

Vernon Hodge

Chemistry and Biochemistry

List of Publications

1. W.H. Richardson and V. Hodge, "1,2 Cycloaddition of Singlet Oxygen to 9,9' Bifluorenylidene," Journal of Organic Chemistry **35**, 1216 (1970).
2. W.H. Richardson and V.H. Hodge, "Activation Parameters for the Decomposition of 3,3-Dimethyl-1,2-Dioxetane in 60% Aqueous Methanol," Tetrahedron Letters 2271 (1970).
3. W.H. Richardson and V.F. Hodge, "Acidities of Tertiary Alkyl Hydroperoxides," Journal of Organic Chemistry **35**, 4012 (1970).
4. W.H. Richardson and V.F. Hodge, "The Neighboring Peroxide Anion and the 1,2-Dioxetane Intermediate. A Kinetic and Product Study of the Basic Decomposition of Chloro-n-butyl Hydroperoxide." Journal of American Chemical Society **93**, 3996 (1971).
5. W.H. Richardson and V.F. Hodge, "The Reaction of 3,3-Dimethyl-1,2-Dioxetane with Sodium Azide," Tetrahedron Letters 749 (1971).
6. R. Grismore, T.R. Folsom, V.F. Hodge, and D.R. Young, "A Study of the Radiosilver Signature of the 1962 Nuclear Weapons Testing Period," Transactions of the New York Academy of Sciences **34**, 392 (1972).
7. V.F. Hodge and T.R. Folsom, "Cyanide Extraction and Electrodeposition of Trace Amounts of Radioactive Silver from Large Biological Samples," Analytical Chemistry **44**, 381 (1972).
8. K.M. Wong, V.F. Hodge, and T.R. Folsom, "Plutonium and Polonium Inside Giant Brown Algae," Nature, **237**, 460 (1972).
9. V.F. Hodge and T.R. Folsom, "Estimate of the World Budget of Fallout Silver Nuclides," Nature, **237**, 98 (1972).
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- Mid-Water Fish of the Eastern Temporal Pacific," Health Physics, **26**, 65 (1974).
12. V.F. Hodge, F.L. Hoffman, and T.R. Folsom, "Rapid Accumulation of Plutonium and Polonium on Giant Brown Algae," Health Physics, **27**, 29 (1974).
 13. F.L. Hoffman, V.F. Hodge, and T.R. Folsom, "²¹⁰Po Radioactivity in Organs of Selected Tunas and Other Marine Fish," J. Radiation Research, **15**, 103 (1974).
 14. V.F. Hodge, F.L. Hoffman, R.F. Foreman, and T.R. Folsom, "Simple Recovery of Plutonium, Americium, Uranium, and Polonium from Large Volumes of Ocean Water," Analytical Chemistry, **46**, 1334 (1974).
 15. W.H. Richardson, V.F. Hodge, D.L. Stiggal, M.B. Yelvington, and F.C. Montgomery, "1,2-Dioxetane Intermediate in the Base Catalyzed Decomposition of R I-Hydroperoxy Ketones," J. American Chemical Society, **96**, 6652 (1974).
 16. T.R. Folsom, N. Hansen, T.J. Tatum, and V.F. Hodge, "Recent Improvements in Methods for Concentrating and Analyzing Radiocesium in Sea Water." J. Radiation Research, **16**, 19 (1974).
 17. V.F. Hodge and M.E. Gurney, "Sensitized Quantitative Determination of Uranium, Plutonium, and Americium in Sea Water," Analytical Chemistry, **47**, 1866 (1974).
 18. T.R. Folsom, V.F. Hodge, and M.E. Gurney, "Plutonium Observed on Algal Surfaces in the Ocean," Marine Science Communications, **15**, 39 (1975).
 19. D.R. Young, T.R. Folsom, and V.F. Hodge, "¹³⁷Cs and

- Electrodeposition of Polonium from Sea Water, Analytical Chemistry **49**, 494 (1977).
25. L. Chen, V.F. Hodge, and R.A. Lewin, "Polonium and Plutonium in an Intertidal Food Chain," Nature, **269**, 795 (1977).
 26. V.F. Hodge, S. Johnson, and E.D. Goldberg, "Influence of Atmospherically Transported Aerosols on Surface Ocean Water Composition," Geochemical Journal **12**, 7 (1978).
 27. E.D. Goldberg, V. Hodge, M. Koide, J. Griffin, E. Gamble, O.P. Bricker, G. Matisoff, G.R. Haldren, and R. Braun, "A Pollution History of Chesapeake Bay," Geochimica et Cosmochimica Acta, **42**, 1413 (1978).
 28. E.D. Goldberg, J. Griffin, V. Hodge, M. Koide, and H. Windom, "The Pollution History of the Savannah River Estuary," Environmental Science and Technology, **13**, 588 (1978).
 29. V.F. Hodge, M. Koide, and E.D. Goldberg, "Particulate Uranium, Plutonium, and Polonium in the Biogeochemistries of the Coastal Zone," Nature, **277**, 206 (1979).
 30. V.F. Hodge, S. Seidel, and E.D. Goldberg, "Determinations of Tin (IV) and Organotin Compounds in Natural Waters, Coastal Sediments, and Macro Algae by Atomic Absorption Spectrometry," Analytical Chemistry **51**, 1256 (1979).
 31. J.J. Griffin, M. Koide, V. Hodge, and E.D. Goldberg, "Determining the Ages of Mussels by Chemical and Physical Methods," Isotope Marine Chemistry **1980**, pp. 193-209.
 32. M. Koide, V. Hodge, and E.D. Goldberg, "Pb-210 and Am-241 in Sediments from Coastal Basins off California and Mexico," Earth and Planetary Science Letters **48**, 250 (1980).
 33. S.L. Seidel, V.F. Hodge, and E.D. Goldberg, "Tin as an Environmental Pollutant," Thalassia Jugoslavica, **18**, 1209 (1980).
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37. E.D. Goldberg, V. Hodge, P. Kay, M. Stallard, and M. Koide, "Some Comparative Marine Chemistries of Platinum and Iridium," Applied Geochemistry 1, 227 (1986).
 38. V. Hodge, M. Stallard, M. Koide, and E.D. Goldberg, "Determination of Platinum and Iridium in Marine Waters, Sediments, and Organisms," Analytical Chemistry 58, 616 (1986).
 39. M. Koide, M. Stallard, V. Hodge, and E.D. Goldberg, "Preliminary Studies on the Marine Chemistry of Ruthenium," Netherlands J. of Sea Res. 163 (1986).
 40. V. Hodge and M. Stallard, "Platinum and Palladium in Roadside Dust," Environmental Science and Technology 20, 1058 (1986).
 41. M. Koide, V. Hodge, J. Yang, M. Stallard, and E.D. Goldberg, "Some Comparative Marine Chemistries of Rhenium, Gold, Silver, and Molybdenum," Applied Geochemistry 2, 1 (1987).
 42. M. Stallard, V. Hodge, and E.D. Goldberg, "Tributyl Tin in California Coastal Waters: Monitoring and Assessment," Environmental Monitoring and Assessment 9, 195 (1987).
 43. M. Koide, V. Hodge, J. Yang, and E.D. Goldberg, "Determination of Rhenium in Marine Waters and Sediments," Analytical Chemistry 59, 415 (1987).
 44. M. Koide, V. Hodge, and E.D. Goldberg, "Gold in Seawater: A Conservative View," Applied Geochemistry 3, 237-241 (1988).
 45. W. Ellis, C. Jones, D. Darby, T. Hinnens, and V. Hodge, "Determination of Beryllium by Furnace Atomic Absorption Spectroscopy," Atomic Spectroscopy 9, 181-188 (1988).
 46. E.D. Goldberg, M. Koide, K. Bertine, V. Hodge, and M. Stallard, "Marine Geochemistry 2, Scavenging Redox," Applied Geochemistry 3, 561-571 (1988).
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71. I. Farnham, K. Johannesson, A. Singh, V. Hodge and K. Stetzenbach, "Factor Analytical Approaches for Evaluating Groundwater Trace Element Chemistry Data", *Analytica Chimica Acta*, 490, 1238 (2003).
72. M. Turner, M. Rudin, J. Cizdziel and V. Hodge, "Excess Plutonium in Soil Near the Nevada Test Site, USA", *Environ. Poll.*, 125, 203 (2003).
73. D. Farmer, A. Steed, J. Sobus, K. Stetzenbach, K. Lindley and V. Hodge, "Rapid Identification and Analysis of Airborne Plutonium Using a Combination of Alpha Spectroscopy and Inductively Coupled Plasma Mass Spectroscopy", *Health Physics* 85, 457-465 (2003).
74. V. Hodge, D. Farmer, T. Diaz, R. Orndorff, "Prompt detection of alpha particles from Pu-238: another clue to the origin of desert varnish?", *Environ. Rad.*, 7, 331-342 (2005).
75. Cizdziel, D. Farmer, V. Hodge, K. Lindsay, K. Stetzenbach, "U-238 isotope ratios in groundwater from southern Nevada: A comparison of alpha counting and magnetic sector ICPMS", *Sci. Total Env.*, 350, 260 (2005).
76. M.A. Cheney, N.R. Birkner, L. Ma, T. Hartman, P.K. Bhowmik, V.F Hodge, S.M. Steinberg, "Synthesis and Characterization of inorganic double helices of cryptomelane nanomaterials", *Colloids and Surfaces A: Physiochem. Eng. Aspects* 289, 185-192 (2006).
77. M. Cheney, P.K. Bhowmik, S. Moriuchi, N.R. Birkner, V.F Hodge, S. Elkouz, "Synthesis and Characterization of two phases of manganese oxide from decomposition of permanganate in concentrated sulfuric acid at ambient temperature", *Colloids and Surfaces A: Physiochem. Eng. Aspects* 300, 62- (2007).
78. J.V. Cizdziel, Y. Wei, K.J. Stetzenbach, V.F. Hodge, J. Cline-Horley, F.M. Phillips, "Recent measurements of ²³⁸U in Yucca Mountain rock, soil, seepage. Journal of Radioanalytical and Nuclear Chemistry 275, 133-144 (2008).
79. J.V. Cizdziel, K. Ketter, D. Farmer, S. Faller, V.F. Hodge, "Pu-239, Pu-240, Pu-241 fingerprinting of plutonium in western U.S. soils using ICPMS: solution and laser ablation measurements", *Anal. Bioanal. Chem.* 390, 550 (2008).
80. Piotr Nowinski, Vernon F. Hodge, Kazumasa Lindley, James v. Cizdziel, "Elemental Analysis of Desert Varnish Samples in the Vicinity of Coal-fired Power Plants and the Nevada Test Site Using Laser Ablation ICP-MS", *The Open Chemical and Biomedical Methods Journal*, 2010, 3, 153-168.
81. Sujanie V. Gamage, Vernon F. Hodge, James V. Cizdziel, Kazumasa Lindley

Ion Chromatography/Inductively coupled Plasma Mass Spectrometry" *The Open Chemical and Biomedical Methods Journal*, 2010, 3, 10-17.

82. Peter Nowinski (former Ph.D. student in Environmental Science), Vernon Hodge and Shawn Gerstenberger "Application of field portable X fluorescence to the analysis of desert varnish samples in areas affected by coal