

**WILLIAM F. CARROLL, JR.**  
**SELECTED PUBLICATIONS AND PRESENTATIONS**

1. Carroll, Bill; "Ranking The Rock Writers: A Complete Catalog of the Writers Appearing on the Major Pop Singles Charts 1955-1991" Carroll Applied Science, LLC, Dallas, TX, 2018; ISBN-10: 0-692-12217-6; ISBN 13: 978-0-692-12217-4
2. Ann M. Mason, William Greggs, Bryce D. Landenberger, William Carroll, Brett Howard and Stephen P. Risotto, "A Tiered Screening Approach to Evaluating Chemical Exposures from Consumer and Commercial Products" *ACS Sustainable Chem. Eng.*, **2018**, 6 (5), pp 7010–7016  
**DOI:** 10.1021/acssuschemeng.8b00851
3. Carroll, William F. Jr., "Upon Further Review: A Commodity Chemist Looks At Green Chemistry." *Physical Sciences Reviews*. Volume 1, Issue 9, 20160071, ISSN (Online) 2365-659X, ISSN (Print) 2365-6581, DOI: 10.1515/psr-2016-0071, September 2016
4. Timothy F. Malloy, Virginia M. Zaunbrecher, Christina Batteate, Ann Blake, William F. Carroll, Jr., Charles J. Corbett, Steffen Foss Hansen, Robert Lempert, Igor Linkov, Roger McFadden, Kelly D. Moran, Elsa Olivetti, Nancy Ostrom, Michelle Romero, Julie Schoenung, Thomas Seager, Peter Sinsheimer, and Kristina Thayer, "Advancing Alternative Analysis: Integration of Decision Science" *Environ. Health Perspectives*, <http://dx.doi.org/10.1289/EHP483>, Published Online 28 Oct, 2016.
5. Carroll, William F., "ACS International Activities: Mechanisms To Advance Member-Serving Global Engagement" Chapter 5, pp 59-65 in *Jobs, Collaborations and Women Leaders in the Global Chemistry Enterprise*, ACS Symposium Series Vol 1195, Publication Date (Web) Sept 2, 2015 DOI: 10.1021/bk-2015-1195-ch005.
6. Isbell, Dann and Carroll, Bill "Ranking the '70s: A Complete Compilation of the Chart Songs and Acts from Pop's Eclectic Decade" Jefrian Books, LLC, Dallas, TX, 2015; ISBN 10: 0692517790, ISBN 13: 978-0692517796
7. Carroll, William F., Jr. "Not So Lonely At The Top: Billboard #1s and a New Methodology for Comparing Records, 1958-1975." *Popular Music And Society* **38**, 586-610 (2015) DOI: 10.1080/03007766.2014.991188. Published Online 20 Dec 2014. <http://dx.doi.org/10.1080/03007766.2014.991188>.
8. Graedel TE, Swackhamer D, Anex R, Carroll WF, Daigger GT, Ferrao P, Frumkin H, Katzen S, Palmisano A, Polasky S, Scarlett L, Stephens R, Zeise L. "Sustainability for the Nation: Resource Connections and Governance Linkages" *Environ. Sci. Tech.* **2014**, 48 (13), 7197–7199  
DOI:10.1021/es502328v
9. Carroll, William F., Jr., "Recycling to First Principles: Back to Atoms" pp. 217-219 in *Permanent Change: Plastics in Architecture and Engineering* Michael Bell and Craig Buckley, editors; Princeton Architectural Press, New York, NY, 2014
10. Carroll, William F., Jr., "Reese's Pieces: The Best of C&EN Newsprints and K. M. Reese" in *A Festival of Chemistry Entertainments*, Chapter 1, pp 1–20, *ACS Symposium Series*, Vol. 1153, **ISBN13:** 9780841229075 **eISBN:** 9780841229099 Publication Date (Web): December 4, 2013
11. L. Lundin, B. Gullett, W. F. Carroll Jr., A. Touati, S. Marklund, H. Fiedler, "The effect of developing nations' municipal waste composition on PCDD/PCDF emissions from open burning." *Atmospheric Environment*, **2013**, 79, 433-441.
12. G. Solorzano Ochoa, D. A. de la Rosa, P. Maiz Larralde, B. K. Gullett, D. G. Tabor, A. Touati, B. Wyrzykowska-Ceradini, H. Fiedler, T. Abel, W. F. Carroll, Jr., "Open Burning of Household Waste:

Impact of Active Stirring of Burning Materials on Combustion Quality and Emission of PCDD, PCDF and PCB." *Chemosphere*, **2012**, 87 1003-1008.

13. W. F. Carroll, Jr., Comment on "Sustainability Metrics: Life Cycle Assessment and Green Design in Polymers," *Environ. Sci. Tech* **2011**, 45, 5054–5054.
14. W. F. Carroll, Jr., R. W. Johnson, S. S. Moore and R. A. Paradis, "Poly(Vinyl Chloride)" Chapter 5 in *Applied Plastics Engineering Handbook: Processing and Materials*, Myer Kutz, Editor, Elsevier, Amsterdam, 2011.
15. R. J. Cooke and W. F. Carroll, "Selection of Persistent Organic Pollutant Disposal Technology for Global Environment Facility: A STAP Advisory Document" Scientific and Technical Advisory Panel of the Global Environment Facility, **2011**. <http://www.unep.org/stap>
16. T. Zhang, H. Fiedler, G. Yu, G. Solorzano Ochoa, S. Marklund, B. K. Gullett, A. Touati, W. F. Carroll, Jr, "Emissions of Unintentional Persistent Organic Pollutants from Open Burning of Municipal Solid Waste from Developing Countries: A Case Study in China and Mexico." *Chemosphere*, **2011**, 84, 994-1001.
17. W. F. Carroll, Jr., "Lab to Lobbyist and Everything in Between" *239<sup>th</sup> ACS National Meeting, San Francisco, CA*, March 21-25, **2010** CHAL-7.
18. T. T. Zhang, S. Wang, S. Marklund, B. K. Gullett, A. Touati, W. F. Carroll, Jr., G. Yu, H. Fiedler, "Emission of PCDD/PCDF from open burning of municipal solid waste in China: field test." *Organohalogen Compd.* **2009**, 71, 2933-2935.
19. B. Carroll, "Chlorine—It Sort of Picked Me." *J. Chem. Educ.* **2009**, 86, 1133.
20. S. Bohmer, W. Carroll, E. Fiani, H. Hartenstein, U. Karl, "Benefits and Trade-offs Between Reductions of Greenhouse Gases and Unintentionally Produced Persistent Organic Pollutants" *Organohalogen Compounds* **2009**, 71, 1520-1525
21. S. Bohmer, W. Carroll, E. Fiani, H. Hartenstein, U. Karl, "Benefits and Trade-offs between Energy Conservation and Releases of Unintentionally Produced Persistent Organic Pollutants" A report to the Scientific and Technical Advisory Panel to the Global Environment Facility, United Nations Environment Programme, **2009**
22. H. Fiedler, T. T. Zhang, G. Yu, G. Solorzano Ochoa, S. Marklund, B. K. Gullett, D. Touati, W. F. Carroll Jr., "Emissions of PCDD/PCDF from burning of waste from developing countries." *Organohalogen Compounds*, **2009**, 71, 2961-2965
23. T. T. Zhang, S. Wang, S. Marklund, B. K. Gullett, D. Touati, W. F. Carroll, G. Yu, H. Fiedler, "Emission of PCDD/Fs from Open Burning of Municipal Solid Waste in China: Field Test," *Organohalogen Compounds*, **2009**, 71, 2933-2935.
24. W. F. Carroll, Jr., "Green Chemistry: Science or Regulation?" Closing Presentation, American Chemical Society Green Chemistry Summer School, Golden, CO, July 29, 2009.
25. W. F. Carroll, Jr. and K. Sherman, "Why Chemistry?" Chapter 2 in *Chemistry in the National Science Education Standards: Models for Meaningful Learning in the High School Chemistry Classroom (2nd ed)*. American Chemical Society, **2008**.
26. W. F. Carroll, "Reese's Pieces: 'Best' of C&EN Newscripts written by K. M. Reese. *235<sup>th</sup> ACS National Meeting, New Orleans, LA*, April 6-10, 2008 HIST-013.
27. W. F. Carroll, Jr., "Chemistry's Long Tail" *Chem. Eng. News*, July 9, 2007 p.44-45
28. *Guidelines on Best Available Techniques and Provisional Guidance on Best Environmental Practices Relevant to Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants*, Chapters VI(a) and VI(f), United Nations Environment Programme, **2007**.

29. W. F. Carroll, "Special challenges in communicating science in a busy world. What can a chemist do?" *232<sup>nd</sup> ACS National Meeting, San Francisco, CA, Sept 10-14, 2006*, PROF-019.
30. W. F. Carroll, "You can never not lead: Styles, skills and responsibilities in a large organization." *232<sup>nd</sup> ACS National Meeting, San Francisco, CA, Sept 10-14, 2006*, PROF-005.
31. L. H. Newton and W. F. Carroll, "Chlorine Sunrise," Chapter 7, pp. 116-140, in *Watersheds 4: Ten Cases in Environmental Ethics (Fourth Edition)*, Belmont, CA: Wadsworth, **2006**. Lisa H. Newton et al, eds.
32. W. F. Carroll, Jr. and D. A. Raber, "The Chemistry Enterprise in 2015," American Chemical Society, **2005**. Accessible at [http://www.billcarroll.org/News/chem\\_enterprise.pdf](http://www.billcarroll.org/News/chem_enterprise.pdf)
33. W. F. Carroll, Jr., "Sustainability Through Green Chemistry, Green Engineering and Commodity Chemicals," in *Environmental Studies: Implications for Sustainability*, Florida Tech-Budapest University of Technology and Economics, G. Nelson and I. Hronszky, editors, **2005**
34. W. F. Carroll, Jr., "A Year for Opportunity" *Chem. Eng. News* January 3, 2005, p. 3
35. W. F. Carroll, Jr., "Do We Have a Future, Or What?" Keynote Presentation, Society of Plastics Engineers Vinyltec, Chicago, 2002.
36. W. F. Carroll, Jr., "The Relative Contribution of Wood and Poly(vinyl chloride) to Emissions of PCDD and PCDF from House Fires," *Chemosphere* **2001**, *45*, 1173-1180.
37. W. F. Carroll, Jr. and D. Eckstein, "Vinyl Chloride in Rural Water from Pre-1977 Applications of PVC Pipe," *Journal of Vinyl and Additive Technology* **2001**, *7*, 43-50.
38. W. F. Carroll, Jr., T. C. Berger, F. E. Borrelli, P. J. Garrity, R. A. Jacobs, J. Ledvina, J. W. Lewis, R. L. McCreedy, T. P. Smith, D. R. Tuhovak and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride, Vinyl Chloride Monomer and Polyvinyl Chloride Facilities in the United States. Consolidated Report," *Chemosphere* **2001**, *43*, 689-700.
39. W. F. Carroll, Jr., T. C. Berger, F. E. Borrelli, R. A. Jacobs, J. Ledvina, J. W. Lewis, R. L. McCreedy, T. P. Smith, D. R. Tuhovak and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride (EDC) Vinyl Chloride (VCM) and Polyvinyl Chloride (PVC) Facilities in the United States. IV. Consolidated Report," *Organohalogen Compounds* **1999**, *41*, 31-34.
40. W. F. Carroll, Jr., T. C. Berger, F. E. Borrelli, J. W. Lewis, R. L. McCreedy, T. P. Smith, D. R. Tuhovak and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride (EDC) Vinyl Chloride (VCM) and Polyvinyl Chloride (PVC) Facilities in the United States. III. Oxychlorination Catalyst," *Organohalogen Compounds* **1999**, *41*, 133-136.
41. W. F. Carroll, Jr., F. E. Borrelli, P. J. Garrity, R. A. Jacobs, J. W. Lewis, R. L. McCreedy and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride (EDC) Vinyl Chloride (VCM) and Polyvinyl Chloride (PVC) Facilities in the United States. I. Resin, Treated Wastewater and Ethylene Dichloride," *Chemosphere* **1998**, *37*, 1957-1972.
42. W. F. Carroll, Jr., F. E. Borrelli, R. A. Jacobs, J. W. Lewis, R. L. McCreedy D. R. Tuhovak and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride (EDC) Vinyl Chloride (VCM) and Polyvinyl Chloride (PVC) Facilities in the United States. II, IIa Wastewater Treatment Solids and Aqueous Hydrochloric Acid," *Organohalogen Compounds* **1997**, *32*, 447-450.
43. W. F. Carroll, Jr., "Environmental Hormones: Fallout from 'Our Stolen Future,'" *Polymer News* **1996**, *21*, 366-369.
44. W. F. Carroll, Jr., "Environmental Hormones: Fallout from 'Our Stolen Future,'" *Proceedings, Society of Plastics Engineers Philadelphia Section Regional Technical Conference* **1996**, 133.

45. W. F. Carroll, Jr. "Correlation of Chlorine in Feedstock with Dioxin Emission Factors from Various Forms of Combustion. A Reanalysis," *Organohalogen Compounds* **1996**, 27, 122-125.
46. W. F. Carroll, Jr., F. E. Borrelli, P. J. Garrity, R. A. Jacobs, J. W. Lewis, R. L. McCreedy and A. F. Weston, "Characterization of Emissions of Dioxins and Furans from Ethylene Dichloride (EDC) Vinyl Chloride (VCM) and Polyvinyl Chloride (PVC) Facilities in the United States. I. Resin, Treated Wastewater and Ethylene Dichloride," *Organohalogen Compounds* **1996**, 27, 62-67.
47. W. F. Carroll, Jr., "Is PVC in House Fires the Great Unknown Source of Dioxin?" *Fire and Materials*, **1996**, 20, 161-166.
48. W. F. Carroll, Jr., "Chlorine in the Service of Man," from the symposium "A World Without Chlorine" Chemistry Section, American Association for the Advancement of Science, February 18, 1995, Atlanta Georgia.
49. W. F. Carroll, Jr., "Recycling Post-consumer PVC Bottles: Technology and Market Development," *J. Vinyl Tech.* **1994**, 16, 169-176.
50. W. F. Carroll, Jr., "How the Anti-Chlorine Hysteria Threatens the Gravure Industry" *Gravure* **1994**, 8, Summer, 47-49.
51. W. F. Carroll, Jr., R. G. Elcik and D. Goodman, "Poly(vinyl chloride) (PVC)" Chapter 6 in *Plastics Recycling: Products and Processes*; Raymond J. Ehrig, Editor, Hanser, Munich, Germany, **1992**, 133-150.
52. W. F. Carroll, Jr., "Vinyl Recycling: An Update," *J. Vinyl Tech.* **1991**, 13, 96-100.
53. W. F. Carroll, Jr., "Vinyl Recycling--The First Year." *Proceedings, Society of Plastics Engineers Recycling Division Regional Technical Conference* **1990**, 131.
54. W. F. Carroll, Jr., "Vinyl Recycling--The First Year." *Proceedings, Society of Plastics Engineers Vinyl Division Regional Technical Conference* **1990**, 59.
55. D. Goodman, W. F. Carroll, Jr., J. J. Beitel "Flammable Liquids in Plastic Containers: Small Scale Burn Tests," *J. Fire Sci.* **1989**, 7, 367-385.
56. D. Goodman and W. F. Carroll, Jr., "Recycling PVC Bottles," *Proceedings, Society of Plastics Engineers Annual Technical Conference* **1989**, 765-766
57. R. T. Gottesman, W. F. Carroll, Jr., and L. Fishbein, "Vinyl Industry Response to Concerns about PVC in Municipal Waste" *Energy Progress* **1988**, 8, 148-153.
58. W. F. Carroll, Jr., M. M. Hirschler, and G. F. Smith, "Kinetic Modeling of Generation and Decay of HCl from Burning PVC" *J. Vinyl Tech.* **1988**, 10, 106-110.
59. W. F. Carroll, Jr. and S. T. Fitzpatrick, "Novel Polyvinyl Chloride Suspension Polymerization Process and Product Having Improved Plasticizer Absorption." U.S. Patent 4,732,954, March 22, 1988.
60. W. F. Carroll, Jr., S. T. Fitzpatrick, J. M. Ogorzalek, and E. P. Tefft, "Novel Polyvinyl Chloride Suspension Polymerization Process and Product Having Improved Plasticizer Absorption" U.S. Patent 4,732,953, March 22, 1988.
61. W. F. Carroll, Jr., "PVC and Incineration" *J. Vinyl Tech.* **1988**, 10, 90-94.
62. W. F. Carroll, Jr., "Chemistry of Fire" Chapter 2 of *Managing Support Systems*, International Society of Fire Service Instructors Fire Officer Series, Book 2, Ashland, MA, **1988**.
63. W. F. Carroll, Jr., "PVC and Incineration" *Proceedings, Society of Plastics Engineers Vinyl Division Regional Technical Conference* **1987**, 134

64. W. F. Carroll, Jr., M. M. Hirschler, G. F. Smith, "Kinetic Modeling of Generation and Decay of HCl from Burning PVC" *Proceedings, Society of Plastics Engineers Vinyl Division Regional Technical Conference* **1987**, 76.
65. J. J. Beitel, C. A. Bertelo, W. F. Carroll, Jr., A. F. Grand, M. M. Hirschler, and G. F. Smith, "Hydrogen Chloride Transport and Decay in a Large Apparatus. II. Variables Affecting Hydrogen Chloride Decay." *J. Fire Sci.* **1987**, 5, 105-145.
66. J. J. Beitel, C. A. Bertelo, W. F. Carroll, Jr., A. F. Grand, R. O. Gardner, M. M. Hirschler, and G. F. Smith, "Hydrogen Chloride Transport and Decay in Large Apparatus I. Decomposition of Poly(Vinyl Chloride) Wire Insulation in a Plenum by Current Overload," *J. Fire Sci.* **1986**, 4, 15-41.
67. C. A. Bertelo, W. F. Carroll, Jr., M. M. Hirschler, G. F. Smith, "Thermal Decomposition of Poly(vinyl chloride): Kinetics of Generation and Decay of Hydrogen Chloride in Large and Small Systems and the Effect of Humidity," *Fire Safety Science: Proceedings of the First International Symposium* **1986**, 1079-1088.
68. C. A. Bertelo, W. F. Carroll, Jr., M. M. Hirschler, G. F. Smith, "Hydrogen chloride generation and decay from the thermal decomposition of poly(vinyl chloride) wire insulation," *Proceedings of the International Conference on Fire Safety* **1986**, 11, 192-204.
69. R. C. DeWald, L. H. Hart, and W. F. Carroll, Jr., "PVC Microdispersion Polymerization. I. Origin of Droplet Families," *J. Polymer Sci., Polymer Chem. Ed.* **1984**, 22, 2923-2930.
70. R. C. DeWald, L. H. Hart, and W. F. Carroll, Jr., "PVC Microdispersion Polymerization. II. Particle and Droplet Growth as a Function of Conversion." *J. Polymer Sci., Polymer Chem. Ed.* **1984**, 22, 2931-2939.
71. W. F. Carroll, Jr., D. G. Peters, "Low-Temperature Polarography of Alkyl Halides in Dimethylformamide," *J. Electrochem. Soc.* **1980**, 127, 2594-2599.
72. W. F. Carroll, Jr., and D. G. Peters, "Electrolytic Reduction of 1,4-Dihalonorbornanes at Mercury Electrodes in Dimethylformamide. Evidence for [2.2.1]Propellane as an Intermediate." *J. Am. Chem. Soc.* **1980**, 102, 4127-4134.
73. D. G. Peters, W. F. Carroll, Jr., D. M. La Perriere, B. C. Willett, "Electrochemistry of Allenes and Cumulenes, Chapter 12 in *The Chemistry of Ketenes, Allenes and Related Compounds*, Saul Patai, Editor, John Wiley and Sons, Ltd., Chichester, 1980.
74. D. M. La Perriere, W. F. Carroll, Jr., B. C. Willett, E. C. Torp, and D. G. Peters, "Radicals and Carbanions as Intermediates in the Electrochemical Reduction of 1-Iododecane at Mercury. Effect of Potential, Electrolysis Time, and Water Concentration on the Mechanism." *J. Am. Chem. Soc.* **1979**, 101, 7561-7568.
75. D. M. La Perriere, B. C. Willett, W. F. Carroll, Jr., E. C. Torp, and D. G. Peters, "The n-Value for Electrochemical Reduction of 1-Iododecane Depends on Electrolysis Time." *J. Am. Chem. Soc.* **1978**, 100, 6293-6294.
76. W. F. Carroll, Jr., and D. G. Peters, "Electrochemical Reduction of 1-Iodonorbornane and 1-Bromonorbornane at a Mercury Cathode in Dimethylformamide," *J. Org. Chem.* **1978**, 43, 4633-4637.
77. W. F. Carroll, Jr., and D. G. Peters, "[2.2.1] Propellane. Generation upon electrolytic reduction of 1,4-dihalonorbornanes." *Tetrahedron Lett.* **1978**, 3543-3546.
78. W. F. Carroll, Jr. and D. G. Peters, "Electrochemical Reduction of 1,4-Dihalonorbornanes," *Abstracts of papers of the American Chemical Society Meeting* **1977** (Sep), 174, 183.

79. E. J. Panek and W. F. Carroll, Jr., "Use of Lithium Dialkylamides as One-Electron Reducing Agents,"  
*Abstracts of papers of the American Chemical Society Meeting* **1975**, 169, 20.