

## CURRICULUM VITAE

DUANE Robert CHARTIER

**PLACE OF BIRTH:** Winnipeg, Manitoba, Canada

**NATIONALITY:** Dual – Canada & United States of America

**CHILDREN:** Beautiful daughter & Adorable son

### DEGREES:

B.Sc., Chemistry (Magna cum laude) (1974)  
McMaster University Hamilton, Ontario, Canada L8S 4M1

Ph.D., Chemistry (Inorganic) (1982)  
McMaster University, Hamilton, Ontario, Canada L8S 4M1  
Thesis: *The Synthesis and Physical Properties of Infinite Mercury Chain Conducting Materials.*

Hons. B.A., Art History (Summa cum laude) (1985)  
McMaster University, Hamilton, Ontario, Canada L8S 4M1

M.A.C., Master's of Art Conservation (Paintings Specialization) (1987/90)  
Queen's University, Kingston, Ontario, Canada K7L 3N6  
Thesis: *Effects of acid rain on cultural materials: The increasing importance of nitrogen oxides.*

**QUALIFICATIONS:** Transcripts and references available upon request.

**LANGUAGES:** English (native), Italian & French (intermediate)

**CONTACT:** e-mail: [DRC@authentica.org](mailto:DRC@authentica.org)

**PRESENT POSITION:** President, International Center for Art Intelligence, Inc.  
[www.authentica.org](http://www.authentica.org)

### CURRENT WRITING PROJECTS:

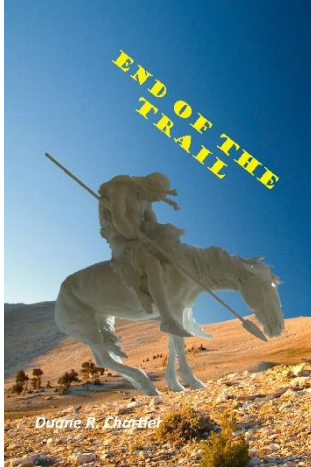
**Signs** – The history and iconology of the development of signs and symbols. In production – tentative date March 2020.

**Bread & Circuses** – An illustrative tale of political and social manipulation – from *Satire X* in the late 1<sup>st</sup> century AD to Donald Trump 2020 – tentative date May 2020.

**Cosmology is Stranger Than Science Fiction** – co-authored with Megan McEwen – A book by scientists for non-scientists on the most exciting advancements in a bizarre and difficult field. Projected for June 2020.

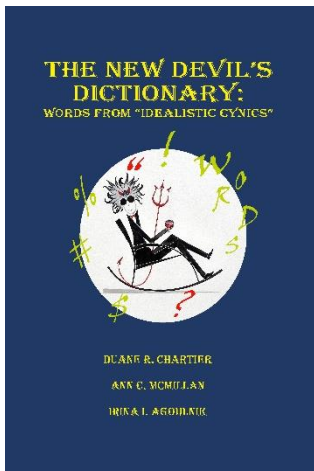
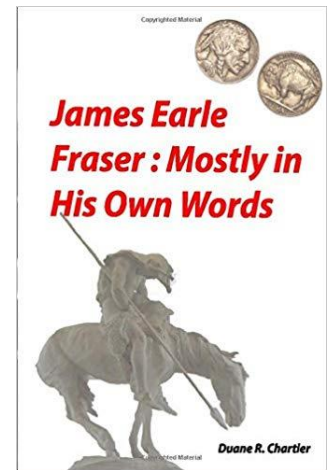
**UPDATED:** Jan. 01, 2020

COMPLETED BOOK PROJECTS



**End of the Trail: A Brief Tale of an Historical and Artistic Journey** – Paperback and Kindle Editions – October 9, 2019 by [Dr. Duane R. Chartier](#) (Author), [Dr. Ann C. McMillan](#) (Editor), [Susanne E. Friend](#) (Editor), [Rosalyn Hurley](#) (Editor), [Winona Phillabaum](#) (Editor)

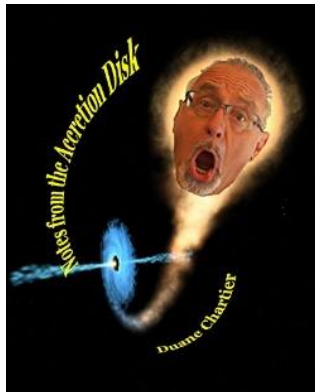
**James Earle Fraser: Mostly in His Own Words** Paperback and Kindle Editions – October 9, 2019 by [Dr. Duane R. Chartier](#) (Author), [Dr. Ann C. McMillan](#) (Editor)



**The New Devil's Dictionary** Paperback and Kindle Editions – March 4, 2019 by [Dr. Duane R. Chartier](#) (Author), [Dr. Ann C. McMillan](#) (Author), [Dr. Irina I. Agoulnik](#) (Author, Illustrator)

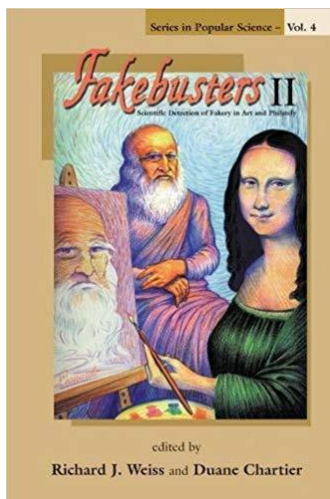
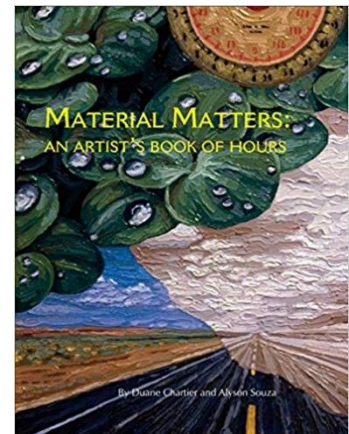
**Aggressive Solutions for Climate Change** Paperback – July 24, 2017 by [Dr. Duane R. Chartier](#) (Author), [Dr. Ann McMillan](#) (Editor, Preface)





**Notes from the Accretion Disk** Kindle Edition – April 19, 2017  
by [Duane Chartier](#) (Author), [Celeste Bryant](#) (Editor)

**Material Matters: An Artist's Book of Hours** Hardcover – October 17, 2016  
by [Duane Chartier](#) (Author), [Alyson Souza](#) (Author)



[Fakebusters II: Scientific Detection Of Fakes In Art And Philately \(Series in Popular Science\)](#)  
Oct 28, 2004  
by Richard J. Weiss and [Duane R. Chartier](#)

**On-line catalogue raisonné for artist Wilson Hurley**  
([www.wilson-hurley.com](http://www.wilson-hurley.com)) December 27, 2014.

**WORK EXPERIENCE****INTERNATIONAL CENTER FOR ART INTELLIGENCE, INC.**

10736 Jefferson Blvd. #327; Culver City, CA 90230 May 1999 – present

*President & CEO*

A not-for-profit organization dedicated to research into problems of art history, art materials, techniques, and methods for analyzing and studying works of art.

**SAVANT TOOLS**

July 2016 – Dec 2019

*Owner & Director*

An enterprise for marketing composite materials and “cool tools”.

**CONSERVART ASSOCIATES, INC.**

July 1989 – Feb 2015

4823 Berryman Avenue; Culver City, CA 90230

*President & Co-Owner (president until October 2014)*

Private fine art conservation studio that performs art conservation, restoration, museum environment consultation and chemical analysis in support of cultural conservation projects.

**CONSERVATION ANALYTICAL LABORATORY**

Sept/89 - Mar/90

**SMITHSONIAN INSTITUTION**, Washington, D.C. (presently SCMRE)

*Visiting scientist* - work on personal scientific projects including boundary layer meteorology and use of cation-selective sorbents for conservation treatments.

**ICCROM - ROME**

Sept/87 - Sept/89

*Scientific Programme Coordinator*

Responsibilities included:

- 1) Training - coordination of and teaching in an existing 17 week course on Scientific Principles of Conservation and development of new courses and didactic materials.
- 2) Support library acquisitions of scientific materials and provide control of the scientific database. Assist Publications in the editing of scientific papers, etc.
- 3) Provide technical assistance to work sites and reply to technical and scientific correspondence.
- 4) Initiate research into the deterioration of materials and into conservation methods. Promotion and coordination of outside projects.

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### THE GETTY CONSERVATION INSTITUTE

Jun 1/87 - Aug 31/87

*Senior Research Fellow*

Responsibilities included the design and execution of both fundamental and applied conservation science research. Areas of activity: pollutant effects, museum environment, fumigation, metals corrosion imaging systems.

### DIANE FALVEY CONSERVATION SERVICES

Aug 5/86 - Aug 9/86

*Summer Internship - Conservator*

Surface cleaning of the mural "The Seven Arts" at the O'Keefe Centre, Toronto.

### ART GALLERY OF ONTARIO

May/86 - Aug/86

*Summer Internship - Conservator*

Duties included painting and object conservation as well as radiography facility set-up and gallery environmental surveys.

### ONTARIO HYDRO

(a) *Research Chemist*

July/82 - Sept/86

1 year leave of absence

Sept/85 - Sept/86

(b) *Atmospheric Chemist*

Dec/80 - July/82

(c) *Chemist: Water Pollution*

May/80 - Nov/80

## SKILLS

Writing, editing and publishing.  
Composite design and manufacture  
Project management  
Database design  
General computing and imaging  
Web content design.

## AWARDS & HONORS (most recent first)

e-Lit Gold Medal 2018 – Environment/ Ecology/ Nature.  
For: *Aggressive Solutions for Climate Change* by Dr. Duane R. Chartier  
Presented by Jenkins Group and Independent Publisher.com

## CURRICULUM VITAE

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### Best Art Restorers In LA

ConservArt Associates Inc. named Best Art Restorers under the Fix & Repair category in "The Best of Los Angeles", Los Angeles Magazine, p.167, August 2007.

### State of New Mexico – Certificate of Recognition

"For exemplary dedication and service in Certificate of Recognition enhancing the quality of life among the peoples in THE LAND OF ENCHANTMENT / 15TH October 1998". (Stephanie Gonzales – Secretary of State, NM)

For New Deal art conservation surveys, actual conservation projects and teaching in New Mexico.

McMaster University Alumni Gallery; Induction into the "McMaster Hall of Fame" June 3, 1995.

### HOOVER DISTINGUISHED LECTURES - September 25-28, 1990

McMaster University - Hamilton, Ontario, Canada

"The Anatomy and Physiology of Canvas and Panel Paintings"

"Realism in Art - A Scientific Approach"

"Examination Techniques for Fine Art"

"Computer Imaging as Art and in the Service of Art"

"An Artist's Workshop - Dealing with Materials"

Charles B. Dudley Publications Award, ASTM. For contributions to Special Technical Publication (STP) 760, Hazardous Waste Testing (see Scientific Publication #7). Presented at October 28 - November 2, 1984 meeting of Committee D-34, Bal Harbor, Florida.

Ontario Graduate Scholarship	1985-1986	Art Conservation, Queen's University
	1986-1987	Art Conservation, Queen's University
	1987-1988	Art History – declined
Dean's Honor List	1983-1984	Humanities, McMaster University
	1984-1985	Humanities, McMaster University

McMaster University  
Entrance Scholarship 1970

**OTHER PROFESSIONAL EXPERIENCE**LEGAL EXPERT WITNESS WORK

6 cases from 1998 to present (separate list available on request)

INSTITUTE OF MUSEUM STUDIES

1996 – 2006; reviewer for grant applications

SPECIALTY WORKSHOPS & SYMPOSIA

Getty Conservation Institute / Loyola Marymount University: Workshop on Infrared Microscopy. January 9-11, 1991; LMU, Los Angeles.

EXTERNAL COMMITTEES

CSA (Canadian Standards Association) Taskforce on Contaminants in Precipitation, Secretary, 1981.

Pickering NGS Ion Exchange Task Force (1985)

INTERNATIONAL ORGANIZATIONS

Contributions to United States-Canada Memorandum of Intent on Transboundary Air Pollution. Atmospheric Sciences Review Sub-Group Work Group 2, Report No. 2F-I, November, 1982.

**CONSERVATION TEACHING EXPERIENCE**

*Please see the Presentations section as well as several projects where training and teaching were an integral part of the conservation.*

CALIFORNIA STATE UNIVERSITY - FULLERTON

Feb/91 - May/91

*Course Designer & Instructor - ART 464*

Designed and co-instructed the course "Museum Conservation", given as a cross-referenced graduate course required by the Exhibition Design Program.

ICCROM; ROME

Sept/87 - Sept/89

*Coordinator, Chief Lecturer & Conservation Scientist*

Coordinator, designer, and chief lecturer in a 4 month international course "Scientific Principles of Conservation". This course was given to mid-career professionals with experience in conservation or in the care of cultural property.

SIR SANFORD FLEMING COLLEGE

Sept/86 - Dec/86

*Instructor for Conservation Chemistry I*

Duties included the design and teaching of a lecture and laboratory course on basic chemistry for final year students in the Conservation Technician Program.

**RECENT COURSES & CERTIFICATES**

The balance of the entries are webinar certificates equivalent to 1 A.I.A. continuing education credit each. They comprise part of an educational program presented by **Traditional Building Conference Series – Online Education**

2018 06 02 - Window Retrofits for Occupant Comfort and Energy Efficiency

2018 06 19 – Window Retrofits for Occupant Comfort and Energy Efficiency

2018 10 02 - Designing Security and Swing: Locks, Hinges and their Applications

2018 10 16 - The Preservation-Minded Homeowner in the 21st Century

2018 12 11 - Terra Cotta Tile: Color Selection and Matching

2019 09 10 - Introduction to Ornamental Metals

2019 11 07 - Working with Custom Cabinet Makers: Modern Kitchens in Traditional Settings

2019 11 19 - Profile Matters: Traditional Mouldings and Millwork Today

2019 12 03 - Repairing Historic Wooden Windows: What Architects Need to Know

2019 12 13 - Glass and Safety

**CONTEMPORARY ART INSTALLATIONS**

Since entering private conservation practice in late 1989, an important emphasis has been working with contemporary artists to:

- *introduce advanced composite materials to fundamentally improve the long-term stability of works of art*
- *use scientific approaches to determine the primary deteriorative mechanisms and to systematically introduce practical preventive conservation*
- *simultaneously teach artists about materials properties and learn how they work on a day-to-day basis.*

**Union Depot, St. Paul, MI – Ralph Gilbert Paintings – Los Angeles, CA**

September 2014 – six arch-topped fiberglass-faced aluminum honeycomb panels, 1" x 67" x 15'8", were fabricated for the artist, shipped to Atlanta, GA and later installed in the restored historic Union Depot.

**University of Southern California Viterbi School of Engineering – Sandro Chia Mural – Los Angeles, CA**

February 2005 – 1" painted fiberglass-faced aluminum honeycomb panels were specified for painter Sandro Chia. The panels were created outside of California shipped and installed in a dedicated space. After installation by ConservArt Associates, Inc. the artist finished the work *in situ*.



**MTA (Metropolitan Transit Authority) – Ricardo Duffy Ceramics – Florence Blue Line Metro Station - Los Angeles, CA**

February 2004 - Duane Chartier was hired to design, certify and manufacture frames used by the artist, Ricardo Duffy, to mount his ceramic works. In addition, ConservArt was contracted to install the 8 finished panels in the station.

**Terry Schoonhoven Mural Installation - “Arrival and Departure” – Downey Transportation Center – Downey, CA**

May 12 - 15, 2002 - The exterior ceramic tile mural (451ft<sup>2</sup>) was installed on a masonry wall with a wrap around the top and sides. It unfortunately is the last work of the artist who is dearly missed by his friends (April 25, 1945 – December 21, 2001).

**Richard Wyatt Mural Installation - “Long Beach: A New Dawn, A New Day” – Lobby, Long Beach City Hall – Long Beach, CA**

September 24, 2000 (contact Richard Wyatt, 5649 West Jefferson Boulevard, Los Angeles, CA 90016; 323-934-7337)

The interior acrylic on cotton mural (11.5' x 21'1") was installed in a wall in the lobby of the Long Beach City Hall. The painting was marouflaged with Beva Gel®.

**Terry Schoonhoven Mural Installation - “A History of Catholic Medicine” - Saint Francis Medical Center – Lynwood, CA**

April 24 and May 18, 2000 - The interior oil on cotton mural was installed in two pieces (11.5' x 24' each for a total of 552 ft<sup>2</sup>) by continuously gluing and custom cutting the 7 component pieces. The “marouflage” is on the walls of the entrance to the “New Patient Tower” at the hospital.

**Terry Schoonhoven Mural Installation - “Jewish Contributions to Medicine” - Cedars-Sinai Hospital - Los Angeles, CA**

April 16-18, 1999 - The interior oil on cotton mural (834 ft<sup>2</sup>) was installed by continuously gluing and custom cutting the 7 component pieces. The “marouflage” is on the west wall of the Harvey Morse Conference Room.

**Connie Jenkins Mural Installations; MWD Building - Los Angeles, CA**

November 17-18, 1998 (contact Connie Jenkins; Artist - 8406 Mipolomol Road; Malibu, CA 90265; 310-457-7370)

Two landscape paintings (oil on cotton; 11'4-1/4" x 9'3-1/2" and 10'3-1/2" x 11'10") of the Feather River were installed by marouflage to interior walls in the lobby of the new Metropolitan Water District building.

**Willard Dixon Mural Installation - California Supreme Court Chambers - San Francisco, CA**

September 28 - October 2, 1998 - Nine custom-made interlocking 1" honeycomb panels were constructed as the arch-shaped support system for the 12'3" x 34'4-1/2" oil on cotton landscape. The painting was marouflaged to the support system *in situ* and was installed during the final construction phase of the restoration of the California Supreme Court (Earl Warren Building, 455 Golden Gate Avenue, San Francisco, CA 94102).

**Terry Schoonhoven Mural Installation - "Poet's Table" - Huntington Beach, CA**

May 1998 - The exterior ceramic tile mural (1700 ft<sup>2</sup>) was installed on a curved and stepped concrete wall in the new pier redevelopment project.

**Terry Schoonhoven Mural Installation - Burbank Police & Fire Station - Burbank, CA**

September 1997 - Newly painted and primed canvas (1700 ft<sup>2</sup>) was installed by continuously gluing and custom cutting. The "marouflage" is in the 2-story lobby of the police and fire combined complex.

**Wilson Hurley Triptych Installations - Oklahoma City, OK**

February 1991 - August 1996 - This was a five-year project to provide technical advice, fabrication and installation services for 5 triptychs with 16'x16' center panels and 10'x16' wing panels. Work included the custom design and fabrication of interlocking honeycomb aluminum panels onto which the paintings were marouflaged. This is the world's largest landscape painting installation.

**Richard Wyatt Mural Installation - Union Station, East Portal - Los Angeles, CA**

April 1995 - February 1996 - A series of 42 interlocking honeycomb aluminum panels were fabricated for the artist who directly painted on the surface. The panels were then installed in an array to create a mural 22'2" x 78' in the East Portal of the new station. Los Angeles City engineers approved the unique mounting system.

**Richard Wyatt Mural Installation - St. Vincent Medical Center - Los Angeles, CA**

June 1995 - A custom revolving vertical easel was designed for the artist to be able to paint in his studio. The painting, which is 11.5' x 30', was rolled and transported to the medical center where it was marouflaged to a curved wall in the main entrance.

**Magic Theaters - Charles Freeman (Bökö), Mural Installation - Los Angeles, CA**

June 1995 - The artist was commissioned to paint a 20.5' x 56' oil on canvas mural to be flush fit onto an irregular wall. ConservArt Associates consulted for the artist before he began the project to insure proper painting preparation and choice of materials. The painting was executed in two 10' sections; the top piece was marouflaged to the wall at the height of 20' off of a specially designed rotating tube attached to scaffolding. The lower section was installed to register perfectly with the upper piece.

**CONSERVART ASSOCIATES MAJOR PROJECTS - NORTH AMERICA****City of Hope, Duarte, CA – Conservation treatment of two mural paintings by John Bernat on the House of Hope**

February - May 2012 - Two oil paintings on canvas depicting David and Moses on the exterior of the House of Hope had received differential sun exposure and weathering over the past 60 years. The paintings were consolidated, cleaned, filled, inpainted and varnished. New non-reflective, UV-absorbing Plexiglas protective coverings were designed and installed in front of the paintings.

**Citigroup Center, 444 S. Flower, Los Angeles, CA – Deinstallation, reinstallation and cleaning of Frank Stella’s “Long Beach XXIII”, 1982**

August - September 2010, January 2011 - The 22' long sculptural painting on aluminum honeycomb shapes was deinstalled and stored prior to remodeling of the display area. The pieces were cleaned, consolidated and inpainted before reinstallation on the same site.

**Holy Family Church, Malibu, CA -- Installation and varnishing of the apse mural, “Ascension of Christ”**

November 2009; installation & January 2011; varnishing - The 26' x 36' mural was painted in New York City and sent rolled to California. The artist had deliberately painted the mural larger than the target wall, which was not yet finished at the time of commissioning. The painting was trimmed to fit the wall and marouflaged directly to the wall, which had been prepared to receive it. A year later it was varnished.

**“Journey to Aztlan”, street mural by Einar and Jamex de la Torre, San Diego, CA**

December 8 -19, 2008 - The mural is on sub-grade concrete retaining walls along Harbor Drive and had chronic problems with salt efflorescence since its creation in 2000. ConservArt worked with the artists and the City of San Diego to conserve the murals as well as provide recommendations to change watering patterns, divert water flow and set up a maintenance program.

**Santa Monica Public Library – Conservation and installation of library murals by Stanton MacDonald Wright - Santa Monica, CA**

September 2004 – February 2006 - ConservArt was contracted to survey condition, supervise transportation, perform conservation treatments and install over 2000 square feet of murals on plywood that were painted by Stanton MacDonald Wright in 1934-35 for a specially designed room in the Santa Monica Public Library. In 1962 the building was destroyed and the murals remained in storage under the care of the Smithsonian American Art Museum until being shipped to Los Angeles for conservation in April 2005. The murals were conserved and installed for the opening of the new Santa Monica Public Library in January 2006.

**Jan Styka “Crucifixion” Mural Conservation – Glendale, CA**

May 2005 – February 2006 - Forest Lawn Mortuaries contracted ConservArt to perform a major conservation treatment on a 45' x 194' marouflaged oil on canvas mural by Polish artist Jan Styka from 1862-1894. The mural was severely damaged after being transported from Poland to the United States for the 1904 World's Fair; subsequent mishandling added to its problems. The conservation included filling and inpainting thousands of losses.

**Union Station, East Portal; Richard Wyatt Mural Conservation – Los Angeles, CA**

September 2004 – October 2004 - ConservArt originally installed the mural in 1995, after which the artist had intended it to be varnished. This was never done, however, and after almost ten years the mural had suffered medium deterioration due to exposure and had become very dirty. The 22'2" x 78' mural was dusted, carefully washed, and then varnished by hand. Highly desaturated areas had to be treated more than once and some inpainting was done to equilibrate losses along the edges and damages from pigeon droppings.

**Ozzy Osbourne Home – Installation of 1910 theatrical backdrop of the Grand Canal in Venice, Italy – Los Angeles, CA**

August 11-12, 2003 - The owners desired to have an antique distemper (pigment and glue) theatrical backdrop adhered to their bedroom wall. The original backdrop was over 14' high by 24' long and was severely damaged by poor handling over the years. The backdrop was treated at ConservArt studios to consolidate flaking paint. The bottom edge, which was badly frayed and water damage, was trimmed. The painting was rolled and taken to the home where it was marouflaged directly to the wall. Water stains and losses were retouched using pastels.

**Junipero Serra Office Building - John Valadez Mural Installation - Los Angeles, CA**

May 10, 2003 - The 12' x 54'3", oil on cotton painting was executed in two pieces and had to be matched vertically on the wall during the marouflage installation.

**Huntington Beach High School - Mural Installation and Restoration - Huntington Beach, CA**

April 17-24, 1999 - A ceramic tile mural salvaged from the historic Sea Cliff Village Shopping Center was installed and restored on an exterior wall. The "Rime of the Ancient Mariner" is 11'6" x 6'.

**Sea Cliff Village / Huntington Beach Civic Center Art Project - Huntington Beach, CA**

September 1998 – April 1999 - This was a large project involving the deinstallation of 14 ceramic tile murals, 45 dioramas and over 90 metal sculptures. Many of the pieces were restored and reinstalled in various locations at the Huntington Beach Civic Center (see above).

**Long Beach Public Library; Mural Conservation & Relocation - Long Beach, CA**

October 23-30, 1998 - The mural, "In", painted on drywall and designed by Corita Kent (1918-86), was relocated within the library by moving the entire wall in order to avoid structural damages to the mural. The mural was remounted to allow a much simpler and cost effective removal in the future. There was an associated surface cleaning and repair of minor damages that had accumulated over the years.

**"Ecclesiastes" Mural Conservation & Conservation Didactic Programs - Eastern New Mexico University (ENMU) - Portales, NM**

September 10-14, 1998 - The WPA era mural by Lloyd Moylan, spanning 2 floors of the administration building, was consolidated locally, cleaned and inpainted during the 4-day period. In addition to performing the conservation with the aid of university volunteers, **8 hours of lectures were given to students, faculty and support staff on several topics including the history of muralism, the history of conservation, materials choices for artists, preventive conservation and building maintenance.**

**Gilcrease Museum; Sculpture Conservation - Tulsa, OK**

October 1997 - November 1998 - Two exterior bronze sculptures, "Sacred Rain Arrow" by Alan Houser and "Crisita" by Doug Hyde were treated in order to remove calcium salt deposits, equilibrate patination, replace lost patina and apply protective synthetic wax coatings. The stones around the pool were repaired and the recirculating pump of the Hyde sculpture was replaced. In

addition, two white marble sculptures were conserved: "Lafayette" by Houdin and "Benjamin Franklin" by H. Powers.

### **Mt. Rushmore National Monument; Interpretive Center Objects Conservation - Keystone, SD**

April 1997 - May 1998 - As a subcontract to Universal Exhibits of El Monte, CA, ConservArt performed all of the environmental consultation, design and fabrication of mounts, as well as conservation of artefacts and art objects, pertaining to the history and the carving of Mt. Rushmore. These included letters, documents, original plaster maquettes, tools and many other original objects. The objects were completely installed in the new facilities in May 1998.

### **Charles Kassler Mural Conservation - Fullerton Union High School - Fullerton, CA**

April - September 1997 - As a result of testing and research a cooperative project with the Fullerton Union High School District was undertaken to restore the largest WPA fresco ever painted. The mural "Pastoral California" was painted as a PWAP commission by Charles Kassler, Jr., on the west wall of the Plummer Auditorium in 1934. It was completely overpainted in 1939. Due to the considerable costs of the proposed conservation project the school board and the guidance office of the school followed our advice to turn the project into a community education opportunity. Community volunteers were trained as well as two concurrent summer school art classes (summer 1997) dedicated to providing the lower level labor in order to carry out the extensive overpaint removal. **This was a unique co-operative project with ConservArt acting as consultants and providing teaching and training as well as conservation expertise.** The School District was successful in obtaining a California Heritage Fund grant (only five granted) to match funds from private donors and the City of Fullerton Redevelopment Agency.

### **New Mexico WPA Art Survey - West - Western New Mexico**

July 1997 - Over a week period in July of 1997, a total of 46 works were examined in 3 institutions in the Gallup, NM vicinity. Complete examinations and treatment proposals were prepared for all works and the data was also entered into a Quattro Pro 7® spreadsheet for future analysis. In addition, a half-day workshop on Preventive Conservation was designed and given to area curators, conservators and art administrators.

### **Peace Theological Seminary - Guasti Mansion - 3500 West Adams Boulevard, Los Angeles, CA 90018**

November 1996 - September 1997 - As part of a larger project to restore the building, which was damaged in the 1994 Northridge earthquake, the lower floor and 2<sup>nd</sup> floor rotunda of the historic (1913) Victorian interior - Mediterranean style villa was conserved. This included the cleaning, stabilization and repair of marouflaged ceiling paintings, the structural modification of non-original architectural elements, casting and replacement of missing compo decorative elements and an overall aesthetic compensation. Marble sculpture conservation and installation were also done.

### **New Mexico WPA Art Survey - East - Eastern New Mexico**

July & October 1996 - Over a two-week period in July of 1996, a total of 114 works were examined in 9 cities. Complete examinations and treatment proposals were prepared for all works and the data was also entered into a Quattro Pro 7® spreadsheet for future analysis.

**National Cowboy Hall of Fame - Sculpture Conservation - Oklahoma City, OK**

May 1994 - August 1995 - The project consisted of both preventive conservation and intervention on three historic plaster sculptures by James and Laura Fraser. The largest, "End of the Trail" is 18' tall and weighs over 4 tons. It was moved into a new building and restored. This work required massive structural intervention, engineering expertise and standard conservation skills.

**Sunkist Growers, Inc. - WPA Mural Conservation - Sherman Oaks, CA**

August 1994 - March 1995 - Conservation of the four murals by Frank Bowers and Arthur Prunier, 1935, presently in the main boardroom. The murals had been exhibited externally for many years before being deinstalled from the old Los Angeles downtown headquarters and marouflaged onto plywood in the early 70's. Two of the panels have a polyurethane coating and were differentially discolored. All the paintings were damaged in the 1994 Northridge earthquake. Work included a new mounting system, cleaning and reinstallation.

**Morven Estates - Sculpture Installation - Charlottesville, VA**

March 1994 - October 1994 - The architectural firm of Glave, Newman, Anderson sought consultation on design and installation of a 2.8 ton glass sculpture by Suzanne Pascal of Beverly Hills. The sculpture is the centerpiece of a fountain in a newly constructed private museum. Duties included design of custom rigging, supervision of the physical move, condition reporting, specification of bedding/mounting materials and the overall installation.

**Social and Public Art Resource Center (SPARC) - Venice, CA**

October 1990 - March 1995 - I was the conservation consultant to SPARC. SPARC is involved in the production of mural paintings for the city of Los Angeles under the "Neighborhood Pride Program". They are the single largest active group of artists producing murals in North America. Consultations included recommendations for mural site preparation, deinfestation, environmental control in painting storage and new artist's materials. Joint research in support of the preservation of mural paintings is being carried out on a long-term basis. A conservation survey of over 380 murals in the city of Los Angeles was the sole responsibility of ConservArt Associates for the last 3 years of the association.

**1 Bunker Hill - Hugo Ballin Mural Conservation - Los Angeles, CA**

June - July 1994 - A large mural in the lobby of the historic Edison building by Hugo Ballin, "Apotheosis of Power", was cracked in half by the Northridge earthquake in January 1994. The painting is oil on canvas adhered to plaster which had been sheared from the wall and displaced outward by as much as 6". More than 20' of tears were repaired by lifting back the damaged plaster, excavating crumbled material and replacing the painting on a new bed of plaster.

**St. Steven's Serbian Orthodox Cathedral - Interior Conservation - Alhambra, CA**

February - May 1994 - The church underwent a major exterior seismic intervention campaign. The work included defining the scope of intervention for the architectural firm in charge of the project, providing lighting consultations and cleaning and restoring all interior painted surfaces. These surfaces included 21 marouflaged paintings, a wooden icon screen, over 900 ft<sup>2</sup> of faux marbles and all vaults, which were painted with figures.

**San Gabriel Mission - Baptistery - San Gabriel, CA**

August 1993 - The domed ceiling and walls of the historic baptistery were heavily damaged in the 1987 Whittier earthquake and had also suffered as a result of the seismic stabilization campaign. There was approximately 40% loss to the painted vault and the faux finish of the lower walls was completely restored.

**City of Fullerton - Lundeberg Mural Conservation - Fullerton, CA**

November 1991 - June 1992 - Helen Lundeberg painted the mural in 1941-42 as a WPA project, which was part of the entire city hall project. The mural was executed in oil paint on very porous acoustic plaster. In the 1960's, one third of the 900 ft<sup>2</sup> mural was overpainted with oil paint when the room was transformed into office space. The overpaint removal represented one of the most difficult types of conservation problems in that there is little or no chemical discrimination between the original oil paint and the overpainted layers. Several new techniques were developed including the modification of "strappo" and the use of alternating heat and liquid nitrogen.

**City of Brea – Brea, CA**

March 1991 - Consultation for the City of Brea included assessments of outdoor statuary and suggestions for intervention and preventive maintenance.

**UCLA - Chicano Studies Program - Los Angeles, CA**

April 1990 - Consultation regarding the deinstallation damages and potential mounting systems for nine (9) 4'x8' 1/4" plywood panels making up a large mural painting. A mounting system of honeycomb aluminum panels was designed and constructed to enable the safe deinstallation.

**ART & OTHER PUBLICATIONS & ON-LINE PROJECTS**

(includes short articles and conference papers – most recent first)

Duane Chartier. "Writing! A Study in Schizophrenia: "A Love/Hate Relationship"". **An invited presentation** at University of La Verne invitation from Tatiana Tatarinova , Associate Professor, Biology; Fletcher Jones Endowed Chair In Computational Biology. October 17, 2018.

Duane R. Chartier. "End of the Trail". Power Point of invited talk given at the National Cowboy & Western Heritage Museum, Oklahoma City, OK, September 14, 2015.

Download available at:

<http://www.authentica.org/End%20of%20the%20Trail%20OKC%20150914.pptx>

Duane Chartier. "End of the Trail". **An invited presentation** for the education program and Dickinson Research Center at the National Cowboy & Western Heritage Museum, Oklahoma City, OK, September 14, 2015.

Rosalyn Hurley and Duane R. Chartier (Creators / Editors). The on-line catalogue raisonné [www.Wilson-Hurley.com](http://www.Wilson-Hurley.com) (<http://216.174.114.218/>). The site was set up in order to organize and facilitate the study of the works of artist Wilson Hurley (1924-2008). The website was co-designed by Peter Guethlein ([www.deltronix.com](http://www.deltronix.com)) and Duane R. Chartier ([www.authentica.org](http://www.authentica.org)) and was released to the public on December 27, 2014.

Duane Chartier. "Wilson Hurley – Visions: Some Revisionist History". **An invited presentation** for the education program and Dickinson Research Center at the National Cowboy & Western Heritage Museum, Oklahoma City, OK, November 3, 2011.

Duane R. Chartier. "The Art of Chemistry; The Chemistry of Art". **An invited presentation** in the Distinguished Scientists Lecture Series sponsored by the SMC (Santa Monica College) Associates and the Life and Physical Science Departments. Santa Monica College, CA. November 5, 2002.

Duane R. Chartier. "No-Tech Analysis for Conservators". **An invited presentation** to the CIPP (Conservator's in Private Practice) group of AIC (American Institute for Conservation) at the 2002 annual conference in Miami, FL, June 6 –11, 2002.

Duane R. Chartier. "Some Abstract Notions of Concrete: Concrete in Architecture". **An invited presentation** to the ARCH 551 class of Peyton Hall in the School of Architecture, University of Southern California. Los Angeles, CA, April 4, 2002. A three-hour lecture on the history, properties and architectural uses of concrete materials. **This was a yearly presentation with constant updates until 2007.**

Duane R. Chartier. "Some Abstract Notions of Concrete". Presented at the Western Association for Art Conservation (WAAC) 2001 Annual Meeting, Los Angeles, CA, Getty Museum, October 12-13, 2001.

Duane R. Chartier and Susanne E. Friend. "A Basic Introduction to Art Conservation". **An invited presentation** to the American Art Council of the Los Angeles County Museum of Art. It was held at and sponsored by Christie's and covered topics such as collections care and management as well as giving a better understanding of what conservation should and should not do. Los Angeles, CA, Christie's, March 14, 2000.

Duane R. Chartier. "A Brief Consideration of Ceramics". **An invited presentation** to the ARCH 551 class of Christy McAvoy in the School of Architecture, University of Southern California. Los Angeles, CA, March 7, 2000. A three-hour lecture on the history of ceramics and architectural uses of ceramic materials.



Susanne Friend and Duane Chartier. "The Destruction of Two Architectures? Large Scale Contemporary Art Deinstallation and Reinstallation" Presented at the Western Association for Art Conservation (WAAC) 1999 Annual Meeting, San Francisco, CA November 15-16, 1999.

Duane R. Chartier. "A New Paradigm for Art Authentication: Science, Technology and Statistics". **An invited presentation** at the symposium *Art and Connoisseurship*, Washington, D.C., Trinity College, November 10, 1999.

Duane Chartier (**Co-Chair/Moderator**). "Scientific Detection of Fakery in Art II". A specialty conference at the semi-annual meeting of the International Society for Optical Engineering (SPIE). Boston, MA, September 20-21, 1999.

Duane Chartier. "Basic Conservation". **An invited presentation** for the art and curatorial community of Albuquerque, NM. By the invitation of Kathryn Flynn, Deputy Secretary of State for New Mexico and sponsored by of the New Mexico New Deal Art Restoration Task Force. The Albuquerque Museum, Albuquerque, NM, July 17, 1998.

Susanne Friend & Duane Chartier. "Community Involvement and Education in the Conservation of a WPA fresco in Fullerton, California". Presented at The American Institute for Conservation (AIC) 1998 Annual Meeting, Arlington, VA, June 1 - June 6, 1998.

Duane Chartier. "A Conservation Workshop". **An invited presentation** for the art and curatorial community for western New Mexico. A half-day workshop was by the invitation of Kathryn Flynn, Deputy Secretary of State for New Mexico and sponsored by of the New Mexico New Deal Art Restoration Task Force. Octavia Fellin Library, Gallup, NM, February 18, 1998.

Duane Chartier. "Authentication: Science and Art at Odds?" **An invited presentation** for the semi-annual meeting of the International Society for Optical Engineering (SPIE). San Jose, CA, January 29-30, 1998.

Duane Chartier. "Conservation of the Interior of Peace Theological Seminary, Los Angeles". **An invited presentation** for the West Adams Historic Society. At 3200 West Adams, Los Angeles, CA, January 24, 1998.

Richard J. Weiss and Duane R. Chartier (Editors). *Fakebusters II: Scientific Detection of Fakery in Art and Philately* (Series in Popular Science). World Scientific Publishing Company, October 28, 2004. Proceedings of a specialty conference held at the

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semiannual meeting of the International Society for Optical Engineering (SPIE). Boston, MA, September 20-21, 1999.

Walter McCrone, Duane R. Chartier, and Richard Weiss (Chairs/Editors). *Scientific Detection of Fakery in Art*. Proceedings of SPIE (SPIE - The International Society for Optical Engineering). 29-30 January 1998, San Jose, California. Volume P 3315. Bellingham, WA: SPIE, 1998.

Duane Chartier and Fred Notehelfer. "Authentication: Science and Art at Odds?" (Invited paper). In *Scientific Detection of Fakery in Art*. Proceedings of SPIE (SPIE - The International Society for Optical Engineering). 29-30 January 1998, San Jose, California. Volume P 3315, 74-86, 1998.

Duane Chartier. "Preventive Conservation at the Source; The Interaction of Artist and Conservator." Presented at The American Institute for Conservation (AIC) 1996 Annual Meeting, Norfolk, Virginia, June 10 - June 16, 1996.

Duane Chartier. "Setting the Standard for Artist's Materials." Presented at The American Institute for Conservation (AIC) 1996 Annual Meeting, Norfolk, Virginia, June 10 - June 16, 1996.

Duane Chartier. "Science in Conservation -- An Oxymoron?" Presented at the Western Association for Art Conservation (WAAC) 1995 Annual Meeting, Montecito-Sequoia Lodge, Sequoia National Forest, CA, September 9-12, 1995.

Duane Chartier. "Setting the Standard!" An Update on ASTM Sub-Committee D01.57, Artists' Paints and Related Materials." Presented at the Western Association for Art Conservation (WAAC) 1995 Annual Meeting, Montecito-Sequoia Lodge, Sequoia National Forest, CA, September 9-12, 1995.

Duane Chartier. "From Flying Carpets to Flying Horses." Presented at the Western Association for Art Conservation (WAAC) 1994 Annual Meeting, Asilomar Conference Center, Pacific Grove, CA, September 25-27, 1994.

Duane Chartier. "The Los Angeles Mural Survey." Presented at the Western Association for Art Conservation (WAAC) 1993 Annual Meeting, Marconi Conference Center, Marshall, CA, October 2-5, 1993.

Duane Chartier. "Experiences with Large-Scale Marouflage & Designs for Dismountable Rigid Supports." Presented at the 10th Triennial Meeting of the ICOM Committee for Conservation, Washington, D.C., 22-27 August 1993.

Wilson Hurley and Duane Chartier. "The Wilson Hurley Installations at the National Cowboy Hall of Fame." **An invited presentation** for the National Academy of Western Art (NAWA). Oklahoma City, OK, June 11-12, 1993.

Duane Chartier. "Conservation versus Restoration: Pay Now or Pay Later!" **An invited presentation** for the National Academy of Western Art (NAWA). Oklahoma City, OK, June 11-12, 1993.

Duane Chartier and Susanne Friend. "How much is too much? Conservation versus Restoration." Presented at The American Institute for Conservation (AIC) 1992 Annual Meeting, Denver, Colorado, May 31 - June 6, 1993.

Duane Chartier and Susanne Friend. "Conservation of the Helen Lundeburg Mural - Fullerton Police Station". **An invited presentation** to the Fullerton Historic Society, Fullerton, CA, May 10, 1993.

Duane Chartier and Susanne Friend. "Mural Marouflage - A Rebirth?" *Western Association for Art Conservation (WAAC) Newsletter*, **15**(1), January 1993. Abstracts of annual meeting presentations.

Duane Chartier and Susanne Friend. "Mural Marouflage - A Rebirth?" Presented at the Western Association for Art Conservation (WAAC) 1992 Annual Meeting, Santa Fe, NM, Sept. 27-29, 1992.

D.R. Chartier. "Cation-selective reagents for conservation treatments." Presented at the Materials Research Society, 1990 Spring Meeting, April 16-20, 1990; San Francisco, CA, USA.

D.R. Chartier. *Effects of acid rain on cultural materials: The increasing importance of nitrogen oxides*. M.A.C. Thesis. Queen's University, Kingston, Ontario, 1987.  
ICCROM/CAL. *International Index of Conservation*. Editor and coordinator, D.R. Chartier. Rome: ICCROM, 1988.

D.R. Chartier and Eugénie Knight. "Sezioni stratigraphiche degli 'strati colorati' e delle 'croste nere'." *La Via Degli Angeli: Il restauro della decorazione scultorea di Ponte S. Angelo*. Roma: De Luca Edizioni d'Arte, 1988. p. 154-55, 207-08.

D.R. Chartier. "The permanence of data and the impermanence of works of art." In ICCROM Newsletter 14. Rome, ICCROM, 1988. (circulation 11,000)

D.R. Chartier. "What you don't see can hurt you; The effects of nitrogen oxides on works of art." Presented at 13th Annual IIC-CG Conference, May 16-18, 1987; Victoria B.C., Canada.

### SCIENTIFIC PUBLICATIONS (most recent first)

1. Maria A. Ochir-Goryaeva, Igor Kornienko, Tatiana G. Faleeva, Olga Yu. Aramova, Mikhail A. Makhotkin, Erdni A Kekeev, Evgeny G. Burataev, Viktoria V. Kukanova, Yuriy S. Sidorenko, Duane R. Chartier, Tatiana V. Tatarinova. "Bronze age Rage at Catacomb Culture burials: a meta-tale of graves, skeletons, and DNA". *In Publication*
2. Siroj Bakoev, Lyubov Getmantseva, Maria Kolosova, Olga Kostyunina, Duane Chartier, Tatiana V. Tatarinova. "PigLeg: prediction of swine phenotype using machine learning".  
*In Publication*
3. Stepan Pachganov, Khalimat Murtazaliea, Alexei Zarubin, Duane Chartier, Tatiana V. Tatarinova. TransPrise: a novel machine learning approach for eukaryotic promoter prediction. *PeerJ* 7:e7990 <https://doi.org/10.7717/peerj.7990>. November 1, 2019.
4. D. Chartier, W.R. Datars and R.J. Gillespie. "Differential thermal analysis of linear chain mercury compounds". Can. J. Phys., **61**(1), 71-75 (1983).
5. Contributions to United States-Canada Memorandum of Intent on Transboundary Air Pollution. Atmospheric Sciences Review Sub-Group Work Group 2, Report No. 2F-I, November, 1982.
6. E. Batalla, W.R. Datars, D.R. Chartier and R.J. Gillespie. "Pressure-dependence of the Fermi-surface of  $Hg_{3-x}SbF_6$ ". Solid State Comm., **40**(7), 711-714 (1981).
7. E. Batalla, W.R. Datars, D.R. Chartier and R.J. Gillespie. "dHvA effect in  $Hg_{3-x}SbF_6$ ". Solid State Comm., **38**(12), 1203-1205 (1981).

8. D.J.R. Dodd, A. Golomb, H.T. Chan and D.R. Chartier. "A comparative field and laboratory study of fly ash leaching characteristics." In Hazardous Solid Waste Testing: First Conference (January 14-15, 1981). R.A. Conway and B.C. Malloy eds. ASTM STP 760, PCN 04-760000-16. Baltimore, MD: ASTM December 1981.
9. D.R. Chartier. "Historical trends in precipitation chemistry in eastern North America, Part 2." Research Review / Acid Rain (2). Toronto: Ontario Hydro Research Division, May 1981. pp. 43-47.
10. R.J. Dinser, W.R. Datars, D.R. Chartier and R.J. Gillespie. "Open orbits in linear chain mercury compounds." Solid State Comm., **32**, 1041-1043 (1979).
11. F.S. Razavi, W.R. Datars, D.R. Chartier, R.J. Gillespie. "Fermi surface of incommensurate mercury chain compounds." Phys. Rev. Lett., **42**(17), 1182 (1979).
12. R.J. Gillespie, D.R. Chartier, B.D. Cutforth, W.R. Datars, A. van Schyndel. "The linear-chain mercury compounds :  $\text{Hg}_{2.86}\text{AsF}_6$  and  $\text{Hg}_{2.91}\text{SbF}_6$ . Electrical conductivity, optical reflectance and thermoelectric studies." In Synthesis and Properties of Low-Dimensional Materials. Vol. 313, J.S. Miller, ed. New York: New York Acad. of Science, 1978. p. 788.
13. W.R. Datars, A. van Schyndel, J.S. Lass, D. Chartier, R.J. Gillespie. "Mercury extrusion from linear-chain mercury compounds." Phys. Rev. Lett., **40**(18), 1184 (1978).
14. W.R. Datars, G.A. Scholz, D. Chartier, R.J. Gillespie. "Thermoelectric power of linear-chain mercury compounds." Physical Review B, **16**(10), 4209 (1977).

**ONTARIO HYDRO PUBLICATIONS AND REPORTS (most recent first)**

1. D.R. Chartier. NPD Candecon Resin Analysis. Toronto: Ontario Hydro Research Division, January, 1986. Report No. 85-226-H.
2. D.R. Chartier. Resin Effects in PNGS Unit 5 Poisoning. Toronto: Ontario Hydro Research Division, January, 1986. Report No. 85-226-H.
3. D.R. Chartier. Resin Effects in PNGS Unit 5 Poisoning. Toronto: Ontario Hydro Research Division, January, 1986. Report No. 85-226-H.
4. J. Complak and D.R. Chartier. Fuel Storage Area Cell Groundwater Quality, 1979-1984, Thunder Bay TGS Extension. Toronto: Ontario Hydro Research Division, January 30, 1986. Report No. 85-179-K.
5. J. Complak and D.R. Chartier. Ash Cell Groundwater Quality, 1976-1984, Thunder Bay TGS Extension. Toronto: Ontario Hydro Research Division, November 1, 1985. Report No. 85-171-K.
6. D.R. Chartier. The Effects of Alkaline Permanganate on Mixed Bed Ion Exchange Resin. Toronto: Ontario Hydro Research Division, March 25, 1985. Report No. 84-411-H.
7. D.R. Chartier. Qualification of Ion Exchange Resins for Gadolinium Removal from Moderator Purification Circuits. Toronto: Ontario Hydro Research Division, October 9, 1984. Report No. 84-233-H.
8. D.R. Chartier. Analysis of a Spent Ion Exchange Resin and Slurry Water Sample from the Pickering NGS - Unit 1 Decontamination: March 1983. Toronto: Ontario Hydro Research Division, August 29, 1984. Report No. 84-163-H.
9. D.R. Chartier. IONAC M-757 Variable Kinetic Performance. Toronto: Ontario Hydro Research Division, August 29, 1984. Report No. C84-78-H.
10. D.R. Chartier. AECL IRN-301 Resin Tests. Toronto: Ontario Hydro Research Division, August 3, 1984. Report No. 84-241-H.

11. D.R. Chartier. Simulations in Support of NPD and Pickering Unit 2 Decontamination. Toronto: Ontario Hydro Research Division, February 22, 1984. Report No. 84-18-K.
12. D.R. Chartier. Analysis of a Resin Sample from Douglas Point NGS. Toronto: Ontario Hydro Research Division, February 1, 1984. Report No. 84-13-K.
13. D.R. Chartier. Kinetics of Nitric Acid Vacuum Distillation. Ontario Hydro Research Division, September 21, 1983. Report No. C82-108-K
14. D.R. Chartier. An Assessment of the Potential for Explosions in Nitrate Loaded Anion-Exchange Resins. Toronto: Ontario Hydro Research Division, March 25, 1983. Report No. 83-3-H.
15. D.R. Chartier. An Assessment of Data Storage and Handling Requirements for the Water Research Unit. Toronto: Ontario Hydro Research Division, February 11, 1983. Report No. C83-8-K.
16. D.R. Chartier. Analysis of an AECL Heat Transport (HT) System Resin. Toronto: Ontario Hydro Research Division, February 9, 1983. Report No. C83-15-K.
17. D.R. Chartier. Simulation of Bruce NGS-A Wet Annulus Gas Chemistry. Toronto: Ontario Hydro Research Division, September 21, 1982. Report No. C82-393-K.
18. D.R. Chartier. Trip Report: Desert Research Institute Atmospheric Sciences Centre, Stead, Nevada. Toronto: Ontario Hydro Research Division, September 24, 1981. Report No. C81-145-K.
19. D.R. Chartier. 12th International Technical Meeting on Air Pollution Modelling and Its Application, Menlo Park, California, August 25-28, 1981. Trip Report. Toronto: Ontario Hydro Research Division, October 13, 1981. Report No. C81-150-K.
20. D.R. Chartier. 1980 Plume Chemistry Study: Part 3 - Data Report. Toronto: Ontario Hydro Research Division, December 31, 1981. Report No. C81-179-K.
21. D.R. Chartier. The Role of Liquid Phase Heterogeneous Chemical Processes in the Formation of Acid Precipitation: A Review and Identification of Research

- Needs. Toronto: Ontario Hydro Research Division, Dec 22, 1981. Report No. 81-429-K.
22. D.R. Chartier. PEPE/NEROS Data Review Meeting, Quail Roost, NC, September 21-23, 1981. Trip Report. Toronto: Ontario Hydro Research Division, October 21, 1981. Report No. 81-369-K.
23. D.R. Chartier. 12th International Technical Meeting on Air Pollution Modelling and Its Application, Menlo Park, California, August 25-28, 1981. Trip Report. Toronto: Ontario Hydro Research Division, October 13, 1981. Report No. C81-150-K.
24. D.R. Chartier. Acid Deposition Knowns and Unknowns: The Canadian Perspective. Trip Report: Joint APCA - Federal Provincial LRTAP Science Committee. Toronto: Ontario Hydro Research Division, May 11, 1981. Report No. C81-68-H.
25. D.R. Chartier. Synthetic Saline Groundwater of Various Compositions. Toronto: Ontario Hydro Research Division, April 9, 1981. Report No. C81-40-K.
26. D.R. Chartier. Notes of a Seminar on a Tunable Diode Laser System for Measurements of Atmospheric Constituents. Toronto: Ontario Hydro Research Division, April 1, 1981. Report No. C81-37-K.
27. D.R. Chartier. Lignite Coal Pile Drainage. Toronto: Ontario Hydro Research Division, March 16, 1981. Report No. 81-22-K.
28. D.R. Chartier. A Summary of the First Meeting of the CSA Task Force on Contaminants in Precipitation. Toronto: Ontario Hydro Research Division, February 9, 1981. Report No. C81-15-K.
29. D.R. Chartier. A Dye Tracer Study of Flow in Columns Containing Fly Ash. Toronto: Ontario Hydro Research Division, November 25, 1980. Report No. 80-446-K.
30. D.R. Chartier. Thunder Bay TGS Ash Cell 1979 Groundwater Monitoring Survey. Toronto: Ontario Hydro Research Division, August 20, 1980. Report No. 80-324-K.



**CLUBS AND ORGANIZATIONS**

American Institute for Conservation (AIC) (past member)  
SPIE - International Society for Optical Engineering (past member)  
National New Deal Preservation Association (founding member & Vice President - past)  
International Institute for Conservation (IIC) (past member)  
Materials Research Society (member)  
Western Association for Art Conservation (WAAC) (member)  
American Society for Testing and Materials (ASTM) (member 1994-1996, 2010-present)  
ASTM Subcommittee D01.57 Artist's Paints and Related Materials Chair  
- Publicity Task Group – 1995