⁺ in crystals". *Bull. Am. Phys. Soc.* **1956**, *1*, 397.
11. Bersohn, R. "Sodium-23 quadrupole coupling constants of sodium nitrate and sodium chlorate". *Bull. Am. Phys. Soc.* **1956**, *1*, 215.
12. Bersohn, R. "Proton hyperfine interactions in semiquinone ions". *J. Chem. Phys.* **1956**, *24*, 1066–70.
13. Das, T. P.; Bersohn, R. "Variational calculation of magnetic shielding of protons in the hydrogen molecule". *Phys. Rev.* **1956**, *104*, 849.
14. Das, T. P.; Bersohn, R. "Variational approach to the quadrupole polarizability of ions". *Phys. Rev.* **1956**, *102*, 733–8.
15. Bersohn, R. "Hyperfine structure of carbazolyl and hydrazyl". *Arch. Sci.* **1958**, *11*, 177–9.
16. Bersohn, R. "Electric field gradients in ionic crystals. I. Nuclear quadrupole coupling constants". *J. Chem. Phys.* **1958**, *29*, 326–33.
17. Das, T. P.; Bersohn, R. "Electric and magnetic properties of the hydrogen molecule". *Phys. Rev.* **1959**, *115*, 897–910.
18. Bersohn, R. "Quadrupole moment of Fe^{57m}". *Phys. Rev. Lett.* **1960**, *4*, 609–10.
19. Bersohn, R. "Nuclear and electron resonance", *Ann. Rev. Phys. Chem.* (H. Eyring, C. J. Christensen, and H. S. Johnston, editors. Annual Reviews, Inc. 1960), *11*, 369–90.
20. Bersohn, R. "Field gradients at the deuteron in molecules". *J. Chem. Phys.* **1960**, *32*, 85–8.
21. Bersohn, R.; Isenberg, I. "Metallic nature of the starch-iodine complex". *J. Chem. Phys.* **1961**, *35*, 1640–3.
22. Bersohn, R. "Electron paramagnetic resonance of organic molecules". *Detn. Org. Struct. Phys. Methods* **1961**, *2*, 563–616.
23. Bersohn, R.; Bernheim, R.; McNeal, R. "Optical pumping and chemical reactions," Columbia University, 1962.
24. Bersohn, R. "Intermolecular bonding in the solid halogens". *J. Chem. Phys.* **1962**, *36*, 3445–54.
25. Bersohn, R. "Solid-state perturbations of nuclear quadrupole coupling constants". *J. Appl. Phys.* **1962**, *33*, 286–9.
26. Bersohn, R. "Bonding wave functions in the xenon fluorides". *J. Chem. Phys.* **1963**, *38*, 2913–14.
27. Bersohn, R.; Das, T. P. "Many-body aspects of dipolar interaction in crystal lattices". *Phys. Rev.* **1963**, *130*, 98–108.
28. Chakravarty, A. S.; Bersohn, R. "Zero field splitting in atomic nitrogen". *Paramagn. Reson., Proc. Int. Conf.* **1963**, *1*, 305–13, discussion 313.
29. Bersohn, R. "Scattering of optical harmonics by macromolecules". *J. Am. Chem. Soc.* **1964**, *86*, 3505–7.
30. Bersohn, R.; Isenberg, I. "Phosphorescence in nucleotides and nucleic acids". *J. Chem. Phys.* **1964**, *40*, 3175–80.
31. Isenberg, I.; Leslie, R. B.; Baird, S. L., Jr.; Rosenbluth, R.; Bersohn, R. "Delayed fluorescence in deoxyribonucleic acid(DNA)-acridine dye complexes". *Proc. Natl. Acad. Sci. U.S.A.* **1964**, *52*, 379–87.
32. Isenberg, I.; Bersohn, R. "Triplet states in DNA [deoxyribonucleic acid]". *Electron Aspects Biochem., Proc. Intern. Symp., Ravello, Italy* **1964**, 3–5.
33. Isenberg, I.; Leslie, R. B.; Baird, S. L., Jr.; Rosenbluth, R.; Bersohn, R. "Delayed Fluorescence in DNA-Acridine Dye Complexes". *Proc. Natl. Acad. Sci. U.S.A.* **1964**, *52*, 379–87.
34. McNeal, R. J.; Bernheim, R. A.; Bersohn, R.; Dorfman, M. "Optical pumping and chemical reactions". *J. Chem. Phys.* **1964**, *40*, 1678–83.
35. Lin, S. H.; Bersohn, R. "Effect of radiation damping on dispersion". *J. Chem. Phys.* **1965**, *44*, 3768–73.
36. Bersohn, R.; Pao, Y.-H.; Frisch, H. L. "Double-quantum light scattering by molecules". *J. Chem. Phys.* **1966**, *45*, 3184–98.
37. Bersohn, R.; Shulman, R. G. "Measures of covalency in transition-metal chlorides". *J. Chem. Phys.* **1966**, *45*, 2298–2303.
38. Crosley, D. R.; Bersohn, R. "Detection of hydrogen atoms and free radicals during the photolysis of ethane". *J. Chem. Phys.* **1966**, *45*, 4353–4.
39. Isenberg, I.; Baird, S. L., Jr.; Bersohn, R. "Interaction of polynucleotides with aromatic hydrocarbons". *Biopolymers* **1967**, *5*, 477–82.
40. Pao, Y.-H.; Frisch, H. L.; Bersohn, R. "Double quantum light scattering and orientational correlations in liquids". *Int. J. Quantum Chem., Symp.* **1967**, 829–37.
41. Nguyen, T.; Bersohn, R.; Brumer, P.; Luk, C. K.; Tao, T. "Effect of pH on the phosphorescence of tryptophan, tyrosine, and proteins". *J. Biol. Chem.* **1967**, *242*, 2979–85.
42. Truong, T.; Bersohn, R.; Brumer, P.; Luk, C. K.; Tao, T. "Effect of pH on the phosphorescence of tryptophan, tyrosine, and proteins". *J. Biol. Chem.* **1967**, *242*, 2979–85.

43. Isenberg, I.; Bersohn, R. "Reply to Comment of metallic nature of the starch-iodine complex". *J. Chem. Phys.* **1968**, *48*, 1427.
44. Lin, S. H.; Bersohn, R. "Effect of partial deuteration and temperature on triplet-state lifetimes". *J. Chem. Phys.* **1968**, *48*, 2732–6.
45. Bersohn, R.; Lin, S. H. "Orientation of targets by beam excitation". *Adv. Chem. Phys.* **1969**, *16*, 67–100.
46. Bersohn, R. "Complexes of alkali atoms and molecules". *Comments Atomic Mol. Phys.* **1969**, *1*, 84–92.
47. Isenberg, I.; Baird, S. L., Jr.; Bersohn, R. "Complexing of nucleic acid and hydrocarbons". *Ann. N. Y. Acad. Sci.* **1969**, *153*, 780–4.
48. Karplus, S.; Bersohn, R. "Photodissociation of methane". *J. Chem. Phys.* **1969**, *51*, 2040–50.
49. Bersohn, R.; Ihnat, M. E. "Proton nuclear magnetic resonance study of the copper(II)-carnosine complex in aqueous solution". *Biochemistry* **1970**, *9*, 4555–66.
50. Ihnat, M.; Bersohn, R. "³H nuclear magnetic resonance study of the copper(II)-carnosine complex in aqueous solution". *Biochemistry* **1970**, *9*, 4555–66.
51. Bersohn, R. "Total cross sections for the harpoon reaction". *Comments Atomic Mol. Phys.* **1971**, *2*, 156–9.
52. Jonah, C.; Chandra, P.; Bersohn, R. "Anisotropic photodissociation of cadmium dimethyl". *J. Chem. Phys.* **1971**, *55*, 1903–7.
53. Solomon, J.; Jonah, C.; Chandra, P.; Bersohn, R. "Photolysis mapping studies of aliphatic carbonyl compounds". *J. Chem. Phys.* **1971**, *55*, 1908–14.
54. Bersohn, R. "Chemical applications of optical pumping". *Acc. Chem. Res.* **1972**, *5*, 200–4.
55. Bersohn, R. "Photodissociation with polarized light". *Isr. J. Chem.* **1973**, *11*, 675–81.
56. Luk, C. K.; Bersohn, R. "Time dependence of the fluorescence of the B state of cyanide". *J. Chem. Phys.* **1973**, *58*, 2153–63.
57. Bersohn, R. "Asymmetry parameter of the deuteron quadrupole coupling constant in aromatic molecules. s–p Inequivalence". *Mol. Phys.* **1974**, *27*, 605–9.
58. Dzvonik, M.; Yang, S.; Bersohn, R. "Photodissociation of molecular beams of aryl halides". *J. Chem. Phys.* **1974**, *61*, 4408–21.
59. Yang, S.-C.; Bersohn, R. "Theory of the angular distribution of molecular photofragments". *J. Chem. Phys.* **1974**, *61*, 4400–7.
60. Bersohn, R. "Photodissociation spectroscopy: symmetry and lifetime of the excited state". *Isr. J. Chem.* **1975**, *14*, 111–17.
61. Bersohn, R.; Horwitz, H. "Lifetime studies of sodium-(42p) produced by photodissociation and quenched by iodine". *J. Chem. Phys.* **1975**, *63*, 48–52.
62. Dlott, D.; Siegel, M.; Bersohn, R. "Proposed fluorimetric determination of unsaturated iron-binding capacity". *Am. J. Clin. Pathol.* **1975**, *64*, 217–24.
63. Dlott, D.; Siegel, B. A.; Bersohn, R. "A proposed fluorimetric determination of unsaturated iron-binding capacity". *Am. J. Clin. Pathol.* **1975**, *64*, 217–24.
64. Fan, S.; Bersohn, R. "Interaction of transition metal ions with ribonuclease A. II. Selective effects of manganese(2+), zinc(2+), cadmium(2+), and mercury(2+) on the histidine magnetic resonance". *Biochim. Biophys. Acta* **1975**, *397*, 405–11.
65. Fan, S.; Bersohn, R. "Interaction of transition metal ions with ribonuclease A. II. The selective effects of Mn²⁺, Zn²⁺, Cd²⁺ and Hg²⁺ on the histidine magnetic resonance". *Biochim. Biophys. Acta* **1975**, *397*, 405–11.
66. Kawasaki, M.; Lee, S. J.; Bersohn, R. "Photodissociation of molecular beams of methylene iodide and iodoform". *J. Chem. Phys.* **1975**, *63*, 809–14.
67. Shank, C. V.; Ippen, E. P.; Bersohn, R. "Time-resolved spectroscopy of hemoglobin and its complexes with subpicosecond optical pulses". *Science* **1976**, *193*, 50–1.
68. Chiu, H. C.; Bersohn, R. "Electronic energy transfer between tyrosine and tryptophan in the peptides Trp-(Pro)n-Tyr". *Biopolymers* **1977**, *16*, 277–88.
69. Kawasaki, M.; Lee, S. J.; Bersohn, R. "Photodissociation of molecular beams of aryl halides: Translational energy distribution of the fragments". *J. Chem. Phys.* **1977**, *66*, 2647–55.
70. Kawasaki, M.; Litvak, H.; Bersohn, R. "Molecular beam photodissociation of thallium(I) iodide: Bond energy and state symmetry". *J. Chem. Phys.* **1977**, *66*, 1434–6.
71. Ugurbil, K.; Norton, R. S.; Allerhand, A.; Bersohn, R. "Studies of individual carbon sites of azurin from *Pseudomonas aeruginosa* by natural-abundance carbon-13 nuclear magnetic resonance spectroscopy". *Biochemistry* **1977**, *16*, 886–94.
72. Ugurbil, K.; Maki, A. H.; Bersohn, R. "Study of the triplet state properties of tyrosines and tryptophan in azurins using optically detected magnetic resonance". *Biochemistry* **1977**, *16*, 901–7.
73. Ugurbil, K.; Bersohn, R. "Tyrosine emission in the tryptophanless azurin from *Pseudomonas fluorescens*". *Biochemistry* **1977**, *16*, 895–901.
74. Ugurbil, K.; Bersohn, R. "Nuclear magnetic resonance study of exchangeable and nonexchangeable protons in azurin from *Pseudomonas aeruginosa*". *Biochemistry* **1977**, *16*, 3016–23.
75. Ugurbil, K.; Maki, A. H.; Bersohn, R. "Study of the triplet state properties of tyrosines and tryptophan in azurins using optically detected magnetic resonance". *Biochemistry* **1977**, *16*, 901–7.
76. Bersohn, R. "Translational energy distribution of photofragments". *J. Photochem.* **1978**, *9*, 87–90.
77. Chao, Y. Y. H.; Bersohn, R. "Carbon-13 and proton NMR studies of cis-trans conformers of oligoprolines". *Biopolymers* **1978**, *17*, 2761–7.
78. Freedman, A.; Bersohn, R. "Photodissociation of molecular beams. Cleavage of metal–metal bonds in rhenium and manganese decacarbonyl". *J. Am. Chem. Soc.* **1978**, *100*, 4116–18.
79. Kawasaki, M.; Litvak, H.; Lee, S. J.; Bersohn, R. "Photodissociation of molecular beams of metallic iodides". *NBS Special Publication (United States)* **1978**, *526*, 155–6.
80. Kawasaki, M.; Bersohn, R. "Photodissociation of molecular beams of arsenic triiodide". *J. Chem. Phys.* **1978**, *68*, 2105–8.
81. Bersohn, R. "Studies of excited alkali atoms produced by photodissociation of alkali halides: superalkali atoms". *Alkali Halide Vap.* **1979**, 345–60.
82. Chao, Y.-Y. H.; Bersohn, R.; Aisen, P. "Proton NMR and ESR studies of oxidized cytochrome c551 from *Pseudomonas aeruginosa*". *Biochemistry* **1979**, *18*, 774–9.

83. Chao, Y. Y.; Bersohn, R.; Aisen, P. "1H NMR and ESR studies of oxidized cytochrome c551 from *Pseudomonas aeruginosa*". *Biochemistry* **1979**, *18*, 774–9.
84. Freedman, A.; Yang, S. C.; Kawasaki, M.; Bersohn, R. "Photodissociation of aryl halides". *Kokagaku Toronkai Koen Yoshishu* **1979**, 232–3.
85. Freedman, A.; Yang, S.-C.; Bersohn, R. "Translational energy distribution of the photofragments of sulfur dioxide at 193 nm". *J. Chem. Phys.* **1979**, *70*, 5313–14.
86. Kawasaki, M.; Lee, S. J.; Bersohn, R. "The photodissociation of cadmium iodide". *J. Chem. Phys.* **1979**, *71*, 1235–40.
87. Kobayashi, T.; Degenkolb, E. O.; Bersohn, R.; Rentzepis, P. M.; MacColl, R.; Berns, D. S. "Energy transfer among the chromophores in phycocyanins measured by picosecond kinetics". *Biochemistry* **1979**, *18*, 5073–8.
88. Yan, S. S.; Bersohn, R. "Laser-induced fluorescence spectra of hydroxyl radical from photolysis of hydrogen peroxide at 193 nm". *Kosoku Hanno Toronkai Koen Yokoshu, 14th* **1979**, 133–4.
89. Bersohn, R. "Ultraviolet photodissociation of molecular beams," Columbia University, New York, NY, USA., 1980.
90. Bersohn, R. "Azurin". *Mol. Struct. Dyn.: Lect. Biol. Chem. Phys., Proc. Symp.* **1980**, 269–78.
91. Bersohn, R. "Molecular photodissociation by an ultraviolet photon". *IEEE J. Quantum Electron.* **1980**, *QE16*, 1208–18.
92. Freedman, A.; Yang, S. C.; Kawasaki, M.; Bersohn, R. "Photodissociation of aryl and aryl–alkyl halides at 193 nm: fragment translational energy distributions". *J. Chem. Phys.* **1980**, *72*, 1028–33.
93. Mitra, S.; Bersohn, R. "Location of the heme groups in cytochrome cd1 oxidase from *Pseudomonas aeruginosa*". *Biochemistry* **1980**, *19*, 3200–3.
94. Shapiro, M.; Bersohn, R. "Vibrational energy distribution of the methyl radical photodissociated from methyl iodide". *J. Chem. Phys.* **1980**, *73*, 3810–17.
95. Wiesenfeld, J. M.; Ippen, E. P.; Corin, A.; Bersohn, R. "Electronic relaxation in azurin: picosecond reverse charge transfer". *J. Am. Chem. Soc.* **1980**, *102*, 7256–8.
96. Yang, S. C.; Freedman, A.; Kawasaki, M.; Bersohn, R. "Energy distribution of the fragments produced by photodissociation of carbon disulfide at 193 nm". *J. Chem. Phys.* **1980**, *72*, 4058–62.
97. Kellman, M. E.; Pechukas, P.; Bersohn, R. "Three-body photodissociation dynamics of collinear AB2 systems: cadmium dimethyl". *Chem. Phys. Lett.* **1981**, *83*, 304–8.
98. Mitra, S.; Donovan, J. W.; Bersohn, R. "Heat stabilization dependence on redox state of cytochrome cd1 oxidase from *Pseudomonas aeruginosa*". *Biochem. Biophys. Res. Commun.* **1981**, *98*, 140–6.
99. O'Hara, P.; Yeh, S. M.; Meares, C. F.; Bersohn, R. "Distance between metal-binding sites in transferrin: energy transfer from bound terbium (III) to iron (III) or manganese (III)". *Biochemistry* **1981**, *20*, 4704–8.
100. Bersohn, R. "Fast nonradiative decay rates in metalloproteins". *Jerusalem Symp. Quantum Chem. Biochem.* **1982**, *15*, 497–503.
101. Brewer, P.; Van Veen, N.; Bersohn, R. "Two-photon-induced fluorescence and resonance-enhanced ionization of sulfur atoms". *Chem. Phys. Lett.* **1982**, *91*, 126–9.
102. Lee, S. J.; Bersohn, R. "Photodissociation of a molecule with two chromophores. Bromoiodomethane". *J. Phys. Chem.* **1982**, *86*, 728–30.
103. Mitra, S.; Bersohn, R. "Proton NMR of the histidines of azurin from *Alcaligenes faecalis*: linkage of histidine-35 with redox kinetics". *Proc. Natl. Acad. Sci. U.S.A.* **1982**, *79*, 6807–11.
104. O'Hara, P. B.; Bersohn, R. "Resolution of the two metal binding sites of human serum transferrin by low-temperature excitation of bound europium (III)". *Biochemistry* **1982**, *21*, 5269–72.
105. Shapiro, M.; Bersohn, R. "Theories of the dynamics of photodissociation". *Annu. Rev. Phys. Chem.* **1982**, *33*, 409–42.
106. Sommer, J. H.; O'Hara, P. B.; Jonah, C. D.; Bersohn, R. "Relative reducibilities of complexes of iron(III), cobalt(III), manganese(III), and copper(II) with apotransferrin using eqaq- and carbon dioxide ion(1-)". *Biochim. Biophys. Acta* **1982**, *703*, 62–8.
107. Sommer, J.; Jonah, C.; Fukuda, R.; Bersohn, R. "Production and subsequent second-order decomposition of protein disulfide anions lengthy collisions between proteins". *J. Mol. Biol.* **1982**, *159*, 721–44.
108. Van Veen, N.; Brewer, P.; Das, P.; Bersohn, R. "Detection of the $a^1\Pi_g$ ($v'=0,1$) $\rightarrow X^1\Sigma_g^+$ ($v''=0$) transition in nitrogen by laser-induced fluorescence". *J. Chem. Phys.* **1982**, *77*, 4326–9.
109. Bersohn, R.; Even, U.; Jortner, J. "Fluorescence excitation spectrum of triptycene in a supersonic jet". *J. Chem. Phys.* **1983**, *79*, 2163–7.
110. Brewer, P.; Das, P.; Ondrey, G.; Bersohn, R. "Measurement of the relative populations of $I(^2P_{1/2}0)$ and $I(^2P_{3/2}0)$ by laser induced vacuum ultraviolet fluorescence". *J. Chem. Phys.* **1983**, *79*, 720–3.
111. Butler, L. J.; Krajinovich, D.; Lee, Y. T.; Ondrey, G.; Bersohn, R. "Photodissociation of nitromethane at 193 nm," Lawrence Berkeley Lab., University California, Berkeley, CA, USA, 1983.
112. Butler, L. J.; Krajinovich, D.; Lee, Y. T.; Ondrey, G.; Bersohn, R. "The photodissociation of nitromethane at 193 nm". *J. Chem. Phys.* **1983**, *79*, 1708–22.
113. Corin, A. F.; Bersohn, R.; Cole, P. E. "pH dependence of the redox reaction of azurin with cytochrome c551: role of His-35 of azurin in electron transfer". *Biochemistry* **1983**, *22*, 2032–8.
114. Corin, A. F.; Bersohn, R.; Cole, P. E. "pH dependence of the reduction–oxidation reaction of azurin with cytochrome c-551: role of histidine-35 of azurin in electron transfer". *Biochemistry* **1983**, *22*, 2032–8.
115. Das, P.; Ondrey, G.; Van Veen, N.; Bersohn, R. "Two photon laser induced fluorescence of carbon atoms". *J. Chem. Phys.* **1983**, *79*, 724–6.
116. Ondrey, G. S.; Kanfer, S.; Bersohn, R. "The collinear photodissociation of carbonyl sulfide at 157 nm". *J. Chem. Phys.* **1983**, *79*, 179–84.
117. Ondrey, G. S.; Bersohn, R. "The photodissociation of thiophosgene at 248 nm". *J. Chem. Phys.* **1983**, *79*, 175–8.

118. Ondrey, G.; Van Veen, N.; Bersohn, R. "The state distribution of hydroxyl radicals photodissociated from hydrogen peroxide at 193 and 248 nm". *J. Chem. Phys.* **1983**, *78*, 3732–7.
119. Van Veen, N.; Brewer, P.; Das, P.; Bersohn, R. "The adiabatic and diabatic reactions of sulfur(¹D) atoms with carbonyl sulfide: internal state distribution of the diatomic sulfur products". *J. Chem. Phys.* **1983**, *79*, 4295–301.
120. Venkitachalam, T. V.; Das, P.; Bersohn, R. "Reaction of fluorine atoms with alkyl iodides: a possible observation of the Walden inversion in the gas phase". *J. Am. Chem. Soc.* **1983**, *105*, 7452–3.
121. Bersohn, R. "Final state distributions in the photodissociation of triatomic molecules". *J. Phys. Chem.* **1984**, *88*, 5145–9.
122. Bersohn, R.; Das, P.; Van Veen, N.; Brewer, P.; Ondrey, G. "Two photon induced VUV fluorescence of sulfur, iodine and carbon atoms". *Ann. Isr. Phys. Soc.* **1984**, *6*, 431–3.
123. Bersohn, R.; Even, U.; Jortner, J. "Fluorescence excitation spectra of indole, 3-methylindole, and 3-indoleacetic acid in supersonic jets". *J. Chem. Phys.* **1984**, *80*, 1050–8.
124. Das, P.; Venkitachalam, T.; Bersohn, R. "On the absence of atomic iodine (²P_{1/2}) as a product of the reactions of fluorine atoms with hydrogen iodide, molecular iodine, and iodine cyanide (ICN)". *J. Chem. Phys.* **1984**, *80*, 4859–62.
125. Ondrey, G. S.; Bersohn, R. "Photodissociation dynamics of 1,3,5-triazine". *J. Chem. Phys.* **1984**, *81*, 4517–20.
126. Venkitachalam, T.; Bersohn, R. "Two-photon dissociation of sulfur dioxide in the region 285–311 nm". *Journal of Photochemistry* **1984**, *26*, 65–7.
127. Tsukiyama, K.; Katz, B.; Bersohn, R. "Isotopic branching ratio for the reaction A + HD → AD(H) + H(D)". *J. Chem. Phys.* **1985**, *83*, 2889–93.
128. Yu, C. F.; Youngs, F.; Bersohn, R.; Turro, N. J. "Photodissociation at 193 nm of cyclooctatetraene and styrene into benzene and acetylene". *J. Phys. Chem.* **1985**, *89*, 4409–12.
129. Bersohn, R. "Translational energy release in the photodissociation of aromatic molecules". *NATO ASI Ser., Ser. C* **1986**, *184*, 1–20.
130. Bersohn, R. "The structure of the transition state as inferred from product state distributions". *NATO ASI Ser., Ser. C* **1986**, *184*, 21–39.
131. Bersohn, R.; Shapiro, M. "Photodissociation dynamics and potential surfaces of hydrogen peroxide". *J. Chem. Phys.* **1986**, *85*, 1396–402.
132. Katz, B.; Tsukiyama, K.; Bersohn, R. "Third harmonic generation by iodine atoms and methyl iodide molecules". *Chem. Phys. Lett.* **1986**, *125*, 19–21.
133. Tsukiyama, K.; Katz, B.; Bersohn, R. "Competition between photodissociation and photoionization in methyl iodide". *Chem. Phys. Lett.* **1986**, *124*, 309–12.
134. Tsukiyama, K.; Katz, B.; Bersohn, R. "Total reactive cross sections for the reaction atomic hydrogen + molecular deuterium = hydrogen deuteride + atomic deuterium". *J. Chem. Phys.* **1986**, *84*, 1934–5.
135. Yu, C. F.; Youngs, F.; Tsukiyama, K.; Bersohn, R.; Preses, J. "Photodissociation dynamics of cadmium and zinc dimethyl". *J. Chem. Phys.* **1986**, *85*, 1382–8.
136. Photodissociation dynamics; Bersohn, R., Ed.; Royal Society of Chemistry: London, 1987, pp 1–30.
137. Johnston, G. W.; Katz, B.; Tsukiyama, K.; Bersohn, R. "Isotopic variants of the atomic hydrogen + hydrogen reaction. 1. Total reaction cross sections of the atomic hydrogen + deuterium and atomic hydrogen + hydrogen deuteride reactions as a function of relative energy". *J. Phys. Chem.* **1987**, *91*, 5445–51.
138. Tsukiyama, K.; Bersohn, R. "Unimolecular dynamics of hydrogen atom release from excited cycloheptatriene, toluene, and p-xylene". *J. Chem. Phys.* **1987**, *86*, 745–9.
139. Alexander, M. H.; Andresen, P.; Bacis, R.; Bersohn, R.; Comes, F. J.; Dagdigian, P. J.; Dixon, R. N.; Field, R. W.; Flynn, G. W.; et al. "A nomenclature for L-doublet levels in rotating linear molecules". *J. Chem. Phys.* **1988**, *89*, 1749–53.
140. Bersohn, R.; Zewail, A. H. "Time dependent absorption of fragments during dissociation". *Ber. Bunsen-Ges.* **1988**, *92*, 373–8.
141. Satyapal, S.; Johnston, G.; Park, J.; Bersohn, R. "Exchange reactions of atomic hydrogen with acetylene and ethylene". *AIP Conf. Proc.* **1988**, *172*, 647–9.
142. Amirav, A.; Penner, A.; Bersohn, R. "Predissociation spectroscopy of cadmium dimethyl". *J. Chem. Phys.* **1989**, *90*, 5232–7.
143. Johnston, G. W.; Bersohn, R. "Energy distribution of the cyanogen(CN) products of the atomic hydrogen + hydrogen cyanide, atomic hydrogen + cyanogen chloride, and atomic fluorine + hydrogen cyanide reactions". *J. Chem. Phys.* **1989**, *90*, 7096–102.
144. Kim, H. L.; Satyapal, S.; Brewer, P.; Bersohn, R. "Photodissociation dynamics of ethylene sulfide at 193.3 nm". *J. Chem. Phys.* **1989**, *91*, 1047–50.
145. Park, J.; Shafer, N.; Bersohn, R. "The time evolution of the velocity distribution of hydrogen atoms in a bath gas". *J. Chem. Phys.* **1989**, *91*, 7861–71.
146. Park, J.; Yu, C. F.; Bersohn, R. "Photodissociation dynamics of the isomers phenyl cyanide and phenyl isocyanide". *Chem. Phys.* **1989**, *134*, 421–8.
147. Satyapal, S.; Park, J.; Bersohn, R.; Katz, B. "Dissociation of methanol and ethanol activated by a chemical reaction or by light". *J. Chem. Phys.* **1989**, *91*, 6873–9.
148. Shafer, N.; Satyapal, S.; Bersohn, R. "Isotope effect in the photodissociation of water-d at 157.5 nm". *J. Chem. Phys.* **1989**, *90*, 6807–8.
149. Johnston, G. W.; Park, J.; Satyapal, S.; Shafer, N.; Tsukiyama, K.; Bersohn, R.; Katz, B. "Properties of hydrogen atoms newly generated in chemical reactions and photodissociations". *Acc. Chem. Res.* **1990**, *23*, 232–8.
150. Johnston, G. W.; Satyapal, S.; Bersohn, R.; Katz, B. "The isotope exchange reaction of fast hydrogen atoms with deuterated alkynes and alkenes". *J. Chem. Phys.* **1990**, *92*, 206–12.
151. Park, J.; Bersohn, R.; Oref, I. "Unimolecular decomposition of methyl substituted benzenes into benzyl radicals and hydrogen atoms". *J. Chem. Phys.* **1990**, *93*, 5700–8.
152. Satyapal, S.; Johnston, G. W.; Bersohn, R.; Oref, I. "The hydrogen-atom channel in the photodissociation of ethylene". *J. Chem. Phys.* **1990**, *93*, 6398–402.
153. Shafer, N.; Bersohn, R. "Photoionization cross section of hydrogenic atoms: a generating function solution". *Phys. Rev. A: Atomic, Mol., Opt. Phys.* **1990**, *42*, 1313–17.

154. Bersohn, R. "Temperatures of fragments in unimolecular dissociations". *Jerusalem Symp. Quantum Chem. Biochem.* **1991**, *24*, 273–81.
155. Chattopadhyay, A.; Tasaki, S.; Bersohn, R.; Kawasaki, M. "The inversion mechanism for the reaction atomic hydrogen + methane-d4 → methane-d3 + atomic deuterium". *J. Chem. Phys.* **1991**, *95*, 1033–6.
156. Johnston, G. W.; Kornweitz, H.; Schechter, I.; Persky, A.; Katz, B.; Bersohn, R.; Levine, R. D. "The branching ratio in the atomic fluorine + hydrogen deuteride reaction: an experimental and computational study". *J. Chem. Phys.* **1991**, *94*, 2749–57.
157. Katz, B.; Park, J.; Satyapal, S.; Tasaki, S.; Chattopadhyay, A.; Yi, W.; Bersohn, R. "Exchange reactions of hydrogen atoms with silane-d4: an inversion mechanism?". *Faraday Discuss. Chem. Soc.* **1991**, *91*, 73–8.
158. Matsumi, Y.; Tonokura, K.; Kawasaki, M.; Inoue, G.; Satyapal, S.; Bersohn, R. "Fine structure branching ratios and Doppler spectroscopy of chlorine atoms from the photodissociation of alkyl chlorides and chlorofluoromethanes at 157 and 193 nm". *J. Chem. Phys.* **1991**, *94*, 2669–74.
159. Penner, A.; Amirav, A.; Bersohn, R. "Emission spectrum of methylcadmium (CdCH₃)". *Chem. Phys. Lett.* **1991**, *176*, 147–51.
160. Satyapal, S.; Bersohn, R. "Photodissociation of acetylene at 193.3 nm". *J. Phys. Chem.* **1991**, *95*, 8004–6.
161. Shafer, N.; Bersohn, R. "Photoionization cross section of hydrogenic atoms: a generating function solution [Erratum to document cited in CA113(16):141401v]". *Phys. Rev. A: Atomic, Mol., Opt. Phys.* **1991**, *44*, 7855–6.
162. Shafer, N.; Bersohn, R. "Two and three-dimensional laser induced fluorescence: application to photodissociation of lithium iodide". *J. Chem. Phys.* **1991**, *94*, 4817–20.
163. Yi, W.; Chattopadhyay, A.; Bersohn, R. "Unimolecular dissociation of cyclopentadiene and indene". *J. Chem. Phys.* **1991**, *94*, 5994–8.
164. Katz, B.; Bersohn, R. "Hydrogen isotope effects in chemical reactions and photodissociations". *ACS Symp. Ser.* **1992**, *502*, 66–79.
165. Kawasaki, M.; Matsumi, Y.; Chattopadhyay, A.; Shafer, N.; Satyapal, S.; Tasaki, S.; Yi, W.; Bersohn, R. "Reaction of two-photon-excited xenon and krypton atoms with hydrogen molecules". *J. Phys. Chem.* **1992**, *96*, 7010–13.
166. Matsumi, Y.; Tonokura, K.; Kawasaki, M.; Inoue, G.; Satyapal, S.; Bersohn, R. "Fine structure branching ratios and Doppler spectroscopy of chlorine atoms from the photodissociation of alkyl chlorides and chlorofluoromethanes at 157 and 193 nm. [Erratum to document cited in CA114(18):174768u]". *J. Chem. Phys.* **1992**, *97*, 5261.
167. Penner, A.; Danon, A.; Kuipers, E. W.; Dagan, S.; Bersohn, R.; Amirav, A. "Selective reactions of metal activated molecules – predissociation spectroscopy of cadmium dimethyl and hyperthermal surface induced dissociative ionization". *Sel. React. Met.-Act. Mol., Proc. Symp., first* **1992**, 105–17.
168. Tonokura, K.; Tasaki, S.; Kawasaki, M.; Tsaki, S.; Bersohn, R. "Photodissociation of hydrogen chloride at 157 and 193 nm: angular distributions of hydrogen atoms and fine-structure branching ratios of chlorine atoms in the ²P_j levels". *J. Chem. Phys.* **1992**, *97*, 8210–15.
169. Penner, A.; Amirav, A.; Tasaki, S.; Bersohn, R. "Photodissociation and photoionization and their branching ratio in bisbenzene chromium". *J. Chem. Phys.* **1993**, *99*, 176–83.
170. Satyapal, S.; Tasaki, S.; Bersohn, R. "Photodissociation of chloroaromatic compounds: excited/ground-state chlorine atoms (Cl^{*}/Cl) ratios". *Chem. Phys. Lett.* **1993**, *203*, 349–52.
171. Waldeck, J. R.; Shapiro, M.; Bersohn, R. "Theory of transient anisotropy in molecular photodissociation". *J. Chem. Phys.* **1993**, *99*, 5924–35.
172. Yi, W.; Satyapal, S.; Shafer, N.; Bersohn, R. "The reaction of excited mercury (Hg(6 ³P₁)) with hydrogen molecules studied by electron spin resonance and laser induced fluorescence". *J. Chem. Phys.* **1993**, *99*, 4548–53.
173. Yi, W.; Bersohn, R. "The hydrogen atom channel in the photodissociation of isocyanic acid". *Chem. Phys. Lett.* **1993**, *206*, 365–8.
174. Bersohn, R.; Kawasaki, M. "Dynamics of the inversion reaction". *Isr. J. Chem.* **1994**, *34*, 19–23.
175. Even, U.; Levine, R. D.; Bersohn, R. "Observations of Molecular Rydberg State Decay for n = 10–200". *J. Phys. Chem.* **1994**, *98*, 3472–7.
176. Huang, X.; Xing, G.; Bersohn, R. "Dynamics of the reaction of O(³P) atoms with acetylene". *J. Chem. Phys.* **1994**, *101*, 5818–23.
177. Tasaki, S.; Satyapal, S.; Bersohn, R. "Dynamics of the reaction of nascent ethynyl with hydrogen". *Can. J. Chem.* **1994**, *72*, 612–14.
178. Sato, Y.; Matsumi, Y.; Kawasaki, M.; Tsukiyama, K.; Bersohn, R. "Ion Imaging of the Photodissociation of OCS Near 217 and 230 nm". *J. Phys. Chem.* **1995**, *99*, 16307–14.
179. Xing, G.; Huang, X.; Bersohn, R.; Tsukiyama, K.; Katz, B. "The reaction of CCl₃ radicals and Cl atoms with hydrogen molecules". *J. Chem. Phys.* **1995**, *102*, 3169–71.
180. Huang, X.; Zhao, J.; Xing, G.; Wang, X.; Bersohn, R. "The reaction of Cs(82p) and Cs(92p) with hydrogen molecules". *J. Chem. Phys.* **1996**, *104*, 1338–43.
181. Kawasaki, M.; Suto, K.; Sato, Y.; Matsumi, Y.; Bersohn, R. "Ion Imaging of the Photodissociation of Chlorine-Containing Molecules". *J. Phys. Chem.* **1996**, *100*, 19853–19858.
182. Wang, X.; Bersohn, R.; Takahashi, K.; Kawasaki, M.; Kim, H. L. "Phase control of absorption in large polyatomic molecules". *J. Chem. Phys.* **1996**, *105*, 2992–2997.
183. Xing, G.; Huang, X.; Wang, X.; Bersohn, R. "Reactions of O(³P) with alkynes: The CO and H atom channels". *J. Chem. Phys.* **1996**, *105*, 488–495.
184. Xing, G.; Wang, X.; Huang, X.; Bersohn, R.; Katz, B. "Modulation of resonant multiphonon ionization of CH₃I by laser phase variation". *J. Chem. Phys.* **1996**, *104*, 826–31.
185. Kim, H. L.; Bersohn, R. "Control of photofragment angular distribution by laser phase variation". *J. Chem. Phys.* **1997**, *107*, 4546–4550.
186. Quandt, R. W.; Wang, X.; Tsukiyama, K.; Bersohn, R. "Translational energy release in the reaction O(³P) + H₂S → H + HSO". *Chem. Phys. Lett.* **1997**, *276*, 122–126.

187. Min, Z.; Quandt, R. W.; Bersohn, R.; Kim, H. L. "Extended range of second harmonic generation in b-BaB₂O₄". *IEEE J. Quantum Electron.* **1998**, *34*, 2409.
188. Min, Z.; Quandt, R.; Bersohn, R. "Kinetic energies of hydrogen atoms photodissociated from alkyl radicals". *Chem. Phys. Lett.* **1998**, *296*, 372–376.
189. Quandt, R.; Wang, X.; Min, Z.; Kim, H. L.; Bersohn, R. "One-Color Molecular Photodissociation and Detection of Hydrogen Atoms". *J. Phys. Chem. A* **1998**, *102*, 6063–6067.
190. Quandt, R.; Min, Z.; Wang, X.; Bersohn, R. "Reactions of O(³P) atoms with alkenes: H, CH₂CHO, CO and OH channels", Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 1998, HYS-093.
191. Quandt, R.; Min, Z.; Wang, X.; Bersohn, R. "Reactions of O(³P) with alkenes: H, CH₂CHO, CO, and OH Channels". *J. Phys. Chem. A* **1998**, *102*, 60–64.
192. Bersohn, R. "Anisotropic photofragment distributions: What have we learned from β ?". Book of Abstracts, 218th ACS National Meeting, New Orleans, Aug. 22–26 1999, HYS-149.
193. Bersohn, R. "Coherent control of photoexcitation processes". *J. Mol. Struct.* **1999**, *480–481*, 231–235.
194. Min, Z.; Wong, T.-H.; Quandt, R.; Bersohn, R. "The Reactions of O(³P) with Alkenes: The Formyl Radical Channel". *J. Phys. Chem. A* **1999**, *103*, 10451–10453.
195. Min, Z.; Quandt, R. W.; Wong, T.-H.; Bersohn, R. "The CO product of the reaction of O(³P) with CH₃ radicals". *J. Chem. Phys.* **1999**, *111*, 7369–7372.
196. Min, Z.; Wong, T.-H.; Bersohn, R. "Hydrogen atom release from methyl groups of energized molecules". *J. Chem. Phys.* **1999**, *110*, 9956–9960.
197. Bersohn, R. "What have we learned from b?". *ACS Symp. Ser.* **2000**, *770*, 19–33.
198. Min, Z.; Wong, T.-H.; Su, H.; Bersohn, R. "Reaction of O(³P) with Alkenes: Side Chain vs Double Bond Attack". *J. Phys. Chem. A* **2000**, *104*, 9941–9943.
199. Ogi, Y.; Takahashi, M.; Tsukiyama, K.; Bersohn, R. "Laser-induced amplified spontaneous emission from the 3d and nf Rydberg states of NO". *Chem. Phys.* **2000**, *255*, 379–395.
200. Sugita, A.; Mashino, M.; Kawasaki, M.; Matsumi, Y.; Bersohn, R.; Trott-Kriegeskorte, G.; Gericke, K.-H. "Effect of molecular bending on the photodissociation of OCS". *J. Chem. Phys.* **2000**, *112*, 7095–7101.
201. Sugita, A.; Mashino, M.; Kawasaki, M.; Matsumi, Y.; Gordon, R. J.; Bersohn, R. "Control of photofragment velocity anisotropy by optical alignment of CH₃I". *J. Chem. Phys.* **2000**, *112*, 2164–2167.
202. Wang, J.-H.; Liu, K.; Min, Z.; Su, H.; Bersohn, R.; Preses, J.; Larese, J. Z. "Vacuum ultraviolet photochemistry of CH₄ and isotopomers. II. Product channel fields and absorption spectra". *J. Chem. Phys.* **2000**, *113*, 4146–4152.
203. Gherman, B. F.; Friesner, R. A.; Wong, T.-H.; Min, Z.; Bersohn, R. "Photodissociation of acetaldehyde: The CH₄ + CO channel". *J. Chem. Phys.* **2001**, *114*, 6128–6133.
204. Su, H.; Bersohn, R. "Mechanisms of Formation of Vinoxy Radicals in the Reaction of O(³P) with Terminal Alkenes". *J. Phys. Chem. A* **2001**, *105*, 9178–9182.
205. Su, H.; Bersohn, R. "Vibrational state distribution and relaxation of vinoxy radicals". *J. Chem. Phys.* **2001**, *115*, 217–224.
206. Bersohn, R. "Radicals containing hydrogen, carbon and oxygen atoms". *J. Chin. Chem. Soc.* **2002**, *49*, 291–300.
207. Kawasaki, M.; Bersohn, R. "Photodissociation of small molecules in the gas phase". *Bull. Chem. Soc. Jpn.* **2002**, *75*, 1885–1900.
208. Su, H.; Bersohn, R. "Inelastic and reactive collisions of Cs(9 ²P_{3/2}) with hydrocarbons". *J. Chem. Phys.* **2002**, *117*, 8412–8417.
209. Yi, W.; Yu, S.; Bersohn, R. "The spin population difference of hydrogen atoms dissociated from mercury hydride molecules". *Spectrochim. Acta. Part A, Mol. Biomol. Spectrosc.* **2002**, *58*, 1389–93.
210. Bersohn, R. "Some pleasures in chemical physics". *Annu. Rev. Phys. Chem.* **2003**, *54*, 1–28.
211. Krisch, M. J.; Miller, J. L.; Butler, L. J.; Su, H.; Bersohn, R.; Shu, J. "Photodissociation dynamics of ethyl ethynyl ether: A new ketenyl radical precursor". *J. Chem. Phys.* **2003**, *119*, 176–186.
212. Krisch, M. J.; Miller, J. L.; McCunn, L. R.; Butler, L. J.; Su, H.; Bersohn, R.; Shu, J. "Photodissociation dynamics of ethyl ethynyl ether: A new ketenyl radical precursor", Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23–27, 2003 2003, HYS-259.
213. Su, H.; Bersohn, R. "VUV probing of nascent reaction products", Abstracts of Papers, 225th ACS National Meeting, New Orleans, LA, United States, March 23–27, 2003 2003, HYS-495.