Jay Allen LaVerne

Curriculum Vitae

Present Position: Senior Scientist (Professional Specialist)
Radiation Laboratory, University of Notre Dame
Concurrent Research Professor
Department of Physics, University of Notre Dame

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Professional Preparation:

1972	B. S. Chemistry	Lamar University, Beaumont, TX
1981	Ph.D. Physical Chemistry	University of Nebraska, Lincoln, NE
1981-1983	Postdoctoral training	University of Notre Dame, Notre Dame, IN

Appointments:

Concurrent Research Professor of Physics, University of Notre Dame, 2004
Professional Specialist, Radiation Laboratory, University of Notre Dame, 1992
Associate Professional Specialist, Notre Dame Radiation Laboratory, 1986-1992
Assistant Professional Specialist, Notre Dame Radiation Laboratory, 1983-1986
Research Associate, Notre Dame Radiation Laboratory, 1979-1983

Professional Duties and Responsibilities:

Principal Investigator in the "Radiation and Photochemistry in the Condensed Phase and at Interfaces" program at the Notre Dame Radiation Laboratory, a cooperative project of the U. S. Department of Energy and the University of Notre Dame
Subtask Leader, "Interfacial Radiation Sciences" subtask, Radiation Laboratory, University of Notre Dame
Chemistry Councilor (Board of Directors): Radiation Research Society
Associate Editor: *Radiation Physics and Chemistry*
Associate Editor: *Radiation Research*
Chair: 2014 Gordon Conference on Radiation Chemistry
Radiation Chemistry Consultant: Los Alamos National Laboratory
Fellow American Association for the Advancement of Science

Visiting Positions:

Visiting Professor, Laboratoire de Chimie Physique d'Orsay, Université Paris-Sud, Paris, France, June 2015

Visiting Professor, Dalton Nuclear Institute, University of Manchester, Cumbria, United Kingdom, January 2012 -

Visiting Professor, Laboratoire de Chimie Physique d'Orsay, Université Paris-Sud, Paris, France, June 2012

Visiting Professor, Nuclear Engineering and Management, University of Tokyo, Tokyo, Japan, March 2011

Visiting Professor, The Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan, October-November 2004

Visiting Fellowship of the Japan Society for the Promotion of Science, University of Tokyo, Tokyo, Japan, September-October 1996

Visiting Scientist, Atomic Energy Research Establishment, Harwell, United Kingdom, March-April 1985

Professional Activities:

Chemistry Councilor (2000-2003, 2014-2017) and Associate Editor (1999-2006, 2008-) of the Radiation Research Society

Chair *ad hoc* Committee for oversight of the journal Radiation Research

Organizer of many workshops and symposia for the meetings of the Radiation Research Society, International Congresses of Radiation Research, DNA Radiation Damage Workshops, International Symposia on Advanced Science Research, and the Asia-Pacific Programs on Radiation Chemistry

International Advisory Board – Asia-Pacific Symposium on Radiation Chemistry 2014

Journal Activities:

Regular referee for several Journals including "Journal of Physical Chemistry", "Radiation Research", and “Radiation Physics and Chemistry". Frequent referee for a dozen other Journals.

Professional Societies:

American Association Advancement of Science, American Chemical Society-Physical Chemistry Division, Radiation Research Society, Sigma Xi

Principal Areas of Research:

Chemical effects of particle track structure, radiation effects in condensed systems, interfacial radiation effects, radiation chemistry, heavy ion radiolysis, chemical physics, physical chemistry, astrochemistry, environmental chemistry, and analytical chemistry.

Principal Areas of Expertise:

Development and use of experimental radiolysis techniques: includes beta radiolysis, γ radiolysis, fast electron pulse radiolysis, and heavy ion radiolysis (protons to uranium) using several accelerators in the United States, Canada, Europe, and Asia.

Application and development of analytical techniques in radiation chemistry: includes the use of gas chromatography, gas chromatography - mass spectrometry, liquid chromatography, x-ray photoelectron spectroscopy, ion selective electrodes, ion chromatography, FTIR spectroscopy, Raman spectroscopy, UV-Vis spectroscopy, secondary electron microscopy, X-ray photoelectron spectroscopy.

Theoretical physical track structure calculations: includes extensive computations involving basic physical concepts on energy loss processes of ions.

Diffusion-kinetic chemical model calculations: includes modelling of nonhomogeneous and homogeneous chemical reactions in aqueous solutions and in hydrocarbons.

Current and Recent Collaborations:

"Radiation Chemical Effects Related to Nuclear Power" S. M. Pimblott, University of Manchester

"Radiation Chemistry of PIT Certification" L. Tandon, Los Alamos National Laboratory

"Scavenging the Water Cation in Concentrated Acidic Solutions" M. Mostafavi, Universite Paris Sud

"Alpha Radiolysis of Nuclear Extraction Materials", S. Mezyk and B. Mincher, California State University Long Beach and Idaho National Laboratory

"Radiation Oxidation of Irradiated Uranium Surrogates" M. Jonsson, Sweden

Graduate Advisor and Postdoctoral Sponsor:

G. G. Meisels, University of Southern Florida, graduate advisor

R. H. Schuler, University of Notre Dame, postdoctoral advisor

Postdoctoral Scholars Supervised:

Araos, M. S. University of Notre Dame

Baidak, A. Dalton Facility University of Manchester

Carrasco-Flores, E. Renishaw, Inc. Rio de Janeiro, Brazil

Chang, Z. South Carolina State University

Dhiman, Surajdevprakash B., Brookhaven National Laboratory

Enomoto, K. Osaka University, Japan

Hiroki, A. JAEA Takasaki, Japan

Horne, G. University of Notre Dame

Iwamatsu, K. University of Notre Dame

Milosavljevic, B. Penn State University

Pastina, P. Posiva, Finland

Pimblott, S. M. University of Manchester

Rajesh, P. Bhabha Atomic Energy, India

Roth, O. Studsvik Nuclear, Sweden
Stanisky, C. Thiel College
Stefanic, I. Culver Military Academy
Sundin, Sara KTH University, Sweden

Graduate Students Co-Supervised:
Bales, K., University of Notre Dame
Chitose, N. University of Tokyo
Feliga, R., University of Manchester
Huestis, P., University of Notre Dame
Horne, G., University of Manchester
Huerta Parajon, M. University of Manchester
Reiff, S. University of Notre Dame
Schmitt, C. J. University of Notre Dame
Schmitz, P. I. University of Manchester
Schofield, J. University of Manchester
Wood, C. M. University of Notre Dame

Undergraduate Students Supervised:
Badali, M. University of Waterloo, Canada
Benvenuti, M. University of Notre Dame
Bouwhuis, R. McMaster University, Canada
Canizares, C. McMaster University, Canada
Combe, Nicole, University of Waterloo, Canada
Dahlgren, B. Royal Institute of Technology, Sweden
Darch, M. Guelph University, Canada
Dowling-Medley, J. University of Guelph
Garcia, J. St. Mary's University, San Antonio, Texas
Frederick, A. University of Guelph
Frederick, R. University of Guelph
Hadley, K. University of Waterloo, Canada
Kang, Sha, McMaster University, Canada
Kleemola, S. Guelph University
Levitin, R. McMaster University, Canada
McDonagh, R. University of Notre Dame
Miller, J. University of Notre Dame
Mu, T. McMaster University, Canada
Nishida. M. Kanasawa University, Japan
O'Brien, A. University of Notre Dame
O'Brien, K. University of Notre Dame
O'Meara, K. University of Notre Dame
Ryan, M. Saint Mary's University, Indiana
Sasgen, A. University of Notre Dame
Schurr, H. University of Notre Dame

Seguin, A. M. University of Waterloo, Canada
Simon, A. McMaster University, Canada
Skotnicki, K. Warsaw University, Poland
Sonnick, M. University of Notre Dame
Tchea, M. University of Melbourne, Australia
Tonnies, S. E. University of Notre Dame
Tratnik, Nicole, University of Waterloo
Webb, J. University of Waterloo, Canada

Current Research Support:

Co- Principal Investigator and subtask group leader, Interfacial Radiation Sciences Department of Energy Award DE-FC02-04 ER15533 (PI: Ian Carmichael, Notre Dame), $5,536,000 fiscal 2016

Co-Principal Investigator, IDREAM: Interfacial Dynamics in Radioactive Environments and Materials (PI: Sue Clark, PNNL, FWP 68932), Department of Energy, Office of Basic Energy Sciences, Energy Frontier Research Center.

Recent Research Support:

Principal Investigator, Radiolysis of Complex Inorganic and Organic Systems, Los Alamos National Laboratory, 2014, $10,000.

Principal Investigator, "Effect of Hydrogen on Water Radiolysis", 2014, SKB Sweden, $75,000.

Principal Investigator, "Next Generation lonic Liquids for Plutonium Science, Separation and Production", 2012-2013, Los Alamos National Laboratory, $150,000.

Co- Principal Investigator, "Enhancement of the Extraction of the Uranium from Seawater" U. S. Department of Energy, Nuclear Energy University Programs, 2012-2013, $100,000.

Principal Investigator, "SISGR: Cobalt-60 Gamma Source for Radiation Chemistry Studies", 2009-2010, U. S. Department of Energy, $645,988.

Principal Investigator, "Radiolytic Decomposition of Water at Zirconia Interfaces", 2004-2005, Bechtel Bettis, $82,000.

Co- Principal Investigator "Hazardous and Corrosive Gas Production in the Radiolysis of Water/Organic Mixtures in Model TRU Waste", 2003-2006, U. S. Department of Energy Environmental Management Science Program, $600,000 (with Dr. S. M. Pimblott, University of Notre Dame).

Co- Principal Investigator, "Effects of Water Radiolysis in Water Cooled Reactors", 2000-2003, Nuclear Energy Research Initiative, U. S. Department of Energy, $920,000 (with Drs. S. M. Pimblott and D. Meisel, University of Notre Dame and T. Orlando, Pacific Northwest National Laboratory).

Principal Investigator, "Hazardous Gas Production by Alpha Particles in Solid Organic Transuranic Waste Matrices", 1999-2002, Environmental Management Science Program, U. S. Department of Energy, $400,000.

Principal Investigator, "Gas Generation and Modelling: Radiation Chemistry and Microdosimetry", 2001-2003, Los Alamos National Laboratory, U. S. Department of Energy, $97,000.

Principal Investigator, “Radiation Chemistry Related to PIT Certification”, 2003-2004, Los Alamos National Laboratory, U. S. Department of Energy, $20,000.

Journal Publications of Jay A. LaVerne:

J. Schofield, S. C. Reiff, S. M. Pimblott and J. A. La Verne **(2016)** "Radiolytic hydrogen generation at silicon carbide - water interfaces", **Journal of Nuclear Materials** *469*, 43-50.

S. C. Reiff and J. A. La Verne **(2015)** "Radiation-Induced Chemical Changes to Iron Oxides", **Journal of Physical Chemistry B** *119*, 7358-7365.

S. C. Reiff and J. A. La Verne **(2015)** "Gamma and He Ion Radiolysis of Copper Oxides", **Journal of Physical Chemistry C** *119*, 8821-8828.

J. A. LaVerne and J. Dowling-Medley **(2015)** "Combinations of Aromatic and Aliphatic Radiolysis", **Journal of Physical Chemistry A** *119*, 10125-10129.

L. Leay, W. Bower, G. Horne, P. Wady, A. Baidak, M. Pottinger, M. Nancekievill, A. D. Smith, S. Watson, P. R. Green, B. Lennox, J. A. LaVerne and S. M. Pimblott **(2015)** "Development of Irradiation Capabilities to Address the Challenges of the Nuclear Industry", **Nuclear Instruments & Methods in Physics Research Section B-Beam Interactions with Materials and Atoms** *343*, 62-69.

B. J. Mincher, S. P. Mezyk, G. Elias, G. S. Groenewold, J. A. La Verne, A. R. Nilsson, J. Pearson, N. C. Schmitt, R. D. Tillotson and L. G. Olsen **(2014)** "The Radiation Chemistry of CMPO: Part 2. Alpha Radiolysis", **Solvent Extraction and Ion Exchange** *32*, 167-178.

S. B. Dhiman, G. S. Goff, W. Runde and J. A. La Verne **(2014)** " Gamma and Heavy ion Radiolysis of Ionic Liquids: A Comparative Study ", **Journal of Nuclear Materials,** *453*, 182-187.

C. M. Lousada, J. A. La Verne and M. Jonsson **(2013)** "Enhanced Hydrogen Formation During the Catalytic Decomposition of H_2O_2 on Metal Oxide Surfaces in the Presence of HO Radical Scavengers ", **Physical Chemistry Chemical Physics** *15*, 12674-12679.

S. B. Dhiman, G. S. Goff, W. Runde and J. A. La Verne **(2013)** "Hydrogen Production in Aromatic and Aliphatic Ionic Liquids", **Journal of Physical Chemistry B** *117*, 6782-6788.

A. K. El Omar, U. Schmidhammer, A. Balcerzyk, J. A. La Verne and M. Mostafavi **(2013)** "Spur Reactions Observed by Picosecond Pulse Radiolysis in Highly concentrated Bromide Aqueous Solutions", **Journal of Physical Chemistry A** *117*, 2287-2293.

O. Roth, B. Dahlgren and J. A. La Verne **(2012)** "Radiolysis of Water on ZrO_2 Nanoparticles", **Journal of Physical Chemistry C** *116*, 17619-17624.

J. A. La Verne and A. Baidak **(2012)** "Track Effects in the Radiolysis of Aromatic Liquids", **Radiation Physics and Chemistry** *81*, 1287-1290.

G. S. Groenewold, G. Elias, B. J. Mincher, S. P. Mezyk and J. A. La Verne **(2012)** "Characterization of CMPO and its Radiolysis Products by Direct Infusion ESI-MS", **Talanta** *99*, 909-917.

A. K. El Omar, U. Schmidhammer, B. Rousseau, J. A. La Verne and M. Mostafavi **(2012)** "Competition Reactions of $H2O^{\bullet+}$ Radical in Concentrated Cl^- Aqueous Solutions:

Picosecond Pulse Radiolysis Study", **Journal of Physical Chemistry A** *116*, 11509-11518.

S. Dhiman and J. A. La Verne **(2012)** "Radiolysis of Simple Quaternary Ammonium Salt Components of Amberlite Resin", **Journal of Nuclear Materials** *436*, 8-13.

C. Schmitt, J. A. LaVerne, D. Robertson, M. Bowers, W. Lu and P. Collon **(2011)** "Target Dependence for Low-Z Ion Charge State Fractions ", **Nuclear Instruments & Methods in Physics Research Section B- Beam Interactions with Materials and Atoms** *269*, 721-728.

O. Roth and J. A. LaVerne **(2011)** "Effect of pH on H_2O_2 Production in the Radiolysis of Water", **Journal of Physical Chemistry A** *115*, 700-708.

O. Roth, A. Hiroki and J. A. LaVerne **(2011)** "Effect of Al_2O_3 Nanoparticles on Radiolytic H_2O_2 Production in Water", **Journal of Physical Chemistry C** *115*, 8144-8149.

A. Balcerzyk, J. A. LaVerne and M. Mostafavi **(2011)** "Direct and Indirect Radiolytic Effects in Highly Concentrated Aqueous Solutions of Bromide", **Journal of Physical Chemistry A** *115*, 4326-4333.

A. Baidak, M. Badali and J. A. LaVerne **(2011)** "Role of the Low-energy Excited States in the Radiolysis of Aromatic Liquids", **Journal of Physical Chemistry A** *115*, 7418-7427.

C. Schmitt, J. A. LaVerne, D. Robertson, M. Bowers, W. Lu and P. Collon **(2010)** "Equilibrium Charge State Distributions for Boron and Carbon Ions Emerging from Carbon and Aluminum Targets", **Nuclear Instruments & Methods in Physics Research Section A** *268*, 1551-1557.

L. Lefticariu, L. A. Pratt, J. A. LaVerne and A. Schimmelmann **(2010)** "Anoxic Pyrite Oxidation by water Radiolysis Products - A Potential Source of Biosustaining Energy", **Earth and Planetary Science Letters** *292*, 57-67.

J. A. LaVerne, O. Roth and S. M. Pimblott **(2010)**. pH Dependence of H_2O_2 in the Radiolysis of Water. Nuclear Plant Chemistry Conference, Quebec City, Canada, Canadian Nuclear Society.

K. M. Dziewinska, A. M. Peters, J. A. LaVerne, P. Martinez, J. J. Dziewinski, D. L. Pugmire, H. G. Flores, S. M. Trujillo and P. Rajesh **(2010)** "Selection and Evaluation of a New Pu Density Measurement Fluid", **IOP Conference Series: Materials Science and Engineering** *9*, 012032.

A. Baidak and J. A. LaVerne **(2010)** "Radiation-Induced Decomposition of Anion Exchange Resins", **Journal of Nuclear Materials** *407*, 211-219.

C. Schmitt, J. A. LaVerne, D. Robertson, M. Bowers, W. Lu and P. Collon **(2009)** "Equilibrium Mean Charge States for Low Z ions at d 1 MeV/u in Carbon", **Physical Review A** *80*, 052711.

J. A. LaVerne, M. R. Ryan and T. Mu **(2009)** "Hydrogen Production in the Radiolysis of Bromide Solutions", **Radiation Physics and Chemistry** *78*, 1148-1152.

K. M. Dziewinska, A. M. Peters, J. A. LaVerne, P. Martinez, J. J. Dziewinski, L. B. Davenhall and P. Rajesh **(2009)** "In Search of an Optimum Plutonium Density Measurement Fluid", **Radiochimica Acta** *97*, 213-217.

E. Atinault, V. De Waele, M. Fattahi, J. A. LaVerne, S. M. Pimblott and M. Mostafavi **(2009)** "Aqueous Solution of UCl_6^{2-} in O_2 Saturated Acidic Medium: An Efficient System to Scavenge All Primary Radicals in Spurs Produced by Irradiation", **Journal of Physical Chemistry A** *113*, 949-951.

J. A. LaVerne, E. A. Carrasco-Flores, M. S. Araos and S. M. Pimblott **(2008)** "Gas Production in the Radiolysis of Poly(vinyl chloride)", **Journal of Physical Chemistry A** *112*, 3345-3351.

M. Huerta Parajon, P. Rajesh, T. Mu, S. M. Pimblott and J. A. LaVerne **(2008)** "H Atom Yields in the Radiolysis of Water", **Radiation Physics and Chemistry** *77*, 1203-1207.

K. Enomoto, J. A. LaVerne, L. Tandon, A. E. Enriquez and J. H. Matonic **(2008)** "The Radiolysis of Poly(4-vinylpyridine) Quaternary Salt Ion Exchange Resins", **Journal of Nuclear Materials** *373*, 103-111.

K. Enomoto and J. A. LaVerne **(2008)** "Reactions of Hydrated Electrons with Pyridinium Salts in Aqueous Solutions", **Journal of Physical Chemistry A** *112*, 12430-12436.

P. Rajesh, J. A. LaVerne and S. M. Pimblott **(2007)** "High Dose Radiolysis of Aqueous Solutions of Chloromethanes: Importance in the Storage of Radioactive Organic Wastes", **Journal of Nuclear Materials** *361*, 10-17.

S. M. Pimblott and J. A. LaVerne **(2007)** "Production of Low-Energy Electrons by Ionizing Radiation", **Radiation Physics and Chemistry** *76*, 1244-1247.

J. A. LaVerne, K. Enomoto and M. S. Araos **(2007)** "Radical Yields in the Radiolysis of Cyclic Compounds", **Radiation Physics and Chemistry** *76*, 1272-1274.

K. Enomoto, J. A. LaVerne and M. S. Araos **(2007)** "Heavy Ion Radiolysis of Liquid Pyridine", **Journal of Physical Chemistry A** *111*, 9-15.

E. A. Carrasco-Flores and J. A. LaVerne **(2007)** "Surface Species Produced in the Radiolysis of Zirconia Nanoparticles", **Journal of Chemical Physics** *127*, 234703.

K. Enomoto, J. A. LaVerne, S. Seki and S. Tagawa **(2006)** "Formation and Decay of the Triplet Excited State of Pyridine", **Journal of Physical Chemistry A** *110*, 9874-9879.

K. Enomoto, J. A. LaVerne and S. M. Pimblott **(2006)** "Products of the Triplet Excited State Produced in the Radiolysis of Liquid Benzene", **Journal of Physical Chemistry A** *110*, 4124-4130.

S. M. Pimblott, B. H. Milosavljevic and J. A. LaVerne **(2005)** "Radiolysis of Aqueous Solutions of 1,1- and 1,2-Dichloroethane", **Journal of Physical Chemistry A** *109*, 10294-10301.

B. M. Milosavljevic and J. A. LaVerne **(2005)** "Pulse Radiolysis of Aqueous Thiocyanate Solution", **Journal of Physical Chemistry A** *109*, 165-168.

B. H. Milosavljevic, J. A. LaVerne and S. M. Pimblott **(2005)** "Rate Coefficient Measurements of Hydrated Electrons and Hydroxyl Radicals with Chlorinated Ethanes in Aqueous Solutions", **Journal of Physical Chemistry A** *109*, 7751-7756.

J. A. LaVerne, L. Tandon, B. C. Knippel and V. M. Montoya **(2005)** "Heavy Ion Radiolysis of Methylene Blue", **Radiation Physics and Chemistry** *72*, 143-147.

J. A. LaVerne and L. Tandon **(2005)** "H_2 and Cl_2 Production in the Radiolysis of Calcium and Magnesium Chlorides and Hydroxides", **Journal of Physical Chemistry A** *109*, 2861-2865.

J. A. LaVerne, I. Stefanic and S. M. Pimblott **(2005)** "Hydrated Electron Yields in the Heavy Ion Radiolysis of Water", **Journal of Physical Chemistry A** *109*, 9393-9401.

J. A. LaVerne, I. Stefanic and S. M. Pimblott **(2005)** "Hydrated Electron Yields in the Proton Radiolysis of Water", **Japanese Society of Radiation Chemistry** *79*, 9-12.

J. A. LaVerne, I. Carmichael and M. S. Araos **(2005)** "Radical Production in the Radiolysis of Liquid Pyridine", **Journal of Physical Chemistry A** *109*, 461-465.

J. A. LaVerne **(2005)** "H_2 Formation from the Radiolysis of Liquid Water with Zirconia", **Journal of Physical Chemistry B** *109*, 5395-5397.

A. Hiroki and J. A. LaVerne **(2005)** "Decomposition of Hydrogen Peroxide at Water-Ceramic Oxide Interfaces", **Journal of Physical Chemistry B** *109*, 3364-3370.

J. A. LaVerne, I. Stefanic and S. M. Pimblott **(2004)**. Hydrated Electron Yields in the Radiolysis of Water with Protons. Proceedings of the Japanese Society for Radiation Chemistry, Hokkaido University, Soporro, Japan.

J. A. LaVerne (2004). *Hydrogen Generation in Transuranic Waste Storage Containers*. In Proceedings of the International Atomic Energy Agency Workshop on "Advances in Radiation Chemistry of Polymers". Vienna, IAEA Press**:** 15-20.

J. A. LaVerne and S. E. Tonnies **(2003)** "H_2 Production in the Radiolysis of Aqueous SiO_2 Suspensions and Slurries", **Journal of Physical Chemistry B** *107*, 7277-7280.

J. A. LaVerne and L. Tandon **(2003)** "H_2 Production in the Radiolysis of Water on UO_2 and Other Oxides", **Journal of Physical Chemistry B** *107*, 13623-13628.

I. Stefanic and J. A. LaVerne **(2002)** "Temperature Dependence of the Hydrogen Peroxide Production in the Gamma-Radiolysis of Water", **Journal of Physical Chemistry A** *106*, 447-452.

S. M. Pimblott and J. A. LaVerne **(2002)** "Effects of Track Structure on the Ion Radiolysis of the Fricke Dosimeter", **Journal of Physical Chemistry A** *106*, 9420-9427.

J. A. LaVerne and L. Tandon **(2002)** "H_2 Production in the Radiolysis of Water on CeO_2 and ZrO_2", **Journal of Physical Chemistry B** *106*, 380-386.

J. A. LaVerne and M. S. Araos **(2002)** "Heavy Ion Radiolysis of Liquid Benzene", **Journal of Physical Chemistry A** *106*, 11408-11413.

A. Hitachi, J. A. LaVerne, J. J. Kolata and T. Doke **(2002)** "Field Effects on Ionic and Excitonic Quenching for Heavy Ions in Liquid Ar", **IEEE Transactions on Dielectrics and Electrical Insulation** *9*, 45-47.

A. Hiroki, S. M. Pimblott and J. A. LaVerne **(2002)** "Hydrogen Peroxide Production in the Radiolysis of Water with High Radical Scavenger Concentrations", **Journal of Physical Chemistry A** *106*, 9352-9358.

Z. Chang and J. A. LaVerne **(2002)** "The Gamma-Radiolysis of Nylons: Molecular Rearrangement and Gas Production", **Journal of Physical Chemistry B** *106*, 508-514.

B. Pastina and J. A. LaVerne **(2001)** "Effect of Molecular Hydrogen on Hydrogen Peroxide in Water Radiolysis", **Journal of Physical Chemistry A** *105*, 9316-9322.

J. A. LaVerne, Z. Chang and M. S. Araos **(2001)** "Heavy Ion Radiolysis of Organic Materials", **Radiation Physics and Chemistry** *60*, 253-257.

N. Chitose, Y. Katsumura, M. Domae, Z. L. Cai, Y. Muroya, T. Murakami and J. A. LaVerne **(2001)** "Radiolysis of Aqueous Solutions with Pulsed Ion Beams. 4. Product Yields for Proton Beams in Solutions of Thiocyanate and Methyl Viologen/Formate", **Journal of Physical Chemistry A** *105*, 4902-4907.

Z. Chang and J. A. LaVerne **(2001)** "Dynamic Evolution of Gases in the Gamma- and Helium-Ion Radiolysis of Solid Polymers", **Journal of Polymer Science Part B-Polymer Physics** *39*, 1449-1459.

Z. Chang and J. A. LaVerne **(2001)** "The Gases Produced in Gamma and Heavy-Ion Radiolysis of Poly(methyl methacrylate)", **Radiation Physics and Chemistry** *62*, 19-24.

S. M. Pimblott, J. A. LaVerne, A. AlbaGarcia and L. D. A. Siebbeles **(2000)** "Energy Loss by Nonrelativistic Electrons and Positrons in Polymers and Simple Solid Hydrocarbons", **Journal of Physical Chemistry B** *104*, 9607-9614.

J. A. LaVerne and S. M. Pimblott **(2000)** "New Mechanism for H_2 Formation in Water", **Journal of Physical Chemistry A** *104*, 9820-9822.
J. A. LaVerne **(2000)** "OH Radicals and Oxidizing Products in the Gamma Radiolysis of Water", **Radiation Research** *153*, 196-200.
Z. Chang and J. A. LaVerne **(2000)** "Hydrogen Production in Gamma-Ray and Helium-Ion Radiolysis of Polyethylene, Polypropylene, Poly(methyl-methacrylate), and Polystyrene", **Journal of Polymer Science Part A-Polymer Chemistry** *38*, 1656-1661.
Z. Chang and J. A. LaVerne **(2000)** "Hydrogen Production in the Heavy Ion Radiolysis of Polymers. 1. Polyethylene, Polypropylene, Poly(methyl methacrylate), and Polystyrene", **Journal of Physical Chemistry B** *104*, 10557-10562.
B. Pastina, J. A. LaVerne and S. M. Pimblott **(1999)** "Dependence of Molecular Hydrogen Formation in Water on Scavengers of the Precursor to the Hydrated Electron", **Journal of Physical Chemistry A** *103*, 5841-5846.
B. Pastina and J. A. LaVerne **(1999)** "Scavenging of the Precursor to the Hydrated Electron by the Selenate Ion", **Journal of Physical Chemistry A** *103*, 209-212.
B. Pastina and J. A. LaVerne **(1999)** "Hydrogen Peroxide Production in the Radiolysis of Water with Heavy Ions", **Journal of Physical Chemistry A** *103*, 1592-1597.
J. A. LaVerne and M. S. Araos **(1999)** "Radical Production in the Radiolysis of Liquid Benzene", **Radiation Physics and Chemistry** *55*, 525-528.
N. Chitose, Y. Katsumura, M. Domae, Z. H. Zuo, T. Murakami and J. A. LaVerne **(1999)** "Radiolysis of Aqueous Solutions with Pulsed Helium Ion Beams. 3. Yields of OH Radicals and the Sum of e_{aq}^- and H Atom Yields Determined in Methyl Viologen Solutions Containing Formate", **Journal of Physical Chemistry A** *103*, 4769-4774.
Z. Chang and J. A. LaVerne **(1999)** "Molecular Hydrogen Production in the Radiolysis of High-Density Polyethylene", **Journal of Physical Chemistry B** *103*, 8267-8271.
L. Wojnarovits and J. A. LaVerne **(1998)** "Comparison of the Linear Energy Transfer Effect in the Radiolysis of Cyclopentane, Cyclohexane and Cyclooctane", **Journal of Radioanalytical and Nuclear Chemistry** *232*, 19-22.
S. M. Pimblott and J. A. LaVerne **(1998)** "On the Radiation Chemical Kinetics of the Precursor to the Hydrated Electron", **Journal of Physical Chemistry A** *102*, 2967-2975.
S. M. Pimblott and J. A. LaVerne **(1998)** "Effect of Electron Energy on the Radiation Chemistry of Liquid Water", **Radiation Research** *150*, 159-169.
N. Chitose, J. A. LaVerne and Y. Katsumura **(1998)** "Effect of Formate Concentration on Radical Formation in the Radiolysis of Aqueous Methyl Viologen Solutions", **Journal of Physical Chemistry A** *102*, 2087-2090.
S. M. Pimblott and J. A. LaVerne **(1997)**. The Effect of Electron Energy on Radiation Damage. Proceedings of the Twelfth Symposium on Microdosimetry, Oxford, The Royal Society of Chemistry.
S. M. Pimblott and J. A. LaVerne **(1997)** "Stochastic Simulation of the Electron Radiolysis of Water and Aqueous Solutions", **Journal of Physical Chemistry A** *101*, 5828-5838.
J. A. LaVerne, S. M. Pimblott and L. Wojnarovits **(1997)** "Diffusion-Kinetic Modeling of the Gamma-Radiolysis of Liquid Cycloalkanes", **Journal of Physical Chemistry A** *101*, 1628-1634.
J. A. LaVerne and S. M. Pimblott **(1997)** "Effect of Elastic Collisions on Energy Deposition by Electrons in Water", **Journal of Physical Chemistry A** *101*, 4504-4510.

L. Wojnarovits and J. A. LaVerne **(1996)** "Rates of Alkyl Radical-Iodine Scavenging Reactions in Normal and Cycloalkanes", **Radiation Physics and Chemistry** *47*, 99-101.
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J. A. LaVerne and G. G. Meisels **(1983)** "Chemical Effects of Fission Recoils. 4. Temperature Distribution in the Tracks", **Radiation Physics and Chemistry** *21*, 329-339.

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J. A. LaVerne **(2000)** "Track Effects of Heavy Ions in Liquid Water", **Radiation Research** *153*, 487-496.

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J. A. LaVerne, R. H. Schuler, A. B. Ross and W. P. Helman **(1981)** "Bibliographies on Radiation-Chemistry .1. Studies of the Heavy Particle Radiolysis of Liquids and Aqueous-Solutions", **Radiation Physics and Chemistry** *17*, 5-20.

Book Chapters of Jay A. LaVerne:

J. A. La Verne (2004), "Radiation Chemical Effects of Heavy Ions", in Charged Particle and Photon Interactions with Matter: Chemical, Physicochemical, and Biological Consequences with Applications, edited by A. Mozumder and Y. Hitano, Marcell-Dekker Inc. Chapter 14.

J. A. La Verne (2011), "Radiation Chemistry of Water with Ceramic Oxides", in Charged Particle and Photon Interactions with Matter: Recent Advances, Applications, and Interfaces edited by Y. Hitano, Y. Katsumura and A. Mozumder, Taylor and Francis. Chapter 16.

Presentations by Jay A. LaVerne:

Jay A. LaVerne, Combinations of Aromatic and Aliphatic Hydrocarbon Radiolysis, Asia Pacific Symposium on Radiation Chemistry, Tokyo, Japan, September 8-11,2014, Invited talk

Jay A. LaVerne, Production of H_2O_2 in the Radiolysis of Water, Science Mix at Kanazawa University, Kanazawa, Japan, September 5-6,2014, Invited talk

Jay A. LaVerne, Are DNA Bases More Sensitive to Radiation at High LET? 60^{th} Annual Meeting of the Radiation Research Society, Las Vegas, NV, September 20-24, 2014, Poster

Sarah C. Reiff and Jay A. LaVerne, Chemical Changes at Iron Oxide Surfaces During Alpha Particle Irradiation, 2014 Gordon Research Conference on Radiation Chemistry, Andover, NH, July 13-18, 2014, Poster

Jennifer Schofield, Simon M. Pimblott and, Jay A. LaVerne, Charge Exchange from Zr and Ti Foils, 2014 Gordon Research Conference on Radiation Chemistry, Andover, NH, July 13-18, 2014, Poster

Jay A. LaVerne, Applications in Heavy Ion Radiolysis, Association for Research at University Nuclear Accelerators, Notre Dame, IN, June 12-13, 2014, Invited

Jay A. LaVerne "Radiation Effects in Heavy Ion Radiolysis", Conference on Applications of Accelerators in Research and Industry, San Antonio, May, 2014.

Jay A. LaVerne "Radiolysis of Aromatic Compounds" Council on Ionizing Radiation and Standards, Gaithersburg, March, 2014.

Jay A. LaVerne and S. Dhiman "Hydrogen Production in the Radiolysis of Aromatic and Aliphatic Ionic Liquids" American Chemical Society Meeting, Indianapolis, September 11, 2013.

Jay A. LaVerne and S. Dhiman, "Long lived radicals in polymer radiolysis" Annual Meeting of the Radiation Research Society, New Orleans, September 17, 2013.

Jay A. LaVerne, "Track Structure Effects in the Radiolysis of Aromatic Compounds" Western Ontario University, London, Canada, September 25, 2013 "Radiation Chemistry of Aromatic Liquids" 4 th Asia Pacific Symposium on Radiation Chemistry, Huangshan, China, October 31, 2012.

"Radiation Chemistry of Waste Separations Components" Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, October 3, 2012.

"Track Effects in Radiation Chemistry: A Few Radiation Chemistry Studies at Notre Dame" University of Paris Sud, Paris, France June 26, 2012.

"Chemical Effects due to Track Structure" Dalton Cumbria Facility, Cumbria, England, May, 2012.
"Update of the Fukushima Accident: Physical Events and Radiation Effects" Nuclear Science Laboratory, University of Notre Dame, April, 2012.
"Radiolysis of Aromatic Liquids" Kanazawa University, Japan, February 2012.
"Hydrogen Production in the Radiolysis of Resins" International Workshop on Radiation Effects in Nuclear Technology, Tokyo, February 2012.
"Heavy Ion Radiolysis from Curie to Present", Radiation Chemistry: the Heritage of Marie Curie Conference, Paris, France, November, 2011.
"Track Effects in the Radiolysis of Aromatic Liquids" 12th Tihany Symposium on Radiation Chemistry, Zalakaros, Hungary, August 2011.
"Radiolysis of Water and Ceramic Oxide Nanoparticles" 27th Miller Conference on Radiation Chemistry, Tällberg, Sweden, May 2011.
"Role of Excited States in the Radiolysis of Simple Aromatic Liquids" Osaka University, March 2011.
"Radiolysis of Water and Ceramic Oxide Nanoparticles" Kanasawa University, March 2011.
"Radiolytic H_2O_2 Production and Reaction in Water", International Workshop on Radiation Effects in Nuclear Technology, Tokyo, March 2011.
"An introduction to Radiation Chemistry - Fundamentals and Application", 6 lecture series as a mini-course in the School of Engineering, University of Tokyo, March, 2011.
"Radiolysis of Water and Ceramic Oxide Nanoparticles" Department of Nuclear Engineering, University of Maryland, November, 2010.
"Radiolysis of DNA and Ices", PIXE Symposium, Notre Dame Nuclear Science Laboratory, June 2010.
"Radiolysis of Water with Ceramic Oxides", Asia Pacific Symposium on Radiation Chemistry, Lonavala, India, September 2010.
"Radical Yields in the Heavy Ion Radiolysis of Water" Annual Meeting of the Radiation Research Society, Maui, HI, September 2010.
"pH Dependence of H_2O_2 in the Radiolysis of Water" Nuclear Power Conference 2010, Quebec City, Canada, October 2010.
"Radiolysis of anion Exchange Resins" Ionizing Radiation and Polymer Meeting 2010, College Park, MD, October 2010.
"Radiation Effects with Heavy Ions" NSF Review of Nuclear Science Laboratory, Notre Dame, IN, October 2010.
"Radiolysis of DNA", PIXE Symposium, Notre Dame Nuclear Structure Laboratory, June, 2009.
"OH Radical Yields and DNA Damage" Annual Meeting of the Radiation Research Society, Savannah, GA, October, 2009.
"Radiolysis of Water Adsorbed on Ceramic Oxides", CPIMS, Warrenton, VA, October, 2009
"Hydrogen Production in the Radiolysis of Halide Solutions", The 2nd Asia Pacific Symposium on Radiation Chemistry, Tokyo, Japan, September 1, 2008.
"Radiolysis of DNA", PIXE Symposium, Notre Dame Nuclear Structure Laboratory, September 5, 2008.
"Oxidizing Reactions at the Surface of Ceramic Oxides", 24th Miller Conference on Radiation Chemistry, Buxton, England, April 17, 2007, invited talk.
"Effects of Track Structure in Radiation Chemistry", International Congress of Radiation Research, San Francisco, July 8, 2007.

"Hydrogen Peroxide in Reactor Water Chemistry", International Congress of Radiation Research, San Francisco, July 11, 2007.

"H Atom Yields in the Radiolysis of Water", The 7th International Symposium on Advanced Science Research, Mito, Japan, November 7, 2007.

"Effects of Track Structure on Radiation Chemistry" and "Hydrogen Peroxide in Reactor Water Chemistry" International Congress of Radiation Research, San Francisco, CA, July 8, 2007, invited talk.

"Radiation Chemistry at Water – Ceramic Oxide Interfaces" Condensed Phase and Interfacial Materials Symposium, Airlie, VA, October 21, 2006, invited talk.

"Electrons in Water Radiolysis", 1st Asian Pacific Conference on Radiation Chemistry, Shanghai, China, September 21, 2006, invited talk.

"Radical Yields in the Radiolysis of Cyclic Compounds", 11th Tihany Symposium on Radiation Chemistry, Eger, Hungary, August 28, 2006, invited talk.

"Radiation Chemistry of Water-Ceramic Oxide Interfaces", Gordon Conference on Radiation Chemistry, Waterville, ME, July, 2, 2006, invited talk.

"Radiation Chemistry Studies with Heavy Ions", Department of Geology, Indiana University, Bloomington, IN, January 23, 2006, invited talk.

"Radiolysis of HPQ Resins", Los Alamos National Laboratory, Los Alamos, NM, November, 8, 2005, invited talk.

"Hydrogen Production in the Radiolysis of Water at Interfaces", Osaka University, Osaka, Japan, October 18, 2004, invited talk.

"Hydrogen Production in the Radiolysis of Water at Interfaces", Waseda University, Tokyo, Japan, October 17, 2004, invited talk.

"H_2/H_2O_2 Production from Water/Oxide Mixtures", University of Tokyo, Tokyo, Japan, October 13, 2004, invited talk.

"Hydrated Electron Yields in the Radiolysis of Water", Japanese Radiation Chemistry Society Meeting, Sapporo, Japan, October 9, 2004, feature talk.

"Radiolysis of Liquid Pyridine", Institute of Scientific and Industrial Research, Osaka University, Osaka, Japan, October 7, 2004, invited talk.

"Radiolytic Production of H_2 at Interfaces", Radiation Chemistry Gordon Conference, June 2004, poster.

"Hydrogen Generation in Transuranic Waste Storage Containers" IAEA Workshop on "Advances in Radiation Chemistry of Polymers", Radiation Laboratory, University of Notre Dame, September 14, 2003, invited talk.

"H_2 Production in the Radiolysis of Water/Oxide Mixtures, International Congress of Radiation Research, Brisbane, Australia, August 19, 2003, invited talk.

"Gas Production from Water on Salts and Oxides" MIS and Core Technology Meeting, Los Alamos National Laboratory, Los Alamos, New Mexico, October 22, 2002, invited talk.

"Thermal Decomposition of Hydrogen Peroxide", 224th National Meeting of the American Chemical Society, Boston, MA, August 21, 2002, poster.

"Decomposition of Hydrogen Peroxide and Oxide Surfaces", Gordon Conference on Radiation Chemistry, Waterville, MA, June 26, 2002, poster.

"H_2 Production in the Radiolysis of Water, Annual Meeting of the Radiation Research Society, Reno, NV, April 20, 2002, invited talk.

"Hydrogen Production from Adsorbed Water" MIS and Core Technology Meeting, Los Alamos National Laboratory, Los Alamos, New Mexico, October 24, 2001, invited talk.

"H_2 Production from the Radiolysis of Adsorbed Water", with Lav Tandon, American Chemical Society National Meeting, Chicago, Illinois, August 28, 2001, poster

"Fundamental Radiation Chemical Techniques" American Chemical Society National Meeting, Chicago, Illinois, August 28, 2001, invited talk

"Hydrogen Production in the Radiolysis of Water", with S. M. Pimblott, Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 24, 2001, poster.

"Radiation Events from the Spur to the Track: Physics to Radiobiology" Annual Meeting of the Radiation Research Society, San Juan, Puerto Rico, April 23, 2001, invited talk.

"H_2 Production from the Radiolysis of Adsorbed Water", presented by Lav Tandon, 22nd Miller Conference on Radiation Chemistry, Bowness-on-Windermerre, U.K. April 9, 2001, poster

"Hydrogen Production from Adsorbed Water" with Lav Tandon, American Chemical Society National Meeting, Washington D.C. August 20, 2000, poster.

"The Radiolysis of Water with Helium Ions" Gordon Conference on Radiation Chemistry, Plymouth, New Hampshire, June 29, 2000, poster.

"Radiation Chemistry Studies with Heavy Ions", National Institute of Radiation Science, Chiba, Japan, March 22, 2000, invited talk.

"Heavy Ion Radiolysis of Organic Materials", Application of Radiation Towards the 21st Century, Tokyo, Japan, March 12, 2000, invited talk.

"Heavy Ion Radiolysis of Organic Materials", Application of Radiation Towards the 21st Century, Tokyo, Japan, March 12, 2000, invited talk.

"Radical and Molecular Products in Hydrocarbon Radiolysis", Osaka University, Osaka, Japan, March 10, 2000, invited talk.

"Production of Hydrogen in the Heavy Ion Radiolysis of Polymers", EMSP National Workshop, Atlanta, Georgia, April 26, 2000, invited talk.

"The Radiolysis of Water with Helium Ions" Annual Meeting of the Radiation Research Society, Albuquerque, New Mexico, April 30, 2000, invited talk.

"Hydrogen Production in the Radiolysis Polyethylene", presented by Z. Chang, American Chemical Society National Meeting, New Orleans, August 22, 1999, poster.

"Production of Hydrogen Gas in the Heavy-Ion Radiolysis of High-Density Polyethylene", with Z. Chang, American Chemical Society National Meeting, New Orleans, August 22, 1999, poster.

"Fundamental Aspects of Heavy Ion Radiolysis" 11th International Congress of Radiation Research. Dublin, Ireland, Invited, July18-23, 1999, invited talk.

"Spatial Distribution Effects of OH Radical Chemistry in Water", American Chemical Society National Meeting, Anaheim, California, March 21, 1999, invited talk.

"Fundamental Chemical Effects in the Radiolysis of Water", Los Alamos National Laboratory, Los Alamos, New Mexico, December 1, 1998, invited talk.

"Ion Beam Radiation Chemistry of Aqueous Solutions", Japan Atomic Energy Research Institute, Takasaki, Japan, November 18, 1998, invited talk.

"Ion Beam Radiation Chemistry of Aqueous Solutions", 7th University of Tokyo Nuclear Science and Technology Symposium, Tokyo, Japan, November 17, 1998, invited talk.

"Fundamental Radiation Chemical Processes in High LET Particle Tracks", Nuclear Engineering Research Laboratory, University of Tokyo, Tokai-Mura, Japan, November 16, 1998, invited talk.

"Radical Reactions in the Radiolysis of Liquid Benzene", 9th Tihany Symposium on Radiation Chemistry, Tata, Hungary, August 29-September 3, 1998, invited talk.
"Fundamental Radiation Chemical Processes in High LET Particle Tracks", Radiation Chemistry Gordon Conference, Newport, Rhode Island, July 5-10, 1998, invited talk.
"Radiation of Aqueous Solutions with Ion Beams", Third TESLA Workshop: Radiation Research with Ion Beams, Belgrade, Yugoslavia, April 5-7, 1998, invited talk.
"Fluorescence in the Heavy Ion Radiolysis of Benzene", 45th Annual Meeting of Radiation Research Society, Providence, Rhode Island, May 3-7, 1997, invited talk.
"Track Effects on the Production of OH Radicals in the Radiolysis of Water", 20 th Miller Conference on Radiation Chemistry, Bowness-on-Windermere, England, March 22-27, 1997, invited talk.
"Radiation Chemistry Studies with Heavy Ions", Physical Chemistry Division of the Department of Chemistry and Biochemistry, University of Notre Dame, Notre Dame, IN, January 30, 1997, invited talk.
"Track Effects in Water Radiolysis with High-Energy Heavy Ions: Irradiation of the Fricke Dosimeter", Japan Atomic Industry Forum (JAIF), Tokyo, October 23, 1996, invited talk.
"Radiation Chemistry Studies with Heavy Ions", The Institute of Physical and Chemical Research (RIKEN), Saitama, October 22, 1996, invited talk.
"Radiation Chemistry Studies with Highly Charged Particles: Excited States in Benzene", The Institute of Scientific and Industrial Research, Osaka University, Osaka, October 19, 1996, invited talk.
"Radiolysis of the Fricke Dosimeter with Very High LET ^{58}Ni and ^{238}U Ions", Annual Meeting of the Japanese Radiation Chemical Society, Tsukuba, October 17, 1996, invited talk.
"Radicals and Excited States in the Heavy Ion Radiolysis of Liquid Hydrocarbons", Japan Atomic Energy Research Institute (JAERI), Takasaki, October 11, 1996, invited talk.
"Effects of Ion Beams in Water, Track Structure Model", Japan Atomic Energy Research Institute (JAERI), Takasaki, October 11, 1996, invited talk.
"Radicals and Excited States in the Heavy Ion Radiolysis of Liquid Hydrocarbons", Graduate School of Engineering, Hokkaido University, Saporro, October 8, 1996, invited talk.
"Radiation Chemistry Studies with Highly Charged Particles: Excited States in Benzene", Advanced Research Center for Science and Engineering, Waseda University, Tokyo, October 3, 1996, invited talk.
"Production of OH Radicals in the Heavy Ion Radiolysis of Water", 44th Annual Meeting of Radiation Research Society, Chicago, Illinois, April 14-17, 1996, invited talk.
"Radiolysis of Water", Los Alamos National Laboratory, Los Alamos, New Mexico, January 25, 1996, invited talk.
"Status of Radiation Chemistry with Heavy Ions", Third International Symposium on Swift Heavy Ions in Matter, SHIM-95, Caen, France, May 15-19, 1995, invited talk.
"Heavy Ion Radiolysis of the Fricke Dosimeter", Chalk River National Laboratory, Chalk River, Ontario, Canada, November 18, 1994, invited talk.
"Contribution of Excited States in the Heavy Ion Radiolysis of Cyclooctane", 8th. Tihany Symposium on Radiation Chemistry, Balatonszéplak, Hungary, August 22-26, 1994, invited talk.
"Refresher Course: Status of Heavy Ion Radiation Chemical Studies", 42nd Annual Meeting of Radiation Research Society, Nashville, Tennessee, April 30 - May 4, 1994, invited talk.

"Track Structure: Relationship Between Experiment and Theory", 41st Annual Meeting of Radiation Research Society, Dallas, Texas, March 20-25, 1993, poster.

"Application of Radiation Chemical Models to Systems of Biological Interest", Pathways to Radiation Damage in DNA, Oakland University, June 14-18, 1992, invited talk.

"Radiation Chemistry Studies with Heavy Ions", Department of Physics, University of Notre Dame, March 25, 1991, invited talk.

"Radiation Chemistry with Heavy Ions", Department of Physics, University of Chile, December 13, 1990, invited talk.

"The Radiolysis of Cyclohexane with ^{4}He Ions", 7th. Tihany Symposium on Radiation Chemistry, Balatonszéplak, Hungary, September 9-14, 1990, invited talk.

"Charged Particle Tracks Effects in Radiation Chemistry", symposium on Energy Transfer in Condensed Systems, 37th Annual Meeting of Radiation Research Society, Seattle, Washington, March 19-23, 1989, invited talk.

"Track Effects in Heavy Particle Radiolysis", Gordon Conference on Radiation Chemistry, Newport, Rhode Island, July 10-15, 1988, invited talk.

"The Production of OH Radicals in the Radiolysis of Water With ^{4}He Ions", 36th Annual Meeting of Radiation Research Society, Philadelphia, Pennsylvania, April 16-21, 1988, poster.

"An Overview of the Oxidation of Ferrous Ions in the Fricke Dosimeter by Heavy Ions", Eighth International Congress of Radiation Research, Edinburgh, Scotland, July 19-24, 1987, invited talk.

"Production of HO_2 in the Radiolysis of Water With Heavy Ions", Third Workshop on Heavy Charged Particles in Biology and Medicine, Darmstadt, West Germany, July 13-15, 1987, invited talk.

"Theory of Range and Range Straggling of Low-Energy Electrons", Miller Conference, Winderemere, England, April 15-19, 1985, invited talk.

"Radiation Chemistry Studies of Track Effects With ^{7}Li, ^{9}Be, ^{11}B, and ^{12}C Ions", Gordon Conference on Radiation Chemistry, Wolfeboro, New Hampshire, June 24-29, 1984, invited talk.