

BIOGRAPHICAL SKETCH

NAME: William Parker Lyon Carter			
TITLE: Research Chemist Emeritus			
PLACE OF BIRTH: Eugene, Oregon, USA		NATIONALITY: United States	
EDUCATION:			
INSTITUTION AND LOCATION	DEGREE	YEAR	SCIENTIFIC FIELD
University of California, Riverside, CA	BA	1967	Chemistry
University of Iowa Iowa City, IA	Ph.D.	1973	Physical Chemistry
HONORS: University of California, Riverside Non-Senate Distinguished Researcher Award, 1992; Institute of Scientific Information "Highly Cited" researcher, 2003; California Air Resources Board Haagen-Smit Clean Air Award, 2005; Atmospheric Environment Haagen-Smit Prize, 2005; First annual A&WMA Arthur C. Stern award, 2013.			
MEMBERSHIPS: South Coast AQMD Scientific Advisory Council (1989 - 1997); California ARB Modeling Advisory Committee (1990 - 1993); Air Research Advisory Board of the Texas Air Research Center (1999-present); the Scientific Advisory Committee for the Texas Environmental Research Consortium (2004-2010); Independent Technical Advisory Committee for the Texas Air Quality Research Program (2016-present)			
MAJOR RESEARCH INTEREST: Atmospheric Chemistry of Organic Compounds			

RESEARCH AND PROFESSIONAL EXPERIENCE:

- 2005 - Present University of California, Riverside, CA. College of Engineering Center for Environmental Research and Technology. Research Chemist Emeritus. Develops methods for evaluating impacts of volatile organic compounds (VOCs) in photochemical air pollution. Develops chemical mechanisms for urban and regional airshed models used for research and regulatory applications. Develops atmospheric chemical mechanism generation systems. See <http://www.cert.ucr.edu/~carter> for additional information and links to reports and data.
- 1987 - 2005 University of California, Riverside, CA. Statewide Air Pollution Research Center and College of Engineering Center for Environmental Research and Technology. Research Chemist. Develops methods for evaluating relative ozone impacts of volatile organic compounds (VOCs) in photochemical air pollution. Develops chemical mechanisms for urban and regional airshed models used for research and regulatory applications. Develops procedures for using environmental chamber data for evaluating such mechanisms and VOC reactivity assessment. Directs environmental chamber research programs. Participates in or directs kinetic or mechanistic studies related to photochemical smog formation.
- 1973-1987 University of California, Riverside, CA. Statewide Air Pollution Research Center. Associate Research Chemist (1981-1987), Assistant Research Chemist (1976-1981) and Postgraduate Research Chemist (1973-1976). Developed chemical kinetic models for photochemical smog. Participated in planning and analysis of data for environmental chamber programs. Developed procedures and software for kinetic model calculations and analysis of chamber data. Participated in kinetic or mechanistic studies related to photochemical smog formation.
- 1970-1973 University of Iowa, Iowa City, IA. Graduate Research Assistant. Studied chemical activation systems involving photochemically produced free radicals employing vacuum and chromatographic techniques. Developed

RESEARCH AND PROFESSIONAL EXPERIENCE (continued)**W. P. L. Carter (continued) - 2**

procedures and software for analysis of complex chemical activation systems.

- 1970-1972 University of Iowa, Iowa City, IA. Graduate Teaching Assistant. Assisted in physical chemistry and freshmen chemistry courses.
- 1967-1969 California Institute of Technology, Pasadena, CA. Graduate Research Assistant. Studied the mechanism of unimolecular pyrolysis reactions. Employed chromatographic and organic synthesis techniques.

RESEARCH PUBLICATIONS

Optical Isomerizations During the Pyrolysis of Alkylcyclo-propanes: Evidence for Diradical Intermediates and an Estimate of Their Relative Rates of Bond Rotation and Ring Closure

J. Amer. Chem. Soc., **90**, 7344-7346 (1968)

Carter, W.P. and R.G. Bergman

Optically Active 1-Ethyl-2-Methylcyclopropanes in the Gas Phase. An Estimate of Relative Rates of Bond Rotation and Ring Closure in Diradical Intermediates

J. Amer. Chem. Soc., **91**, 7411-7425 (1969)

Bergman, R.G. and W.P. Carter

Behavior of Collisional Efficiencies in External Activation Systems.

J. Phys. Chem., **78**, 612-617 (1974)

Carter, W.P. and D.C. Tardy

Homoallylic Isomerization of 1-Penten-4-yl and the Critical Energy for Methyl + 1,3-Butadiene

J. Phys. Chem., **78**, 1245-1248 (1974)

Carter, W.P. and D.C. Tardy

Ring Opening of Chemically Activated Cyclopentyl and Methyl Cyclobutyl Radicals

J. Phys. Chem., **78**, 1573-1578 (1974)

Carter, W.P. and D.C. Tardy

Analysis of External Activation Systems with Multiple Isomerizations and Decompositions

J. Phys. Chem., **78**, 1579-1582 (1974)

Carter, W.P. and D.C. Tardy

Reactions of Chemically Activated Pentenyl Radicals: Kinetic Parameters of 1,4 H Shifts and the Cis-Trans Isomerization of Homoallylic Radicals

J. Phys. Chem., **78**, 2201-2211 (1974)

Carter, W.P. and D. C. Tardy

The Effect of Latitude on the Potential for Formation of Photochemical Smog

Atmos. Environ., **10**, 731-734 (1976)

Nieboer, H., A.C. Lloyd, W.P. Carter and J.N. Pitts, Jr.

Evidence for Alkoxy Radical Isomerization in Photooxidations of C₄-C₆ Alkanes Under Simulated Atmospheric Conditions

Chem. Phys. Lett., **42**, 22-27 (1976)

Carter, W.P., K.R. Darnall, A.C. Lloyd, A.M. Winer and J.N. Pitts, Jr.

Importance of RO₂ + NO in Alkyl Nitrate Formation from C₄-C₆ Alkane Photooxidations Under Simulated Atmospheric Conditions

J. Phys. Chem., **80**, 1948-1950 (1976)

Darnal, K.R., W.P. Carter, A.M. Winer, A.C. Lloyd and J.N. Pitts, Jr.

Computer Modeling of Smog Chamber Data: Progress in Validating Detailed Mechanisms for the Photooxidation of Propene and n-Butane in Photochemical Smog

Int. J. Chem. Kinet., **11**, 45-101 (1979)

Carter, W.P., A.C. Lloyd, J.L. Sprung and J.N. Pitts, Jr.

Effects of Ultraviolet Spectral Distribution on the Photochemistry of Simulated Atmospheres

Atmos. Environ., **13**, 989-993 (1979)

Winer, A.M., G.M. Breuer, W.P. Carter, K.R. Darnall and J.N. Pitts, Jr.

Smog Chamber Studies of Temperature Effects on Photochemical Smog

Environ. Sci. Technol., **13**, 1094-1100 (1979)

Carter W.P.L., A.M. Winer, K.R. Darnall and J.N. Pitts, Jr.

Reactions of C₂ and C₄ α -hydroxy Radicals with O₂

J. Phys. Chem., **83**, 2305-2311 (1979)

Carter, W.P.L., K.R. Darnall, R.A. Graham, A.M. Winer and J.N. Pitts, Jr.

A Smog Chamber and Modeling Study of the Gas Phase NO_x-Air Photooxidations of Toluene and the Cresols

Int. J. Chem. Kinet., **12**, 779-836 (1980)

Atkinson, R., W.P.L. Carter, K.R. Darnall, A.M. Winer and J.N. Pitts, Jr.

The Effect of Peroxyacetyl Nitrate on the Initiation of Photochemical Smog

Environ. Sci. Technol., **15**, 831-834 (1981)

Carter, W.P.L., A.M. Winer and J.N. Pitts, Jr.

Reaction of Hydrazines with Ozone Under Simulated Atmospheric Conditions

Environ. Sci. Technol., **15**, 823-828 (1981)

Tuazon, E.C., W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Evidence for Chamber Dependent Radical Sources: Impact on Kinetic Computer Models for Air Pollution

Int. J. Chem. Kinet., **13**, 735-740 (1981)

Carter, W.P.L., R. Atkinson, A.M. Winer and J.N. Pitts, Jr.

Major Atmospheric Sink for Phenol and the Cresols: Reaction with the Nitrate Radical

Environ. Sci. Technol., **15**, 829-831 (1981)

Carter, W.P.L., A.M. Winer and J.N. Pitts, Jr.

An Experimental Protocol for the Determination of OH Radical Rate Constants with Organics Using Methyl Nitrite as an OH Radical Source

J. Air Pollut. Control Assoc., **31**, 1090-1092 (1981)

Atkinson, R., W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Gas Phase Reactions of NO_x-Dimethylhydrazine with Ozone and NO_x in Simulated Atmospheres. Facile Formation of N-Nitrosodimethylane

In N-nitroso Compounds, R.A. Scanlan and S.R. Tannenbaum, Es., ACS Symposium Series 174, 117 (1981)

Carter W.P.L., E.C. Tuazon, A.M. Winer and J.N. Pitts, Jr.

Effects of Kinetic Mechanisms and Hydrocarbon Composition on Oxidant-Precursor Relations Predicted by the EKMA Isopleth Technique

Atmos. Environ., **16**, 113-120 (1982)

Carter, W.P.L., A.M. Winer and J.N. Pitts, Jr.

Studies of Trace Non-ozone Species Produced in a Corona Discharge Ozonizer

J. Air Pollut. Control Assoc., **32**, 274-276 (1982)

Harris, G.W., W.P.L. Carter, A.M. Winer, R.A. Graham and J.N. Pitts, Jr.

Observations of Nitrous Acid in the Los Angeles Atmosphere and Implications for Predictions of Ozone-Precursor Relationships

Environ. Sci. Technol, **16**, 414-419 (1982)

Harris, G.W. W.P.L. Carter, A.M. Winer, J.N. Pitts, Jr., U. Platt and D. Perner

Kinetics of the Reactions of OH Radical with n-Alkanes at 299 ± 2 K

Int. J. Chem. Kinet., **14**, 781-788 (1982)

Atkinson, R., S.M. Aschmann, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Rate Constants for the Gas Phase Reaction of OH Radicals with a Series of Ketones at 299 ± 2 K

Int. J. Chem. Kinet., **14**, 389-847 (1982)

Atkinson, R., S.M. Aschmann, W.P.L. Carter and J.N. Pitts, Jr.

Kinetics of the Gas Phase Reactions of OH Radicals with Alkyl Nitrates at 299 ± 2 K

Int. J. Chem. Kinet., **14**, 919-926 (1982)

Atkinson, R., S.M. Aschmann, W.P.L. Carter, A.M. Winer

Experimental Investigation of Chamber-Dependent Radical Sources

Int. J. Chem. Kinet., **14**, 1071-1103 (1982)

Carter, W.P.L., R. Atkinson, A.M. Winer and J.N. Pitts, Jr.

Alkyl Nitrate Formation from the NO_x -Air Photooxidations of C_2 - C_8 n-alkanes

J. Phys. Chem., **86**, 4563-4568 (1982)

Atkinson, R., S.M. Aschmann, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Reply to "Comments on 'A Smog Chamber and Modeling Study of the Gas Phase NO_x -Air Photooxidation of Toluene and the Cresols' "

Int. J. Chem. Kinet., **14**, 813-814 (1982)

Carter, W.P.L., R. Atkinson, A.M. Winer and J.N. Pitts, Jr.

Rate Constants for the Gas Phase Reactions of OH Radicals with a Series of Bi- and Tri-Cycloalkanes at 299 ± 2 K: Effects of Ring Strain

Int. J. Chem. Kinet., **15**, 37-50 (1983)

Atkinson, R., S.M. Aschmann and W.P.L. Carter

Kinetics of the Reactions of O_3 and OH Radicals with Furan and Thiphenes at 298 ± 2 K

Int. J. Chem. Kinet., **15**, 51-61 (1983)

Atkinson, R., S.M. Aschmann and W.P.L. Carter

The Gas Phase Reaction of Hydrazine and Ozone: A Non-photolytic Source of OH Radicals for Measurement of Relative OH Radical Rate Constants

Int. J. Chem. Kinet., **15**, 619-629 (1983)

Tuazon, E.C., W.P.L. Carter, R. Atkinson and J.N. Pitts, Jr.

Effects of Pressure on Product Yields in the NO_x -Photooxidations of Selected Aromatic Hydrocarbons

J. Phys. Chem., **87**, 1605-1610 (1983)

Atkinson, R., W.P.L. Carter and A.M. Winer

Gas Phase Reaction of 1,1-Dimethylhydrazine with Nitrogen Dioxide

J. Phys. Chem., **87**, 1600-1605 (1983)

Tuazon, E.C., W.P.L. Carter, R.V. Brown, A.M. Winer and J.N. Pitts, Jr.

Effects of Temperature and Pressure on Alkyl Nitrate Yields in the NO_x Photooxidations of n-Pentane and n-Heptane

J. Phys. Chem., **87**, 2012-1018 (1983)

Atkinson, R., W.P.L. Carter and A.M. Winer

Effects of Ring Strain on Gas Phase Rate Constants: 1. Ozone Reactions with Cycloalkenes

Int. J. Chem. Kinet., **15**, 721-731 (1983)

Atkinson, R., S.M. Aschmann, W.P.L. Carter and J.N. Pitts, Jr.

OH Radical Rate Constants and Photolysis Rates of α -Dicarbonyls

Environ. Sci. Technol., **17**, 479-484 (1983)

Plum, C.N., E. Sanhueza, R. Atkinson, W.P.L. Carter and J.N. Pitts, Jr.

Effects of Ring Strain on Gas Phase Rate Constants. 2. OH Radical Reactions with Cycloalkanes

Int. J. Chem. Kinet., **15**, 1161-1177 (1983)

Atkinson, R., S.M. Aschmann and W.P.L. Carter

Atmospheric Reactions of N-Nitrosodimethylamine and Dimethylnitramine

Environ. Sci. Technol., **18**, 49-54 (1983)

Tuazon E.C., W.P.L. Carter, R. Atkinson, A.M. Winer and J.N. Pitts, Jr.

Trace Nitrogenous Series in Urban Atmospheres

Environ. Health Perspect., **52**, 153-157 (1983)

Pitts, J.N., Jr., A.M. Winer, G.W. Harris, W.P.L. Carter and E.C. Tuazon

Kinetics of the Reactions of OH Radicals with a Series of Branched Alkanes at 297 ± 2 K

Int. J. Chem. Kinet., **16**, 469-481 (1984)

Atkinson, R., W.P.L. Carter, S.M. Aschmann, A.M. Winer and J.N. Pitts, Jr.

Rate Constants for the Gas Phase Reactions of NO₃ Radicals with a Series of Organic in Air at 298 ± 1 K

J. Phys. Chem., **88**, 1210-1215 (1984)

Atkinson, R., C.N. Plum, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Rate Constants for the Gas Phase Reactions of NO₃ Radicals with a Series of Alkanes at 298 ± 1 K

J. Phys. Chem., **88**, 2361-2364 (1984)

Atkinson, R., C.N. Plum, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Direct Determination of the Equilibrium Constant at 298 K for the NO₂ + NO₃ \rightarrow N₂O₅ Reactions

J. Phys. Chem., **88**, 3095-3098 (1984)

Tuazon, E.C., E. Sanhueza, R. Atkinson, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Kinetics of the Gas Phase Reactions of NO₃ Radicals with a Series of Aromatics at 296 ± 2 K

Int. J. Chem. Kinet., **16**, 887-898 (1984)

Atkinson, R., W.P.L. Carter, C.N. Plum, A.M. Winer and J.N. Pitts, Jr.

Effects of Temperature and Pressure on the Photochemical Reactivity of a Representative Aviation Fuel

Environ. Sci. Technol., **18**, 556-561 (1984)

Carter, W.P.L., R. Atkinson and A.M. Winer

An Investigation of the Dark Formation of Nitrous Acid in Environmental Chambers

Int. J. Chem. Kinet., **16**, 919-939 (1984)

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Kinetics of the Reactions of O₃ and OH Radicals with a Series of Dialkenes and Trialkenes at 294 ± 2 K

Int. J. Chem. Kinet., **16**, 967-976 (1984)

Atkinson, R., S.M. Aschmann and W.P.L. Carter

Formation of Alkyl Nitrates from the Reaction of Branched and Cyclic Alkyl Peroxy Radicals with NO

Int. J. Chem. Kinet., **16**, 1085-1101 (1984)

Atkinson, R., S.M. Aschmann, W.P.L. Carter, A.M. Winer and J.N. Pitts, Jr.

Kinetics and Mechanisms of the Gas Phase Reactions of Ozone with Organic Compounds Under Atmospheric Conditions

Chem. Rev., **84**, 437-470 (1984)

Atkinson, R. and W.P.L. Carter

Rate Constants for the Gas Phase Reactions of OH Radicals and O₃ with Pyrrole at 295 ± 1 K and Atmospheric Pressure

Atmos. Environ., **18**, 2105-2107 (1984)

Atkinson, R., S.M. Aschmann, A.M. Winer and W.P.L. Carter

Yields of Glyoxal and Methylglyoxal from the NO_x-Air Photooxidations of Toluene and m- and p-Xylene

Environ. Sci. Technol., **18**, 981-984 (1984)

Tuazon, E.C., R. Atkinson, H. MacLeod, H.W. Biermann, A.M. Winer, W.P.L. Carter and J.N. Pitts, Jr.

Rate Constants for the Gas Phase Reactions of NO₃ Radicals with Furan, Thiophene and Pyrrole at 295 ± 1 K and Atmospheric Pressure

Environ. Sci. Technol., **19**, 159-163 (1985)

Atkinson, R., S.M. Aschmann, A.M. Winer and W.P.L. Carter

Atmospheric Chemistry of cis- and trans-3-Hexene-2,5-dione

Environ. Sci. Technol., **19**, 265-269 (1985)

Tuazon, E.C., R. Atkinson and W.P.L. Carter

Extent of H-Atom Abstraction from the Reaction of the OH Radical with 1-Butene Under Atmospheric Conditions

Int. J. Chem. Kinet., **17**, 725-734 (1985)

Atkinson, R., E.C. Tuazon and W.P.L. Carter

Atmospheric Chemistry of Alkanes

J. Atmos. Chem., **3**, 377-405 (1985)

Carter, W.P.L., and R. Atkinson

α-Dicarbonyl Yields from the NO_x-Air Photooxidations of a Series of Aromatic Hydrocarbons in Air

Environ. Sci. Technol., **20**, 383-387 (1986)

Tuazon, E.C., H. MacLeod, R. Atkinson and W.P.L. Carter

An Experimental Study of Incremental Hydrocarbon Reactivity

Environ. Sci. Technol., **21**, 670-679 (1987)

Carter, W.P.L. and R. Atkinson

A Computer Modeling Study of Incremental Hydrocarbon Reactivity

Environ. Sci. Technol., **23**, 864-880 (1989)

Carter, W.P.L. and R. Atkinson

Alkyl Nitrate Formation from the Atmospheric Photooxidation of Alkanes; A Revised Estimation Method

J. Atmos. Chem., **8**, 165-173 (1989)

Carter, W.P.L. and R. Atkinson

Computer Modeling Studies of Incremental Reactivities of Organics with Respect to Urban Ozone Formation

Transactions of the APCA International Specialty Conference on "The Scientific and Technical Issues Facing Post-1987 Ozone Control Strategies," November 16-19, 1988, Hartford, CT (1989)

Carter, W.P.L.

Formation of Ring-Retaining Products from the OH Radical-Initiated Reactions of Benzene and Toluene

Int. J. Chem. Kinet., 21, 801-827 (1989)

Atkinson, R., S.M. Aschmann, J. Arey and W.P.L. Carter

A Detailed Mechanism for the Gas-Phase Atmospheric Reactions of Organic Compounds

Atmos. Environ., 24A, 481-518 (1990)

Carter, W.P.L.

A Method for Evaluating the Atmospheric Ozone Impact of Actual Vehicle Emissions

Transactions of the SAE International Congress and Exposition, Detroit, MI, February 26-March 2, 1990

Lowi, A. and W.P.L. Carter

Aggregation and Analysis of Volatile Organic Compound Emissions for Regional Modeling

Atmos. Environ., 24A, 1107-1133 (1990)

Middleton, P., W.R. Stockwell and W.P.L. Carter

Thermal Decomposition of Peroxyacetyl Nitrate and Reactions of Acetyl Peroxy Radicals with NO and NO₂ Over the Temperature Range 283-313 K

J. Phys. Chem., 95, 2434-2437 (1991)

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Products of the Gas-Phase Reaction of Methyl-tert-Butyl Ether with the OH Radical in the Presence of NO_x

Int. J. Chem. Kinet., 23, 1003-1015 (1991)

Tuazon, E.C., W.P.L. Carter, S.M. Aschmann and R. Atkinson

Reactions Alkoxy Radicals under Atmospheric Conditions: The Relative Importance of Decomposition Versus Reaction with O₂

J. Atmos Chem., 13, 195-210 (1991)

Atkinson R. and W.P.L. Carter

Evaluation of a Detailed Gas Phase Atmospheric Reaction Mechanism Using Environmental Chamber Data

Atmos. Environ., 25A, 2771-2806 (1991)

Carter, W.P.L. and F. W. Lurmann

Development of Ozone Reactivity Scales for Volatile Organic Compounds

J. Air and Waste Manage. Assoc., 44, 881-899 (1994)

Carter, W. P. L.

Environmental Chamber Studies of Maximum Incremental Reactivities of Volatile Organic Compounds

Atmospheric Environment, 29, 2499-2511 (1995)

Carter, W. P. L., J. A. Pierce, D. Luo, and I. L. Malkina

Computer Modeling of Environmental Chamber Measurements of Maximum Incremental Reactivities of Volatile Organic Compounds

Atmospheric Environment, 29, 2513-2527 (1995)

Carter, W. P. L.

Rate Constants for the Reactions of O(³P) with Selected Monoterpenes

Int. J. Chem. Kinet., 28, 1-8 (1996)

D. Luo, J. A. Pierce, I. L. Malkina, and W. P. L. Carter

Development and Evaluation of a Detailed Mechanism for the Atmospheric Reactions of Isoprene and NO_x.

Int. J. Chem. Kinet., 28, 497-530 (1996)

Carter, W. P. L. and R. Atkinson

Condensed Atmospheric Photooxidation Mechanisms for Isoprene
Atmospheric Environment, **30**, 4275-4290 (1996)
Carter, W. P. L.

Investigation of the Atmospheric Reactions of Chloropicrin
Atmospheric Environment, **31**, 1425-1439 (1997)
CE-CERT Document no. 96-AP-029J
W. P. L. Carter, D. Luo, and I. L. Malkina

The reactions of Selected Acetates with the OH Radical in the Presence of NO: Novel Rearrangement of Alkoxy Radicals of Structure RC(O)CH(O)R'
Journal of Physical Chemistry A, **102**, 2316-2321 (1998)
E. C. Tuazon S. M. Aschmann, R. Atkinson and W. P. L. Carter

The Concept of Species age in Photochemical Modeling.
Atmospheric Environment, **32**, 3403-3413 (1998)
A. Venkatram, S Du, R Hariharan, W.P.L. Carter, R Goldstein

Reactivity Estimates for Aromatic Compounds 1. Uncertainty in Chamber-Derived Parameters.
Atmospheric Environment, **34**, 4337-4348 (2000)
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Reactivity Estimates for Aromatic Compounds 2. Uncertainty in Incremental Reactivities.
Atmospheric Environment, **34**, 4349-4360 (2000)
L. Wang, J. B. Milford, and W. P. L. Carter

Atmospheric Oxidation Mechanism for Methyl Pivalate, CH₃CC(O)OCH₃.
J. Phys. Chem A. **105**: 7225-7235 (2001)
Wallington, T. J., Y. Ninomiya, M. Mashino, M. Kawasaki, V. L. Orkin, R. E. Huie, M. J. Kurylo, W. P. L. Carter, D. Luo, and I. L. Malkina

Analysis of Chamber-Derived Incremental Reactivity Estimates for N-Butyl Acetate and 2-Butoxy Ethanol
Atmospheric Environment, **36**, 115-135 (2002)
Wang, L, J. B. Milford, and W. P. L. Carter

The Ozone Formation Potential of 1-Bromo-propane
J. Air & Waste Manage. Assoc., **53**, 262-272 (2003)
Whitten, G. Z., J. P. Cohen, T. C. Myers and W. P. L. Carter

A New Environmental Chamber for Evaluation of Gas-Phase Chemical Mechanisms and Secondary Aerosol Formation
Atmospheric Environment, **39** 7768-7788 (2005)
William P. L. Carter, David R. Cocker III, Dennis R. Fitz, Irina L. Malkina, Kurt Bumiller, Claudia G. Sauer, John T. Pisano, Charles Bufalino, and Chen Song

Evaluation of alkene degradation in the detailed tropospheric chemistry mechanism, MCM v3, using environmental chamber data
J Atmos Chem **55**, 55-79 (2006)
P. G. Pinho, C.A. Pio, W. P. L. Carter, and M. E. Jenkin

Impact of an Updated Carbon Bond Mechanism on Predictions from the Community Multiscale Air Quality (CMAQ) Modeling System: Preliminary Assessment
Journal of Applied Meteorology and Climatology, **47**, 3-14, 2008
G. Sarwar, D. Luecken, G. Yarwood, G. Z. Whitten, and W. P. L. Carter

A study of VOC Reactivity in the Houston-Galveston Air Mixture Utilizing an Extended Version of SAPRC99 Chemical Mechanism

Atmospheric Environment, 42, 5733–5742, 2008
B. Czader; Daewon W Byun; Soon-Tae Kim; W. P. Carter

Reactivity scales for Volatile Organic Compounds using the SAPRC-07 and MCMv3.1 Chemical Mechanisms

J. Air & Waste Manage. Assoc, 60, 914-924, 2010
R. G. Derwent, M. E. Jenkin, M. J. Pilling, W. P.L. Carter, A. Kaduwela

Development of the SAPRC-07 Chemical Mechanism

Atmospheric Environment, 44, 5324-5335, 2010
W, P. L. Carter

Development of a Condensed SAPRC-07 Chemical Mechanism

Atmospheric Environment, 44, 5336-5345.2010
W, P. L. Carter

Modeling Alkene Chemistry Using Condensed Mechanisms for Conditions Relevant to Southeast Texas, USA

Atmospheric Environment, 44, 5365-5374, 2010.
G. Heo, Yosuke Kimura, E. McDonald-Buller, W. P.L. Carter, G. Yarwood, D. T. Allen

A New Condensed Toluene Mechanism for Carbon Bond: CB05-TU

Atmospheric Environment, 44, 5346-5355, 2010
G. Z. Whitten, G. Heo, Y. Kimura, E. McDonald-Buller, D. T. Allen, W. P. L. Carter, and G Yarwood

Rate of Gas Phase Association of Hydroxyl Radical and Nitrogen Dioxide

Science, 2010, 330, 646-649
Mollner, A. K., S. Valluvadasan, L. Feng, M. K. Sprague, M. Okumura, D. B. Milligan, W. J. Bloss, S. P. Sander, P. T. Martien, R. A. Harley, A. B. McCoy, and W. P. L. Carter

Secondary Organic Aerosol from Ozonolysis of Biogenic Volatile Organic Compounds: Chamber Studies of Particle and Reactive Oxygen Species Formation

Environ. Sci. Technol, 2011, 45, 276–282
X. Chen, P. Hopke, and W.P.L. Carter

Interpreting predictions from the SAPRC07 mechanism based on regional and continental simulations

Atmospheric Environment, 2012, 46, 417-429
Hutzell, W. T., D.J. Luecken, K.W. Appel, and W.P.L. Carter.

Winter ozone formation and VOC incremental reactivities in the Upper Green River Basin of Wyoming

Atmospheric Environment, 50, 255-266 (2012)
W. P. L. Carter and J. H. Seinfeld

Modeling ozone formation from alkene reactions using the Carbon Bond chemical mechanism

Atmospheric Environment, 59, 141-150 (2012)
G. Heo, Elena McDonald-Buller, W. P. L. Carter, G. Yarwood, G. Z. Whitten, and D. T. Allen

Potential impacts of two SO₂ oxidation pathways on regional sulfate concentrations: aqueous-phase oxidation by NO₂ and gas-phase oxidation by Stabilized Criegee Intermediates

Atmospheric Environment, 68 186-197 (2013)
G. Sarwar, K. Fahey, R. Kwok, S. J. Roselle, R. Mathur, J. Xue, J. Yu, W. P. L. Carter

Development of revised SAPRC aromatic mechanisms

Atmospheric Environment, 77, 404-414 (2013)
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