John C. Gordon
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ACADEMIC/PROFESSIONAL HISTORY

2025 (Oct)-Currently: Professor and Chair, Chemistry Department, University of Central Florida
2026 (Jan)-present; Secondary Joint Appointment (SJA); Renewable Energy and Chemical Transformations (REACT) Cluster, University of Central Florida
2022 (Sept)-2025 (Sept): Chair (Division Head), Chemistry Division, Brookhaven National Laboratory
2022-Present: Point of Contact for DOE Office of Basic Energy Sciences (DOE OBES) Chemical Sciences, Geosciences, and Biosciences (CSGB) Division funded programs at BNL
2021-2022: Deputy Director, National Security Education Center (NSEC), Los Alamos National Laboratory (LANL)
2008-2021: Senior Scientist, Inorganic, Isotope and Actinide Chemistry Group, LANL
2008-2010: Deputy Director, DOE Chemical Hydrogen Storage Center of Excellence (funded by DOE funded EERE)
2006-2008: Group Leader, Inorganic, Isotope and Actinide Chemistry Group, LANL
2003-2006; Detailee Program Manager, Office of Basic Energy Sciences, US DOE
2001-2006; Technical Staff Member, Actinide, Catalysis and Separations Group, LANL
2002-2003: Associate Director (Acting), G. T. Seaborg Institute for Transactinium Science, LANL
1999-2001: Technical Staff Member, Nuclear Materials Technology Division, LANL
1996-1998: Senior Research Chemist, Schumacher, (Air Products and Chemicals Inc), Carlsbad, CA,
1995-1996: Principal Scientist, Hughes STX Corporation, USAF Phillips Laboratory, Edwards AFB, CA
1992-1995: Postdoctoral Research Associate (Drs. David Clark and John Watkin), CST-Division, LANL
1990-1992: Postdoctoral Research Associate (Prof. Rinaldo Poli), University of Maryland, College Park, MD
1990: Ph.D. in Chemistry (with Prof. Michael J. Chetcuti), University of Notre Dame, Notre Dame, IN
1985: B.Sc. (Hons) in Chemistry, University of Glasgow, Glasgow, Scotland, UK

FELLOWSHIPS AND AWARDS

2025: Elected to Scotland's National Academy (The Royal Society of Edinburgh); Appointed to the Rank of International Fellow of the Royal Society of Edinburgh (IntFRSE).
2022: US Department of Energy's Hydrogen Program R&D Award (for work on improved catalysts for the dehydrogenation of high capacity hydrogen carriers).
2017: Invited Fellow, Japan Society for the Promotion of Science (JSPS)
2015: Fellow, American Institute of Chemists (AIC)
2014: Laboratory Fellow, LANL
2014: Fellow, Royal Society of Chemistry (RSC)
2011: Fellow, American Association for the Advancement of Science (AAAS)
2011: Fellows Prize, LANL
2010: Exceptional Mentor Award (Los Alamos Award Program), Chemistry, Life and Earth Sciences Directorate, LANL

HONORS AND DISTINCTIONS

2022: Session Chair, Organometallic Chemistry GRC, Salve Regina University, Newport, RI
2022: Member, Career Panel, Organometallic Chemistry Research Graduate Research Symposium
2021: Chair, LANL Fellows Prize Committee
2020, 2021: Chair, *LDRD Panel, Chemistry Exploratory Research Category*, LANL

2020: Co-Organizer, symposium entitled “Catalytic Addition and Removal of Hydrogen for Upgrading Oxidized Bio-Related and Renewable Compounds”, International Chemical Congress of Pacific Basin Societies (Pacifichem), Honolulu, HI, Dec 2020; postponed to Dec 2021 due to COVID-19, then canceled, due to ongoing pandemic issues.
2019: Invited Reviewer, University of Strasbourg Institute for Advanced Study
2018: Member, *Fellows Prize Selection Comnittee*, LANL
2017: Chair, *Organometallic Chemistry Gordon Research Conference*, Salve Regina University, Newport, RI
2017: Session Chair, ACS Award Symposium, (Dr. David L. Clark, recipient), 253rd ACS National Meeting, San Francisco, CA
2016: Vice Chair, *Organometallic Chemistry Gordon Research Conference*, Salve Regina University, Newport, RI
2015: Organizer, symposium entitled *“Homogeneous Catalysis Methodologies for the Upgrading of Biomass Derived Molecules*”; held during the 2015 International Chemical Congress of Pacific Basin Societies (Pacifichem) in Honolulu, HI. This conference was sponsored jointly by the American Chemical Society, the Canadian Society for Chemistry, the Chemical Society of Japan, the New Zealand Institute of Chemistry, the Royal Australian Chemical Institute, the Korean Chemical Society, and the Chinese Chemical Society 2014: Session Moderator, *2nd International Symposium on Energy Challenges and Mechanics*, Aberdeen, Scotland, UK.
2011: Symposium Organizer; “*Recycling Carbon: Catalyzed Conversion of Non-Food Biomass to Fuels & Chemicals*” (I&EC Division, primary sponsor); held during the 242nd ACS National Meeting, Denver,
2011.; Organizer, *LANSCE neutron scattering summer school*, LANL
2005: Organizer, *DOE Office of Basic Energy Sciences Catalysis and Chemical Transformations Contractors’ Meeting*
2005: Session Chair, *ACS Award Symposium*, (Prof. Bill Evans, recipient), 229th ACS National Meeting 2004: Organizer, *DOE Office of Basic Energy Sciences Catalysis and Chemical Transformations Contractors’ Meeting* 2003: Session Chair, *Inorganic Chemistry Gordon Research Conference*
1998: Organizer, *Schumacher Annual Dielectrics and Metallization Symposium*
1997: Chemical industry representative, *SEMATECH committee reviewing Aluminum CVD Technologies* 1995: Session Chair, *Organometallic Chemistry Session*, 210th National ACS Meeting.

SERVICE TO PROFESSIONAL JOURNALS AND FUNDING AGENCIES

2026 (Jan): Invited participant, NSF workshop on "Reproducibility in Homogeneous Catalysis"; Denver, CO
Currently: Member, Advisory Board, *Energy Advances* (RSC)
Currently: *Associate Editor, Frontiers in Chemistry (Inorganic Chemistry)*
Currently: *Member, Editorial Board, Inorganics*
2016-2024: *Member, International Advisory Board, European Journal of Inorganic Chemistry (EurJIC)*

2018-2019: Guest Editor, Special Issue, *Inorganics*, entitled "First Row Transition Metal Complexes"
2011-2014: Member, Editorial Advisory Board, *Inorganic Chemistry*
2013: Guest Editor, Special Forum Issue, *Inorganic Chemistry*, entitled " Aspects of Inorganic Chemistry Related to Nuclear Energy" (2013, 52, Issue 7) .
2012: Guest Editor, *Main Group Chemistry*: Special Edition (Vol 11(1), 2012); Highlighting a symposium entitled “Main Group Chemistry: A Continual Source of Fundamental New Knowledge and Applications in Everyday Life” 67th Southwest Regional ACS Meeting, Austin TX, Nov 2011.

Proposal reviewer; *National Science Foundation, DOE Office of Basic Energy Sciences, Petroleum Research Fund, The Leverhulme Trust (UK),University of Strasbourg Institute for Advanced Study* .
Previously and Ongoing: Manuscript reviewer for ACS journals; *Inorganic Chemistry*, *Organometallics*, *J. Am. Chem. Soc.*, *I&E Chemistry Research, Chemistry of Materials, ACS Catalysis, ChemCatChem* Previously and Ongoing: Manuscript reviewer for RSC journals; *Chemical Communications, Dalton Transactions, Energy & Environmental Science, Chemical Science, Physical Chemistry Chemical Physics.* Manuscript reviewer for other international journals; *Science, Chemistry-A European Journal, Angew. Chem. Int. Ed., Catalysis Letters, International Journal of Hydrogen Energy, International Journal of Energy Research, PNAS (National Academy of Sciences), Comments on Inorganic Chemistry, Nature Communications, Nature Chemistry*.

ADVISORY ROLES AND COMMITTEES

2026 (currently): Member, Royal Society of Edinburgh's Environmental Community of Interest
2020, 2021: Chair, LANL Laboratory Directed Research and Development Program, Chemistry ER Panel 2018-2019: Committee Member, Emergent Phenomena in Materials Functionality (EPM) Category, LANL LDRD program.
2018: US Department of Energy, Invited Reviewer, Energy Frontier Research Centers (EFRCs).
2017: National Science Foundation (NSF), Chemistry Division Panel Member.
2016: US Department of Energy Small Business Innovation Research (*SBIR*) and Small Business Technology Transfer (*STTR*) Program, Phase I Reviewer.
2016: Member, Fellows Prize Selection Committee, LANL.
2016: Member, Laboratory Fellow Selection Committee, LANL.
2016: US Department of Energy, Invited Review Panelist for Energy Frontier Research Centers, Bethesda, MD.
2015: Member, Laboratory Fellow Selection Committee, LANL.
2015: Member, Fellows Prizes Selection Committee, LANL.
2015: Committee Member, Complex Natural and Engineered System component, FY16 LDRD-DR Strategic Investment Plan (SIP), LANL
2013-present: Member, Director's Colloquium Advisory Board, LANL
2013: Chair, Inorganic, Isotope and Actinide Chemistry Group Leader Search Committee, LANL
2013: Proposal reviewer, scientific program content for AAAS Annual Meeting
2013: Panelist for "Student and Postdoc Transitions", LANL. Gave students and postdocs advice as to what should be considered and managed when moving/transitioning from abroad to the US, or visa versa, and how to navigate the transition to becoming an independent scientist.
2012: LANL LDRD Directed Research Category; Institutional Strategy Team Member.
2011-2012: Chair, Chemistry Deputy Division Leader Search Committee, LANL.
2011: Invited Onsite Reviewer, DOE Office of Basic Energy Sciences (Catalysis and Chemical Transformations Program), Oak Ridge National Laboratory.
2011: Chair, LANL Committee tasked by ADCLES and SPO-SC with internal OBES programs self assessment

2010, 2011: LANL Laboratory Directed Research and Development Program, Science Advisory Panel Member.
2010: LANL LDRD program, Early Career Research Award Committee member.
2009-2012 LANL Chemistry Division, "Red Team" member for review of LDRD DR category pre-proposals,
2011, 2012: Chair, ADCLES "Red Team" for review of LDRD DR category pre-proposals, 2011, 2012. 2009, 2010: LANL ADCLES "Red Team" member for review of LDRD DR category pre-proposals.
2007-2010: LANL Postdoctoral Program Committee Member, representing Chemistry Division.
2003, 2006, 2009: External Member, Chemistry Ph.D. Thesis Committees, University of Texas at Austin

OTHER PROFESSIONAL ACTIVITIES

Participated in "Faces of Science" for LANL's public website and LANL's 70th anniversary (http://www.lanl.gov/science innovation/features/faces-of-science/john-gordon.php). These are videos viewable by the general public that introduce researchers behind the science at Los Alamos and how their efforts benefit the Nation and humanity in general. Research also highlighted in the Bradbury Science Museum in Los Alamos.

PATENTS GRANTED (17)

"Regeneration of Metal CVD Precursors"; US Patent # 6046364; Japanese Patent # 2000212742; European Patent # 1008671
"Nanophosphors for Large Area Radiation Detectors", US Patent # 7,651,633
"Metal Aminoboranes", US Patent # 7,713,506
"Regeneration of Polyborazylene", US Patent # 7,846,410
"Regeneration of Ammonia Borane from Polyborazylene", US Patent # 8,367,027
"Method of Carbon Chain Extension Using Novel Aldol Reaction", US Patent # 8,497,386
"Preparation of Cerium Halide Solvate Complexes", US Patent # 8,501,484
"Method of Carbon Chain Extension Using Novel Aldol Reaction", US Patent # 8,507,700
"Hydrogenation of Biomass Derived Substrates" US Patent # 9,359,319
"Compounds and Methods for the Production of Long Chain Hydrocarbons from Biological Sources" US Patent # 9,422,207
"Conversion of Oligomeric Starch, Cellulose, or Sugars to Hydrocarbons" US Patent # 9,469,574
"Conversion of Oligomeric Starch, Cellulose, Hydrolysates or Sugars to Hydrocarbons" US Patent # 9,751,815
"Macrocyclic Ligands and their Complexes for Bifunctional Molecular Catalysis", US Patent # 10,487,100
"Peptoid-Based Chelating Ligands for Selective Metal Chelation" US Patent # 11,254,708
"Synthesis of Fluoro Hemiacetals via Transition Metal-Catalyzed Fluoro Ester and Carboxamide Hydrogenation" U.S. Patent # 11,370,736

PATENT APPLICATIONS FILED

"Ligands and Their Derived Metal Complexes for Applications in Redox Flow Batteries", US Patent Application 16/824465, filed March 19th, 2020.

OTHER INFORMATION RELATED TO INVENTIONS

A number of ligands and catalysts prepared in our laboratories are available from STREM CHEMICAL, INC. (*see: https://www.strem.com/about/*). One of our patented ligands (Strem Catalog #07-3525) was also highlighted in the American Chemical Society's *Chemical and Engineering News* (April 9th, 2018 Edition, page 41). For other examples, see: *https://www.strem.com/catalog/v/07-3500/48/ nitrogen_1179894-18-8* and *https://www.strem.com/catalog/v/77-0550/31/iridium_1799787-28-2*).

PROFESSIONAL SOCIETIES

Member, American Institute of Chemists

Member, American Association for the Advancement of Science

Member, American Chemical Society (also Inorganic Chemistry Division)

Member, Royal Society of Chemistry

SELECTED RECENT FUNDING

PI: *"*Hydrogenation of CO_2 into Formic Acid", BNL LDRD program, ~$900k/3yr (FY24-FY26)

*"*Chemical Hydrogen Storage Media with Value-Added Co-Products", (DOE EERE DE-EE-0011096), Travis J. Williams (PI), John C. Gordon (BNL PI), $1,000,000, 01/01/2024 – 12/13/2026 (University led requirement)

"Hydrogen Release from Concentrated Media with Reusable Catalysts", (DOE EERE DE-EE0008825), Travis J. Williams (PI), John C. Gordon (LANL PI), $1,250,000, 10/01/2019 – 12/31/2023 (University led requirement)

PI: "Electric Field Swing Adsorption - A Process Intensification Tool for For Selective Removal of Specific Molecules", LANL LDRD ER reserve funding, $300k (FY'21)

DOE National Laboratory Technology Transfer Researcher Liason at LANL, $95k (FY'20)

PI: "Chemical Approaches to Stable, Narrow-Bandgap Perovskite Materials", LANL LDRD ER (Chemistry & Chemical Sciences Category), $320k/yr (FY'17-FY'19).

Co-PI: "Flow Cells for Scalable Energy Conversion and Storage", LANL LDRD DR (Complex and Natural Engineered Systems Category), $1.6M/yr (FY'17-FY'19).

Co-I: "Controlling the Functionality of Materials through Interfacial Colloidal Gelation", LANL LDRD ER (Defects and Interfaces in Materials Category), $320k/yr (FY'16-FY'18).

PI: "Investigations of the Magnetic Characteristics of Iron Only Clusters", LANL LDRD ER (Chemistry & Chemical Sciences Category), $320k/yr (FY'16-FY'18).

PI: "Methane Coupling Chemistry Promoted by Catalysts Containing Inexpensive Metals", LANL LDRD ER (Chemistry & Chemical Sciences Category), ~$390k/yr (FY'15-FY'17).

PI: DOE-EERE (BETO): "Hydrolyzed Lignocellulose as a Feedstock for Fuels Synthesis", $483k (FY'14, 15).

PI: DOE-EERE: "New Earth Abundant Metal Catalysis for Hydrogenation of Biomass Derived Substrates", $275k (FY'14).

Mentor: Director's Funded and J. R. Oppenheimer Distinguished Postdoctoral Fellowships (awarded to Dr. Pavel Dub ~ $182k/yr (FY' 2014-2017).

PI: LANL Director's PD Research Fellowship (awarded to Dr. Amanda King), ~ $140k/yr (FY' 2014-2016). PI: Laboratory Directed Research and Development Program (LANL): "Redox Active Catalysts for C-C Coupling Reactions Relevant to Renewable Energy"~$390k/yr (FY'2013-2015).

PI: “Upgrading Renewable and Sustainable Carbohydrates for Production of High Energy Density Fuels”, Laboratory Directed Research and Development Program (LANL): ~ $1.6M /yr (FY 2010-2012).
PI: G.T. Seaborg Institute Postdoctoral Research Fellowship, LANL (awarded to Dr. Kalyan Vasudevan), ~ $60k/yr (FY’2010-2012).
Co-PI: “New Catalytic Methods for Selective C-C Bond Cleavage in Lignin: Towards Sustainable and Renewable Chemicals and Fuels”, Laboratory Directed Research and Development Program (LANL): $375k/yr (FY 2010-2012).
Co-PI**:** Cooperative Research and Development Agreement (CRADA) with Fortune 500 company that is established LANL partner: ~$1.4M/34months (FY 2009-2012).
PI: LANL Director’s PD Research Fellowship, LANL (awarded to Dr. Susan Hanson), ~ $140k/yr (FY’ 2009-2010).
Co-PI (EERE DOE Chemical Hydrogen Storage Center of Excellence): ~$11M allocated to LANL efforts (FY 2007-2011)
PI: LANL Director’s PD Research Fellowship, LANL (awarded to Dr. Tom Cameron), ~ $117k/yr (FY’ 2003-2005).

RESEARCH INTERESTS

(1) synthesis, structure and bonding of p-, d-, and f-block elements; (2) catalysis for energy applications, including (renewable) energy storage and release and; (3) f-element chemistry. See also: *https:// www.lanl.gov/org/ddste/aldcels/chemistry/inorganic-isotope-actinide/chemical-energy-storage/index.php and http://www.lanl.gov/collaboration/fellows/index.php*

POSTDOCTORAL RESEARCHERS SUPERVISED AS PRIMARY MENTOR (2002-PRESENT)

Dr. Thomas Cameron (Ph.D., University of Florida (Prof. Jim Boncella, advisor)); *Director’s Postdoctoral Fellow*.
Dr. Garth Giesbrecht (Ph.D., University of British Columbia (Prof. Mike Fryzuk, advisor)); Postdoctoral Research Associate.
Dr. Benjamin Davis (Ph.D., UC Irvine (Prof. Bill Evans, advisor)); Postdoctoral Research Associate.*
Dr. Andrew Sutton (Ph.D., University of Manchester, UK (Dr. Iain May, advisor)); Postdoctoral Research Associate.*
Dr. Susan Hanson (Ph.D., University of Washington, (Prof. Karen Goldberg, advisor)); Director’s Postdoctoral Fellow. *
Dr. Nathan Smythe (Ph.D., MIT, (Prof. Richard Schrock, Nobel Laureate, advisor)); Postdoctoral Research Associate. *
Dr. Kalyan Vasudevan (Ph.D., UT Austin, (Prof. Alan Cowley, FRS, advisor)); G.T. Seaborg Postdoctoral Fellow.
Dr. Christopher Waidmann (Ph.D., University of Washington, (Prof. Jim Mayer, advisor)); Postdoctoral Research Associate.*
Dr. Owen Summerscales (D.Phil., University of Sussex, UK, (Prof. Geoff Cloke, FRS, advisor)); Director’s Postdoctoral Fellow.

Dr. Amanda King (Ph.D., University of Wisconsin at Madison (Profs. Shannon Stahl and Thomas Brunold, advisors)); *Director's Postdoctoral Fellow*.

Dr. Pavel Dub (First Ph.D., A. N. Nesmeyanov Institute of Organoelement Compounds of the Russian Academy of Sciences Moscow, Russia (Dr. Natalia V. Belkova, Prof. Elena S. Shubina, advisors); Second Ph.D., University of Toulouse, Paul Sabatier (Prof. Rinaldo Poli, advisor); *J. R. Oppenheimer Distinguished Postdoctoral Fellow*.*

Dr. Douglas Kindra (Ph.D., UC Irvine (Prof. Bill Evans, advisor)); *Postdoctoral Research Associate.*

Dr. Shikha Sharma (Ph.D., Texas Tech University (Prof. David Birney, advisor)); *Postdoctoral Research Associate.*

Dr. Rami Batrice (Ph.D., The Technion, Israel (Prof. Moris Eisen, advisor)); *Director's Postdoctoral Fellow*

POSTDOCTORAL RESEARCHERS SUPERVISED AS A SECONDARY MENTOR (2002-PRESENT)

Dr. John Brady (Ph.D., University of Wisconsin at Madison (Prof. Charles Casey, advisor)); *Postdoctoral Research Associate*.

Dr. Ahmad Dehestani (Ph.D., University of Washington (Prof. Jim Mayer, advisor)); *Postdoctoral Research Associate*.

Dr. Tianshu Li (Ph.D., University of Toronto (Prof. Robert Morris, advisor)); *Postdoctoral Research Associate*.

Dr. Charles Hamilton (Ph.D., MIT (Prof. Joe Sadighi, advisor)); *Postdoctoral Research Associate*.

Dr. Ryan Trovitch (Ph.D., Cornell University (Prof. Paul Chirik, advisor)); *G.T. Seaborg Postdoctoral Fellow*.

Dr. Matthew Jones (Ph.D., Emory University, (Prof. Cora MacBeth, advisor)); *Postdoctoral Research Associate*.

Dr. Jessie McDonald (Ph.D., UC Santa Barbara, (Prof. Trevor Hayton, advisor)); *G.T. Seaborg Postdoctoral Fellow*.

Dr. Matthew Buck (Ph.D., The Pennsylvania State University (Prof. Raymond Schaak, advisor)); Directors Postdoctoral Fellow.

Dr. David Baumann (Ph.D., University of Utah (Prof. Gary Keck, advisor)); G.T. Seaborg Postdoctoral Fellow.

Dr. Yury Minko, (Ph.D., The Technion, Israel (Prof. Ilan Marek, advisor)); Postdoctoral Research Associate. *

Individuals denoted with an asterisk are now permanent staff scientists at LANL

SELECTED EXTERNAL COLLABORATORS

Professor Rinaldo Poli: ENSIACET and Laboratoire de Chimie de Coordination, Toulouse, France. Professor Alan H. Cowley, FRS: University of Texas at Austin (deceased).

Professor Philip P. Power, FRS: University of California at Davis

Professor David A. Dixon, University of Alabama, Tuscaloosa, AL

Professor R. Tom Baker, University of Ottawa, Ottawa, CA.

Professor Marcel Schlaf, University of Guelph, Guelph, CA

Professor Muralee Murugesu, University of Ottawa, Ottawa, CA

SELECTED LANL COLLABORATORS

Dr. Dave Clark, National Security Education Center

Drs. Jeff Hay (retired), Rich Martin (retired), Enrique Batista (Theory Division)
Drs. Greg Kubas (retired) and Robert Currier (Chemistry Division)
Drs. Pete Silks and Ruilian Wu (Biosciences Division)
Dr. Tony Burrell (Materials Physics and Applications Division; currently at NREL)
Drs. Ross Muenchausen and Nickolaus Smith (Materials Science and Technology Division)

PERSONAL REFERENCES

Prof. Dan Nocera (Member, US National Academy of Sciences), Harvard University, Cambridge, MA, USA
Prof. Maurice Brookhart, (Member, US National Academy of Sciences), University of North Carolina, Chapel Hill, NC, USA
Prof. Phil Power FRS, University of California at Davis, Davis, CA, USA
Prof. Bill Evans, University of California at Irvine, Irvine, CA, USA
Prof. Geoff Cloke FRS, University of Sussex, Brighton, Sussex, UK

JOHN C. GORDON

LIST OF PUBLICATIONS

(as of April 7th, 2026 (Google Scholar); Citations = 6641; h-index = 41; i10-index = 83;

corresponding author highlighted by #; reviews and cover articles highlighted in ***bold***

1. M. J. Chetcuti, J. C. Gordon, K. A. Green, P. E. Fanwick, D. Morgenstern: "Protonation of Nickel-Molybdenum and Nickel-Tungsten Alkyne Complexes with Trifluoroacetic Acid Affording μ-η^1, η^2 Alkenyl Species: X-Ray Structure of $NiW(CO)_2(\mu\text{-}\eta^1,\eta^2\text{-}(E)\text{-}C(Me):CHMe)(\eta^5\text{-}C_5H_5)(\eta^5\text{-}C_5H_4Me)(CO_2CF_3)$", *Organometallics*, **1989**, *8*, 1790.

2. M. J. Chetcuti, P. N. Cunningham, J. C. Gordon, B. E. Grant, J. Klaiss: "Nickel-Molybdenum and Nickel-Tungsten Complexes as Building Blocks in the Synthesis Of Mixed Metal Clusters", *J. Organometal. Chem.*, **1990**, *394*, 765.

3. M. J. Chetcuti, J. C. Gordon, P. E. Fanwick: Synthesis of Cobalt-Tungsten Clusters with Tetrahedral Cores Using the Mixed-Metal Complex $CoW(CO)_7(\eta^5\text{-}C_5H_4Me)$ (Co-W) as a Cluster Building Block. X-Ray Diffraction Study of the Sterically Crowded Tetrahedral Cluster $CoW_3(CO)_9(\eta^5\text{-}C_5H_4Me)_3$", *Inorg. Chem.*, **1990**, *29*, 3781.

4. M. J. Chetcuti, J. C. Gordon, P. E. Fanwick: "Reactions of a Cobalt-Molybdenum and Related Cobalt-Tungsten Tetrahedral Clusters with Phenylacetylene: Formation of Tetrametallic Alkyne Clusters or Alkyne Fragmentation?", *Inorg. Chem.*, **1991**, *30*, 4710.

5. K. J. Ahmed, J. C. Gordon, H. D. Mui, R. Poli: "Synthesis, Structure and Properties of the Face-Sharing Bioctahedral $Mo_2X_6(PMe_2Ph)_3$ (X = Br, I) Compounds", *Polyhedron*, **1991**, *10*, 1667.

6. R. Poli, J. C. Gordon: "^{1}H NMR Investigation of the Tetrahydrofuran Replacement by Phosphine Ligands on $MoCl_3(THF)_3$", *Inorg. Chem.*, **1991**, 30, 4550.

7. R. Poli, J. C. Gordon, J. U. Desai, A. L. Rheingold: "Formation and Structure of a Quadruply Iodo-Bridged Complex of Dimolybdenum (III, IV), $[(Cp^*Mo)_2(\mu\text{-}I)_4]I_3$ (Cp^* = η^5-C_5Me_5) and it's Reversible Oxidation and Reduction", *J. Chem. Soc. Chem. Commun.* **1991**, 1518.

8. A. A. Cole, J. C. Gordon, M. A. Kelland, R. Poli, A. L. Rheingold: "Synthesis and Structure of the Trimolybdenum Cluster $[(CpMoCl)_3(\mu\text{-}Cl)_4(\mu_3\text{-}O)]$", *Organometallics*, **1992**, *11*, 1754.

9. M. J. Chetcuti, K. J. Deck, J. C. Gordon, B. E. Grant, P. E. Fanwick: "Reactions of the Unsaturated Species $(\eta^5\text{-}C_5Me_5)Ni\text{-}W(CO)_3(\eta^5\text{-}C_5H_5)$ and of it's Methylene Derivative $(\eta^5\text{-}C_5Me_5)Ni(\eta\text{-}CO)(\mu\text{-}CH_2)W(CO)_2(\eta^5\text{-}C_5H_5)$ with 2-Electron Donors", *Organometallics*, **1992**, *11*, 2128.

10. R. Poli, J. C. Gordon: "The Question of Metal-Metal Bonding in Edge-Sharing Bioctahedral Mo(III) Complexes. Variable Temperature ^{1}H NMR Study of $Mo_2Cl_6(PMe_xEt_{3-x})_4$ (X = 0-3) and the Mechanism of the Face-Sharing to Edge-Sharing Transformation", *J. Am. Chem. Soc.*, **1992**, *114*, 6723.

11. R. Poli, J. C. Gordon, R. K. Khanna, P. E. Fanwick: "The First Discrete Structure for the I_7^- Anion", *Inorg. Chem.*, **1992**, *31*, 3165.

12. F. Abugidieri, J. C. Gordon, R. Poli, B. E. Owens-Waltermire, A. L. Rheingold: "New Phosphine Containing Cyclopentadienylmolybdenum Complexes with an 18-electron and a 16-electron count. X-ray structure of $CpMoCl_3(PMe_2Ph)_2$ and Cp^*MoCl_3L (L = PMe_3, $PMePh_2$)", *Organometallics*, **1993**, *12*, 1575.

13. D. M. Barnhart, D. L. Clark, J. C. Gordon, J. G. Watkin, B. D. Zwick: "Tetrameric Lanthanide Neopentoxide Complexes with Ln---H-C Interactions: X-Ray Crystal Structure of $Ln_4(OCH_2\text{-}t\text{-}Bu)_{12}$ (Ln = La, Nd)", *J. Am. Chem. Soc*., **1993**, *115*, 8461.

14. J. C. Gordon, V. Lee, R. Poli: "Preparation Of $CpMoX_3$ (Cp = η^5-C_5H_5 ; X = Cl, Br, I) by Thermal Decarbonylation Of $CpMoX_3(CO)_2$, a Previously Overlooked Phenomenon", *Inorg. Chem.,* **1993**, *32*, 4460.

15. J. U. Desai, J. C. Gordon, H. B. Kraatz, B. E. Owens-Waltermire, R. Poli, A. L. Rheingold: "The Redox Behaviour of Cp^*Mo-Bromide Systems: The Unusual Structure of a Compound Containing Mo(III), Mo(IV), and Mo(V) $[Cp^*_2Mo_2Br_4]_2[Cp^*MoBr_4]_3$", *Angew. Chem. Int. Ed. Engl.,* **1993**, *32*, 1486. For German version, see – J. U Desai; J. C Gordon; H-B Kraatz, B. E Owens-Waltermire, R. Poli, A. L Rheingold "Redoxverhalten von Cp*MoBr/Br_2-Systemen: Die ungewöhnliche Struktur von $[(Cp_2^*Mo_2Br_4)_2(Cp^*MoBr_4)_3]$, einer Verbindung, die Mo^{III}, Mo^{IV} und Mo^V enthält **1993**, *105*, 1506.

16. D. M. Barnhart, D. L. Clark, J. C. Gordon, J. C. Huffman, R. L Vincent, J. G. Watkin, B. D. Zwick: "Synthesis, Properties and X-Ray Structures of Lanthanide η^6-Arene Bridged Aryloxide Dimers $Ln_2(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_6$ and Their Lewis Base Adducts $Ln(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_3(THF)_2$ (Ln = Pr, Nd, Sm, Gd, Er, Yb, Lu)", *Inorg. Chem.,* **1994**, *33*, 3487.

17. F. A. Abugidieri, G. A. Brewer, J. U. Desai, J. C. Gordon, R. Poli: "Pentamethylcyclopentadienylmolybdenum (IV) Chloride. Synthesis, Structure and Properties", *Inorg. Chem.*, **1994**, *33*, 3745.

18. J. U. Desai, J. C. Gordon, H. B. Kraatz, V. T. Lee, B. E. Owens-Waltermire, R. Poli, A. L. Rheingold, C. B. White: "Pentamethylcyclopentadienyl Molybdenum Bromides and Iodides", *Inorg. Chem.*, **1994**, *33*, 3752.

19. D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin: "Polymerization of Metal-Oxygen Bonds in Thorium Alkoxide Chemistry. Synthesis and X-Ray Structures of $Th_4(O\text{-}i\text{-}Pr)_{16}py_2$ and $Th_2(OCHEt)_8py_2$", *Inorg. Chem.,* **1994**, *33*, 3939.

20. D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "A Samarium Alkyl-Aryloxide Complex Containing a Trigonal Bipyramidal Carbon Atom: X-Ray Structure of $[Li(THF)]_2$ $[Sm(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_3(CH_2SiMe_3)_2]$", *Organometallics*, **1994**, *13*, 4266.

21. D. L. Clark, J. C. Gordon, J. C. Huffman, R. L. Vincent-Hollis, J. G. Watkin, B. D. Zwick: "Preparation of Lanthanide Tetrakis(Aryloxide) Anions with Unusual Potassium Cation Environments: X-Ray Structures of $K[Ln(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_4]$ (Ln = La, Nd, Er)", *Inorg. Chem.,* **1994**, *33*, 5903.

22. J. C. Gordon, R. Poli: "Structure of a Tetranuclear Butterfly Cluster of Molybdenum that can be viewed as a Fragment of Octahedral $[Mo_6I_8]^{4+}$: $[PPh_4]_2[Mo_4I_{11}]$", *Acta. Crystallographica., Section C*, **1995**, *C51*, 14.

23. J. C. Gordon, S. P. Mattamana, R. Poli, P. E. Fanwick: "Crystal Structure of Base-Free $[MoOI_4]^-$", *Polyhedron*, **1995**, *14*, 1339.

24. D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "Preparation of Mono-Pentamethylcyclopentadienyl Uranium (IV) Sulfido Clusters through Oxidation of $(\eta\text{-}C_5Me_5)UI_2(THF)_3$. X-Ray Structural Characterization of $(\eta\text{-}C_5Me_5)_3U_3(\mu_3\text{-}I)(\mu_3\text{-}S)(\mu_2\text{-}I)_3I_3$", *New Journal of Chemistry*, invited publication, **1995**, *19*, 495.

25. D. M. Barnhart, R. D. Butcher, D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "An Unprecedented Cyclic Structure for a Cyclopentadienyl Metal Complex. Preparation and X-Ray Crystal

structure of [(η-C_5Me_5)Th_2(O-*i*-Pr)$_7$]$_3$", *New Journal of Chemistry*, invited publication, **1995**, *19*, 503.

26. D. M. Barnhart, D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "Thorium Alkoxide Chemistry: Preparation and Structural Studies of Thorium Tetrakis(di-*iso*-propylmethoxide) and its Lewis Base Adducts. X-Ray Structures of [Th(OCH-*i*-Pr_2)$_4$]$_2$, Th(OCH-*i*-Pr_2)$_4$(quin) and ThI(OCH-*i*-Pr_2)$_3$$py_2$", *Inorg. Chem.*, **1995**, *34*, 5416.

27. J. C. Gordon, P. E. Fanwick, R. Poli : "[(η^5-C_5Me_5)$_2$$Mo_2$(μ-I)$_4$]$^+$[$FeI_4$]$^-$[(η^5-$C_5Me_5$)$_2$$Mo_2I_2$(μ-I)$_2$(μ-O)]", *Acta Crystallogr., Sect. C, Cryst. Struct. Commun.* **1996**, *C52*, 1098-1101.

28. D. L. Clark, J. C. Gordon, J. T. McFarlan, R. L.Vincent, J. G. Watkin, B. D. Zwick: "Crystal Structure of the Zero-Valent Niobium Complex Nb(η-C_6H_5Me)$_2$", *Inorg. Chim. Acta*., **1996**, *224*, 269.

29. D. L. Clark, J. C. Gordon, J. C. Huffman, J. G.. Watkin, B. D. Zwick "Structural Characterization and Reactivity Studies of the Samarium Aryloxide Complex Sm(O-2,6-*i*-$Pr_2C_6H_3$)$_3$$(THF)_2$", *Polyhedron*, **1996**, *15*, 2279.

30. J. L. Fettinger, J. C. Gordon, S. P. Mattamana, C. T. O'Connor, R. Poli, and G. Salem "Anionic Halomolybdate(III) Chemistry. Tetrahydrofuran Loss from [$MoX_3Y(THF)_2$]$^-$ (X, Y = Cl, Br, I). Preparation and Properties of [Mo_3X_{12}]$^{3-}$ (X = Br, I) and Crystal Structure of the Edge-Sharing Trioctahedral [PPh_4]$_3$[Mo_3I_{12}]", *Inorg. Chem.*, **1996**, *35*, 7404.

31. D. L. Clark, J. C. Gordon, B. L. Scott, J. G. Watkin "Iodobis(pyridine-N)bis(η^5-trimethylsilylcyclopentadienyl)neodymium", *Acta. Crystallographica., Sect. C.*, **1997**, *C53*, 850.

32. J. J. Schwab, J. D. Lichtenhan, K. P. Chaffee, J. C. Gordon, Y. A. Otonari, M. J. Carr, A. G. Bolf "Investigations Into Structure/Property Relationships For Polyhedral Oligomeric Silsesquioxane (POSS) Based Methacrylate Polymers" *Am. Chem. Soc. Polym. Prep*, **1997**, *38*, 518.

33. (a) J. C. Gordon and R. Poli: "Cyclopentadienylmolybdenum Tetrachloride"; (b) J. U. Desai, J. C. Gordon and R. Poli: "Pentamethylcyclopentadienylmolybdenum Trichloride": In "*Synthetic Methods of Organometallic and Inorganic Chemistry*", W. A. Herrmann, Volume Editor; C. Zybill, Chapter Editor; Thieme Verlag: Stuttgart, **1997**; *Vol. 8* (Transition Metals, Part 2), 96.

34. R. D. Butcher, D. L. Clark, J. C. Gordon, J. G. Watkin "Synthesis and X-Ray Crystal Structures of the Samarium Mono(Pentamethylcyclopentadienyl) Aryloxide Complexes (η-C_5Me_5)Sm(O-2,6-*t*-$Bu_2C_6H_3$)$_2$(THF) and [(η-C_5Me_5)Sm(O-2,6-*i*-$Pr_2C_6H_3$)$_3$Li(THF)]. Differences in the Metathesis Chemistry of 2,6-Di-*iso*-propylphenoxide and 2,6-Di-*tert*-butylphenoxide Ligands", *J. Organomet. Chem*, **1999,** *577***,** 228.

35. D. L. Clark, J. C. Gordon, B. L. Scott, J. G. Watkin "Synthesis and Characterization of a Mixed-Ring Bis-Cyclopentadienyl Derivative of Neodymium. X-Ray Crystal Structures of (η-C_5Me_5)NdI_2py_3 and (η-C_5Me_5)(η-$C_5H_4SiMe_3$)NdI(py)", *Polyhedron*, **1999,** *18***,** 1389.

36. L. R. Avens, C. J. Burns, R. D. Butcher, D. L. Clark, J. C. Gordon, A. R. Schake, J. G. Watkin, B. D. Zwick: "The First Examples of Structurally Characterized Neutral Uranium(III) Mono(cyclopentadienyl) Complexes: Synthesis, Properties and X-Ray Structures of (C_5Me_5)$UI_2$$(THF)_3$, ($C_5Me_5$)$UI_2$$(py)_3$, and ($C_5Me_5$)U[$N(SiMe_3)_2$]$_2$" *Organometallics*, **2000,** *19***,** 451.

37. D. L. Clark, R. J. Donohoe, J. C. Gordon, P. L. Gordon, D. W. Keogh, B. L. Scott, C. D. Tait, J. G. Watkin: "First Single-crystal X-ray Diffraction Study of a Lanthanide Tricarbonate Complex: [$Co(NH_3)_6$][$Sm(CO_3)_3(H_2O)$]·$4H_2O$", *J. Chem. Soc. Dalton. Trans.* **2000**, *13*, 1975.[#]

38. D. L. Bond, D. L. Clark, R. J. Donohoe, J. C. Gordon, P. L. Gordon, D. W. Keogh, B. L. Scott, C. D. Tait, J. G. Watkin: "A New Structural Class of Lanthanide Carbonate: Synthesis, Properties and X-ray Structure Of The One-Dimensional Chain Complex $[Co(NH_3)_6]_6[K_2(H_2O)_{10}][Nd_2(CO_3)_8]_2 \bullet 20H_2O$", *Inorg. Chem.*, **2000,** *39*, 3934**.** #

39. W. V Konze, D. L Clark, S. D. Conradson, R. J. Donohoe, J. C. Gordon, P. L Gordon, D. W Keogh, D. E. Morris, C. D. Tait: "Identification of Oligomeric Uranyl Complexes Under Highly Alkaline Conditions". *AIP Conference Proceedings*, **2000**, *532* (Plutonium Futures--*The Science*), 261-262.

40. D. L. Bond, D. L. Clark, R. J. Donohoe, J. C. Gordon, P. L. Gordon, D. W. Keogh, B. L. Scott, C. D. Tait, J. G. Watkin: "A Model for Trivalent Actinides in High Carbonate-Containing Media: Structural Characterization of the Lanthanide Tetracarbonate $[Co(NH_3)_6][Na(-\mu H_2O)(H_2O)_4]_2[Ho(CO_3)_4] \bullet 4H_2O$", *Eur. J. Inorg. Chem.*, **2001**, *2001*, 2921. #

41. J. C. Gordon, G. R. Giesbrecht, J. T. Brady, D. L. Clark, D. W. Keogh, B. L. Scott, J. G. Watkin: Observation of a Significantly Reduced $^1J_{C\text{-}H}$ Coupling Constant in an Agostic f-Element Complex: X-Ray Crystal Structure of $(ArO)Sm[(\mu\text{-}OAr)(\mu\text{-}Me)AlMe_2]_2$ (Ar = 2,6-*i*-$Pr_2C_6H_3$), *Organometallics*, **2002,** *21***,** 127.#

42. G. R Giesbrecht, J. C. Gordon, J. T. Brady, D. L. Clark, D. W. Keogh, R. Michalczyk, B. L. Scott, J. G. Watkin: **"**Interactions of Remote Alkyl Groups with Lanthanide Metal Centers: Synthesis, Characterization and Ligand Redistribution Reactions of Heterobimetallic Species Containing Trialkylaluminum Fragments.**"** *Eur. J. Inorg. Chem.*, **2002**, 723.#

43. J. C. Gordon, G. R. Giesbrecht, D. L. Clark, P. J. Hay, D. W. Keogh, R. Poli, B. L. Scott, J. G. Watkin: "The First Example of a μ_2-Imido Functionality Bound to a Lanthanide Metal Center: X-Ray Crystal Structure and a DFT Study of $[(\mu\text{-}ArN)Sm(\mu\text{-}NHAr)(\mu\text{-}Me)AlMe_2]_2$ (Ar = 2,6-*i*-$Pr_2C_6H_3$)", *Organometallics*, **2002**, *21*, 4726. #

44. J. C. Gordon, P. Shukla, A. H. Cowley, J. N. Jones, D. W. Keogh, B. L. Scott: "Dialkyl aluminum amides: new reagents for the conversion of C=O into C=NR functionalities", *Chem. Commun.*, **2002**, 2710-2711. #

45. D. L. Clark, J. C. Gordon, P. J. Hay, R. L. Martin, R. Poli: "A DFT Study of Tris(bis(trimethylsilyl)methyl)lanthanum and –samarium", *Organometallics*, **2002**, 21, 5000.

46. G. R. Giesbrecht, J. C. Gordon, D. L. Clark, B. L. Scott, J. G. Watkin, K. J. Young: **"**Salt-free synthesis of samarium-aluminum mixed-metal alkoxides: X-ray crystal structures of $\{[(i\text{-}Pr\text{-}O)(i\text{-}Bu)Al(\mu\text{-}O\text{-}i\text{-}Pr)_2Sm(O\text{-}i\text{-}Pr)(HO\text{-}i\text{-}Pr)](\mu\text{-}O\text{-}i\text{-}Pr)\}_2$, $[(THF)_2Sm(O\text{-}t\text{-}Bu)_2(\mu\text{-}O\text{-}t\text{-}Bu)_2Al(i\text{-}Bu)_2]$, $Sm(OAr)_3(THF)_3$ (Ar = 2,4,6-$Me_3C_6H_2$), $[Nd(\mu\text{-}OAr)(OAr)_2(py)_2]_2$ (Ar = 2,4,6-$Me_3C_6H_2$) and $(ArO)_3Sm[(\mu\text{-}O\text{-}t\text{-}Bu)_2Al_2(O\text{-}t\text{-}Bu)_4]$ (Ar = 2,6-*i*-$Pr_2C_6H_3$)", *Inorg. Chem.*, **2002,** *41***,** 6372. #

47. G. R. Giesbrecht, D. L. Clark, J. C. Gordon, C. A. Hijar, B. L. Scott, J. G. Watkin: "Neutral and Anionic Transition Metal Complexes Supported by Decafluorodiphenylamido Ligands: X-Ray Crystal Structures of $\{Na(THF)_2\}\{Ti[N(C_6F_5)_2]_4\}$, $\{K(\eta\text{-}C_6H_5Me)_2\}\{ZrCl_2[N(C_6F_5)_2]_3\}$, $K\{VCl[N(C_6F_5)_2]_3\}$, $Fe[N(C_6F_5)_2]_2(THF)_2$ and $Co[N(C_6F_5)_2]_2(THF)_2$)", *Polyhedron*, **2003**, *22*, 153. #

48. E. D. Brady, D. L. Clark, J. C. Gordon, P. J. Hay, D. W. Keogh, R. Poli, J. G. Watkin: "Tris(bis(trimethylsilyl)amido)samarium: X-ray Structure and DFT Study", *Inorg. Chem.*, **2003**, *42*, 6682.

49. G. R. Giesbrecht, J. C. Gordon, D. L. Clark, B. L. Scott: "Syntheses and Structures of Mono-Cyclopentadienyl Di-Iodide Complexes of the Lanthanides: X-ray Crystal Structures of Cp'"LaI_2py_3 (Cp'" =

[η^5-$C_5H_2(SiMe_3$-1,2,4]$^-$; py = pyridine) and Cp''' LaI_2(bipy)py (bipy = 2,2'-bipyridine)", invited contribution in honor of Professor Thomas Fehlner's 65th birthday, *Applied Organometallic Chemistry* **2003**, *17*, 473. #

50. T. M. Cameron, J. C. Gordon, R. Michalczyk, B. L. Scott: "Unusual Alkyl Group Activation and Cationic Complex Formation From a Novel Lutetium Dialkyl Complex Supported By a Tridentate By a Tridentate Monoanionic Ligand", *Chem. Commun*. **2003**, 2282. #

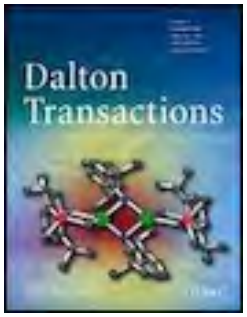
51. G. R. Giesbrecht, J. C., Gordon, D. L. Clark, B. L. Scott: "Synthesis, Structure and Solution Dynamics of Lithium Salts of Superbulky Cyclopentadienyl Ligands", *Dalton. Transactions*., **2003**, *13*, 2658.

52. G. R. Giesbrecht, J. C. Gordon, D. L. Clark, B. L. Scott, "Auto-Ionization in Lutetium Iodide Complexes: Effect of Ionic Radius on Lanthanide-Iodide Binding." *Inorg. Chem.*, **2004**, *43*, 1065. #

53. G. R. Giesbrecht, J. C. Gordon, D. L. Clark, P. J. Hay, B. L. Scott, C. D. Tait: "A Comparative Study of π-Arene Bridged Lanthanum Arylamide and Aryloxide Dimers. Solution Behavior, Exchange Mechanisms and X-ray Crystal Structures of $La_2(NH\text{-}2,6\text{-}^iPr_2C_6H_3)_6$, $La(NH\text{-}2,6\text{-}^iPr_2C_6H_3)_3(THF)_3$ and $La(NH\text{-}2,6\text{-}^iPr_2C_6H_3)_3(py)_2$", *J. Am. Chem. Soc*., **2004**, *126*, 6387. #

54. G. R. Giesbrecht, G. Collis, J. C. Gordon, D. L. Clark, B. L. Scott, N. J. Hardman: "'Mono-Cyclopentadienyl Complexes of Lanthanum: Synthesis and Characterization of Anilido Derivatives", *J. Organomet. Chem*., **2004,** *689*, 2173.

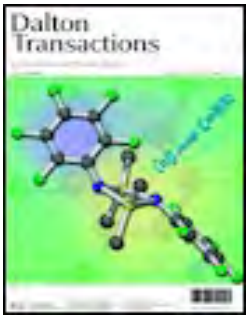
55. T. M. Cameron, J. C. Gordon, B. L. Scott: "Synthesis and Characterization of (Mono)pentamethylcyclopentadienyl Lutetium Complexes: Formation of Bipyridyl-Stabilized Alkyls, Anilides, and Terminal Acetylides", *Organometallics*, **2004**, *23*, 2995**.**



56. T. M. Cameron, J. C. Gordon, B. L. Scott, W. Tumas: "Unusual C-H Activation of 2,2'-Bipyridine Mediated by a (Mono)(pentamethyl)cyclopentadienyl Lutetium Complex", *Chem. Commun.*, **2004**, 1398.

57. G. R. Giesbrecht, J. C. Gordon: "Lanthanide Alkylidene and Imido Complexes", ***Dalton Transactions*** **Invited Perspectives Article,** ***featured on the cover page of this issue,*** **2004, 2378.#**

58. G. R. Giesbrecht, J. C., Gordon, D. L. Clark, B. L. Scott: (η^5-Fluorenyl)-tris-pyridine-di-iodo-lanthanum (III) and -neodymium (III)", Crystallographic report, *Applied Organometallic Chemistry* **2005,** *19***,** 98.



59. A. H. Cowley P. Shukla, J. N. Jones, J. C. Gordon, B. L. Scott: "Fluoroaryl-Substituted Aminoalane Dimers: Syntheses and Structures", ***Dalton Transactions, featured on the cover page of this issue,*** **2005,** ***6,*** **1019.**

60. P. Shukla, J. C. Gordon, A. H. Cowley, J. N. Jones: "Fluoroaryl-Substituted Ketiminate Complexes of Aluminum", *J. Organomet. Chem*., **2005**, *690*, 1366.

61. P. Shukla, J. C. Gordon, A. H. Cowley, J. N. Jones: "An Unusual Bowl Shaped Aluminum-Nitrogen Cage Compound", *Inorg. Chim. Acta*., **2005,** *358***,** 4407**.**

62. D. L. Clark, J. C. Gordon, P. J. Hay, R. Poli: "Existence and Stability of Lanthanide–Main Group Element Multiple Bonds. New Paradigms In the Bonding of the 4f-Elements. A DFT Study of Cp_2CeZ (Z = F^+, O, NH, CH^-, CH_2) and the Ligand Adduct $Cp_2Ce(CH_2)(NH_3)$", *Organometallics*, **2005,** *24***,** 5747. #

63. K. C. Jantunen, B. L. Scott, P. J. Hay, J. C. Gordon, J. L. Kiplinger: "Dearomatization and

Functionalization of Terpyridine by Lutetium(III) Alkyl Complexes", *J. Am. Chem. Soc.*, **2006**, *128*, 6323.

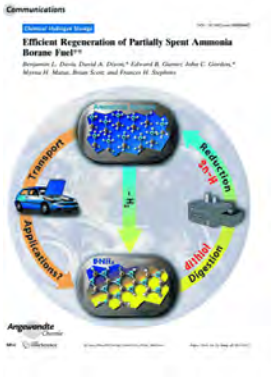
64. J. A. Moore, A. H. Cowley, J. C. Gordon: "Mediating Oxidation States in Decamethyleuropocene Complexes. The Role of the Diazabutadiene Fragment", *Organometallics* **2006**, *25*, 5207-5209.

65. T. J. Boyle, L. A. Ottley, S. D. Daniel-Taylor, L. J. Tribby, S. D. Bunge, J. C. Gordon, T. M McCleskey: "*Iso*- Structural *Neo*-Pentoxide Derivatives of Group 3 and the Lanthanide Series Metals for the Production of M_2O_3 Nanoparticles", *Inorg. Chem.* **2007**, *46*, 3705.

66. K. C. Jantunen, B. L. Scott, J. C. Gordon, J. L. Kiplinger: "Reactivity of $(C_5Me_5)Lu(CH_2SiMe_3)_2(THF)$ with Pyridine Ring Systems: Synthesis and Structural Characterization of an η^2-(N,C)-Pyridyl (Mono)pentamethylcyclopentadienyl Lutetium(III) Complex", *Organometallics* **2007,** *26*, 2777.

67. J. C. Gordon, R. T. Baker, A. K. Burrell, B. L. Davis, H. V. Diyabalanage, C. W. Hamilton, M. Inbody, K. K. Jonietz, K. C. Ott, V. Pons, T. A. Semelsberger, R. Shrestha, F. H. Stephens, D. L. Thorn, W. Tumas: "Chemical Hydrogen Storage at Los Alamos", *Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry* **2007**, *52*, 445.

68. S. K. Hanson, J. C. Gordon, R. T. Baker, B. L. Scott, A. D. Sutton, D. L. Thorn: "Aerobic Oxidation of Pinacol by Vanadium(V) Dipicolinate Complexes: Evidence for Reduction to Vanadium(III)" *J. Am. Chem. Soc.*, **2009**, *131*, 428.



69. B. L. Davis, D. A. Dixon, E. B. Garner, J. C. Gordon, M. H. Matus, B. L. Scott, F. H. Stephens: "Efficient Regeneration of Partially Spent Ammonia Borane Fuel", ***Angew. Chem. Int. Ed.*** **2009,** ***48,*** **6812.** ***Highlighted as Frontispiece Cover Picture article.***[#]

70. A. D. Sutton, B. L. Davis, J. C. Gordon: "Regeneration Of Ammonia Borane Spent Fuel", *Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry*, **2009**, *54*, 1056.

71. D. A. Dixon, E. B. Garner, M. H. Matus, D. J. Grant. D. M. Camaioni, B. L. Davis, J. C. Gordon, F. H. Stephens, R. T. Baker: "Computational Approaches for the Prediction of Molecular Properties of Chemical Hydrogen Systems; Release and Regeneration", *Preprints of Symposia - American Chemical Society, Division of Fuel Chemistry*, **2009**, *54*, 685.

72. A. D. Sutton, B. L. Davis, K. X. Bhattacharrya, B. D. Ellis, J. C. Gordon, P. P. Power: "Recycle of Tin Thiolate Compounds Relevant to Ammonia Borane Regeneration", *Chem. Commun.*, **2010**, *46*, 148. [#]

73. N. C. Smythe, J. C. Gordon: "Ammonia Borane as a Hydrogen Carrier: Dehydrogenation and Regeneration", Invited Review Article, ***Eur. J. Inorg. Chem*****. 2010,** ***4,*** **509.**[#]

74. B. L. Davis, J. C. Gordon, A. D. Sutton, D. Schwarz, D. L. Thorn: "Some New Chemistry of Borazine with Aryldiamines", *Main Group Chemistry*, **2010,** *9,* 135; special edition in honor of Professor Alan H. Cowley, *FRS.*

75. S. K. Hanson, R. T. Baker, J. C. Gordon, B. L. Scott, D. L. Thorn: "Aerobic Oxidation of Lignin Models Using a Base Metal Vanadium Catalyst", *Inorg. Chem.*, **2010**, *49*, 5611. [#]

76. B. D. Ellis, T. M. Atkins, Y. Peng, A. D. Sutton, J. C. Gordon and P. P. Power: "Synthesis and Thermolytic Behavior of Tin(IV) Formates: In Search of Recyclable Metal-Hydride Systems, *Dalton Transactions,* **2010**, *39*, 10659. [#]

77. J. C. Gordon, G. J. Kubas: "Perspectives on How Nature Employs the Principles of Organometallic Chemistry in Dihydrogen Activation in Hydrogenases" invited review article, *Organometallics*, 2010, *29*, 4682 (*special volume in honor of Professor Dietmar Seyferth)*. [#]

78. S. K. Hanson, R. T. Baker, J. C. Gordon, B. L. Scott, L. A. "Pete" Silks, D. L. Thorn: "Mechanism of Alcohol Oxidation by Dipicolinate Vanadium(V): Unexpected Role of Pyridine", *J. Am. Chem. Soc.*, **2010**, *132*, 17804.

79. A. D. Sutton, A. K. Burrell, D. A. Dixon, E. B. Garner III, J. C. Gordon, T. Nakagawa, K. C. Ott, J. P. Robinson, M. Vasiliu: "A "Single Pot" Approach to the Efficient Regeneration of Ammonia Borane Spent Fuel", *Science*, **2011**, *331*, 1426. *The work in this publication was highlighted in R&D Magazine, Chemical and Engineering News (ACS), the Los Alamos Monitor, Chemistry World (RSC), Chemical Engineering Magazine, was the subject of a Science Magazine Podcast, and was highlighted as a Top Ten Story from LANL in 2011.*[#]

80. K. V. Vasudevan, N. A. Smith, M. W. Blair, B. L. Scott, E. A. McKigney, J. C. Gordon, R. E. Muenchausen: "An Ionic Liquid-Mediated Route to Cerium(III) Bromide Solvates", *Inorg. Chem.* **2011**, *50*, 4627.[#]

81. P. H. Lin, N. C. Smythe, S. I. Gorelsky, S. Maguire, N. J. Henson, I. Korobkov, B. L. Scott, J. C. Gordon, R. T. Baker, M. Murugesu: "Importance of Out-of-State Spin-Orbit Coupling for Slow Magnetic Relaxation in Mononuclear Fe^{II} complexes", *J. Am. Chem. Soc.* **2011**, *133*, 15806.

82. K. V. Vasudevan, N. A. Smith, B. L. Scott, B. L. Bennett, R. E. Muenchausen, J. C. Gordon: " Ionic Liquid Mediated Routes to Polydentate Oxygen-Donor Adducts of Cerium(III) Bromide", *Dalton Transactions*, **2012,** *41*, 1924.[#]

83. R. T. Baker, J. C. Gordon, C. W. Hamilton, N. J. Henson, P. H. Lin, S. Maguire, M. Murugesu, B. L. Scott, N. C. Smythe: "Iron Complex-Catalyzed Ammonia-Borane Dehydrogenation. A Potential Route Towards B-N Containing Polymer Motifs Using Earth Abundant Metal Catalysts", *J. Am. Chem. Soc.*, **2012**, *134*, 5598.[#]

84. K. V. Vasudevan, B. L. Scott, J. C. Gordon: "Main-Group Element Compounds Derived from the (1*R*,2*R*)-*N*,*N'*-Bis(2-pyridylmethylene)cyclohexane-1,2-diamine (BPID) Ligand", *Main Group Chemistry*, **2012**, *11 (1)*, 45.[#]

85. T. K. Mukhopadhyay, R. K. Feller, F. N. Rein, N. J. Henson, N. C. Smythe, R. J. Trovitch, J. C. Gordon: "Investigation of Formally Zerovalent Triphos Iron Complexes", *ChemComm* **2012**, *48*, 8670.[#]

86. C. R. Waidmann, A. W. Pierpont, E. R. Batista, J. C. Gordon, R. L. Martin, L. A. "Pete" Silks, R. M. West, R. Wu: "Functional Group Dependence of the Acid Catalyzed Ring Opening of Biomass Derived Furan Rings: an Experimental and Theoretical Study", *Catalysis Science and Technology*, 2013, *3*, 106 (*featured as inside cover article).* [#] *In February 2013, this was among the top ten accessed articles from the online version of Catalysis Science and Technology.* This publication was also highlighted as a *Catalysis Science & Technology Hot Article* and was featured at *http://blogs.rsc.org/cy/2012/08/14/ring-opening-of-biomass-derived-furan-rings/* (the RSC *Catalysis Science & Technology* Blog). This particular work was highlighted on the DOE EERE Biomass Blog (*http://www.eereblogs.energy.gov/biomass/)* and by DOE Pulse.[#]

87. M. B. Jones, A. J. Gaunt, J. C. Gordon, N. Kaltsoyannis, M. P. Neu, B. L. Scott: "Uncovering f-Element Bonding Trends in a Series of 1:3 and 1:4 Complexes with a Selenium-Donor Diselenophosphinate Ligand", *Chem. Sci.*, **2013**, *4*, 1189.

88. K. V. Vasudevan, N. C. Smythe, B. L. Scott, J. C. Gordon: "Metallopolymer Formation Using the (1*R*,2*R*)-*N*,*N*′-Bis(pyridylmethylene)cyclohexane-1,2-diamine (BPID) Ligand Class", *Dalton Trans.*, **2013**, *42*, 4768.[#]

89. C. R. Waidmann, L. A. P. Silks, R. Wu, J. C. Gordon: "One-Pot Reduction of Olefin and Ketone Moieties by a Copper–Phosphine Catalyst Enabled by Polar Aprotic Solvents", *Catalysis Science and Technology*, **2013,** *3*, 1240. [#]

90. J. C. Gordon, O. T. Summerscales: "Complexes Containing Multiple Bonding Interactions Between Rare Earth Metals and Main-Group Fragments", *RSC Advances,* 2013, *3*, 6682.[#]

91. A. D. Sutton, F. Waldie, R. Wu, M. Schlaf, L. A. "Pete" Silks III, J. C. Gordon: "The Hydrodeoxygenation of Bioderived Furans into Alkanes", *Nature Chemistry* **2013,** *5*, 428**.** This work was highlighted in *Biodiesel Magazine* (*http://www.biodieselmagazine.com/articles/9067/los-alamos-national-lab-improves-biomass-to-fuel-process*) and by *phys.org. (http://phys.org/news/2013-05-scientists-biomass-to-fuel.html).* [#]

92. O. T. Summerscales, J. C. Gordon: "Regeneration of Ammonia Borane From Spent Fuel Materials", *Dalton Transactions*, Invited Review Article, 2013, *42*, 10075, *featured as an inside cover article* [#]

93. P. A. Dub, N. J. Henson, R. L. Martin, J. C. Gordon: "Unravelling the Mechanism of the Asymmetric Hydrogenation of Acetophenone by [RuX_2(diphosphine)(1,2-diamine)] Catalysts", *J. Am. Chem. Soc.*, **2014,** *136*, 3505.[#]

94. K. V. Vasudevan, W. L. Boncher, N. A. Smith, M. W. Blair, B. L. Scott, B. L. Bennett, M. P. Hehlen, R. E. Muenchausen, J. C. Gordon: "Nitrile-Supported Coordination Polymers of Cerium(III) Bromide" *Eur. J. Inorg. Chem.*, **2014**, 13, 2213.[#]

95. T. K. Mukhopadhyay, M. Flores, R. K. Feller, B. L. Scott, R. D. Taylor, M. P. Pasternak, F. N. Rein, N. J. Henson, N. C. Smythe, R. J. Trovitch, J. C. Gordon: "A New Spin on Cyclooctatetraene (COT) Redox-Activity: Comparing Triphos Chelates through their Support of Low-Spin Fe(I) Complexes Exhibiting Antiferromagnetic Coupling to a Singly Reduced η^4-COT Ligand", *Organometallics*, **2014**, *33*, 7101.[#] ***This was a top 20 downloaded (most read) article for December 2014.***

96. A. W. Pierpont, E. R. Batista, R. L. Martin, W. Chen, J. K. Kim, C. J. Hoyt, J. C. Gordon, R. Michalczyk and L. A. P. Silks: "Origins of the Stereoselectivity in the Lutetium Triflate Catalyzed Ketalization of Glycerol and Acetone: A DFT Study", *ACS Catalysis* **2015**, *5*, 1013.[#]

97. J. L. Brown, M. B. Jones, S. D. Reilly, A. J. Gaunt, B. L. Scott, J. C. Gordon: "Synthesis and Isolation of Ln(III) Di- and Tetranuclear Complexes Supported by Chelating Tripodal Tris(Amidate) Ligands", *Inorg. Chem.*, **2015**, *54*, 4064.

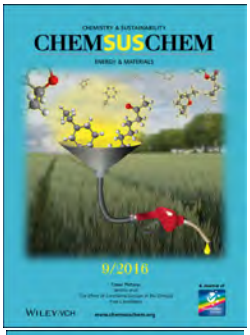
98. O. T. Summerscales, J. A. Stull, B. L. Scott, J. C. Gordon: "Synthesis and Reactivity of Square Planar Diamido-Pyridine Complexes Based on Earth-Abundant First Row Transition Elements", *Inorganic Chemistry*, **2015**, *54*, 6885.[#]

99. P. A. Dub, B. L. Scott, J. C. Gordon: "Air-Stable NNS (ENENES) Ligands and their Well Defined Ru and Ir Complexes for Outer-Sphere Molecular Catalysis" *Organometallics,* **2015**, *34*, 4464.[#]

100. A. D. Sutton, D. L. Clark, B. L. Scott, J. C. Gordon: "Synthesis of Novel Cerium(IV) Metallocenes", invited contribution, *Inorganics* **2015**, *3*, 589.[#]

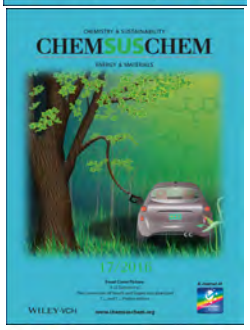
101. P. A. Dub, B. L. Scott, J. C. Gordon: "First-Row Transition Metal Complexes of ENENES Ligands: The Ability of the Thioether Donor to Impact the Coordination Chemistry", *Dalton Transactions,* **2016**, *45*, 1560.[#]

102. P. A. Dub, J. C. Gordon: "The Mechanism of Enantioselective Ketone Reduction by the Noyori and Noyori–Ikariya Bifunctional Catalysts", invited review, featured as front cover article, *Dalton Transactions*, 2016, *45*, 6756.[#]



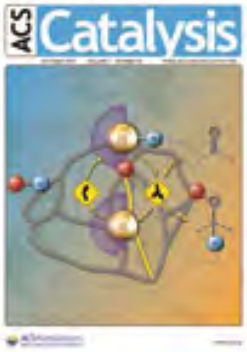
103. A. E. King, S. C. E. Steiber, N. J. Henson, S. A. Kozimor, B. L. Scott, N. C. Smythe, A. D. Sutton, and J. C. Gordon: "Ni(bpy)(cod): A Convenient Entryway into the Efficient Hydroboration of Ketones, Aldehydes, and Imines", *EurJIC*, **2016**, *11*, 1635.[#]

104. R.W. Jenkins, C. M. Moore, T. A. Semelsberger, C. J. Chuck, J. C. Gordon, A. D. Sutton: "The Effect of Functional Groups in Bioderived Fuel Candidates", review, *ChemSusChem*., 2016, *9*, 1051, *featured as back cover article.*



105. A. D. Sutton, J. K. Kim, R. Wu, C. B. Hoyt, D. B. Kimball, L. A. Silks III, J. C. Gordon: "The Conversion of Starch and Sugars into Branched C_{10} and C_{11} Hydrocarbons", featured as front cover article, *ChemSusChem*, 2016, *9*, 2298.

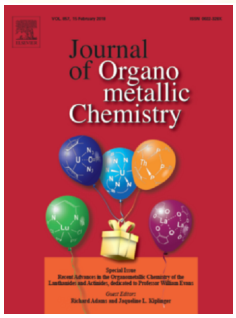
106. Mukhopadhyay, T. L. Groy, N. C. Smythe, J. C. Gordon, R. J. Trovitch: "Reactivity of (Triphos)$FeBr_2$(CO) towards Sodium Borohydrides", *J. Coord. Chem.* **2016**, *69*, 2038.



107. P. A. Dub, B. L. Scott, J. C. Gordon: "Why Does Alkylation of the N–H functionality Within M/NH Bifunctional Noyori-Type Catalysts Lead to Turnover?", *J. Am. Chem. Soc.*, **2017**, *139*, 1245.[#]

108. P. A. Dub, J. C. Gordon: "Metal–Ligand Bifunctional Catalysis: The "Accepted" Mechanism, the Issue of Concertedness, and the Function of the Ligand in Catalytic Cycles Involving Hydrogen Atoms" *ACS Catalysis*, 2017, *7*, 6635. *Featured as a supplementary cover article.*

109. A. D. Sutton, B. L. Scott, D. L. Clark, J. C. Gordon: "Lutetium Functionalities Supported by a Sterically Encumbered β-Diketiminate Ligand", *Journal of Organometallic Chemistry*, **2018**, *857*, 187.[#] *Invited contribution for the William J. Evans Special Journal Issue on Organometallic Lanthanide and Actinide Complexes*.



110. P. A. Dub, J. C. Gordon: "The Role of the Metal Bound N–H Functionality in Noyori-Type Molecular Catalysts", *invited review, Nature Reviews Chemistry*, 2018, *2*, 396.[#] *Featured as the cover article.*

111. M. A. Santiago Cordoba, J. S. Spendelow, A. N. G. Parra-Vasquez, L. A. Kuettner, P. M. Welch, C. E. Hamilton, J. A. Oertel, J. G. Duque, E. J. Meierdierks, T. A. Semelsberger, J. C. Gordon, M. N. Lee "Ultralight Carbon Aerogels from Co-continuous Emulsions", *Adv. Funct. Mater.* **2020**, *30*, 1908383. *Featured as a back cover article*.

112. P. A. Dub, R. J. Batrice, J. C. Gordon, B. L. Scott, Y. Minko, J. G. Schmidt, R. F. Williams "Engineering Catalysts for Selective Ester Hydrogenation"*Organic Process Research and Development*, **2020**, *24,* 415.

113. R. J. Batrice, J. C. Gordon "Powering the Next Industrial Revolution: Transitioning from Nonrenewable Energy to Solar Fuels via CO_2 Reduction" Minireview, *RSC Adv.*, 2021, *11*, 87.#

114. S. Sharma, G. A. Andrade, S. Maurya, I. A. Popov, E. R. Batista, B. L. Davis, R. Mukundan, N. C. Smythe, A. M. Tondreau, P. Yang, J. C. Gordon "Iron-Iminopyridine Complexes as Charge Carriers for Non-Aqueous Redox Flow Battery Applications", *Energy Storage Materials*, **2021**, *37*, 576.#

115. V. K. Do, L. Zhang, A. J. Chavez, N. Alfonso, P. A. Dub, R. P. Currier, J. C. Gordon, T. J. Williams "Pressurized Formic Acid Dehydrogenation: An Entropic Spring Replaces Hydrogen Compression Cost," *Catal. Sci. Technol.,* **2022***, 12, 7182.*

116. N. C. Smythe, J. Mondal, J. Duque, R. K. Feller, M. Flores, J. C. Gordon, N. J. Henson, M. Paz-Pasternak, F. N. Rein, B. L. Scott, R. D. Taylor, R. J. Trovitch "Historical Account of Dinitrogen-Bridged Diiron Complex Synthesis Using a Commercial Tripodal Ligand," *ChemComm*, **2025,** *61*, 9908

INVITED, KEYNOTE AND PLENARY LECTURES AND TALKS

1992 Los Alamos National Laboratory.
Department of Chemistry and Biochemistry, University of Notre Dame.

1995 BF Goodrich Company, R&D Center, Brecksville, OH. USAF Phillips Laboratory, Edwards AFB, CA.
Oak Ridge National Laboratory, Oak Ridge, TN.

1996 Schumacher, Carlsbad, CA.

1998 Tokyo Electron Limited (Arizona)
CST-Division, Los Alamos National Laboratory, Los Alamos, NM.

1999 Symyx Technologies, Santa Clara, CA.

2000 University of Kentucky, Lexington, KY.

2001 Florida State University, Tallahassee, FL.

University of Nebraska-Lincoln, Lincoln, NE.

University of Texas at Austin, Austin, TX.

NSF Inorganic Chemistry Workshop, Shanty Creek Resort, MI**.**

2002 University of California at Berkeley, Berkeley, CA.

Rare Earths Research Conference 2002, University of California at Davis, Davis, CA Inorganic

Chemistry Gordon Research Conference, Salve Regina University, Newport RI. IUCCP Symposium,

Texas A&M University, College Station, TX

University of Texas at Austin, Austin, TX.

Plenary Lecturer, Rocky Mountain Sectional Meeting of the ACS, Albuquerque, NM.

2004 In "*Modern Aspects of Main-Group Chemistry*"; Symposium held in honor of Professor Alan H. Cowley, FRS (70th birthday celebration); Spring National ACS Meeting, Anaheim, CA.

2005 In Symposium entitled **"***2005 Recipient of the ACS Award in Inorganic Chemistry: William J.*

Evans"; Spring National ACS Meeting, San Diego, CA.

NSF Workshop on Inorganic Chemistry, Lansdowne Resort, Lansdowne, VA.

Health Science Center, University of New Mexico, Albuquerque, NM.

Department of Chemistry, University of Minnesota-Twin Cities, Minneapolis, MN.

Department of Chemistry, Syracuse University, Syracuse, NY.

Department of Chemistry and Biochemistry, Columbia University, New York, NY.

2007 In symposium entitled "Frontiers in Catalysis", University of Florida, Gainesville, FL.

Laboratoire de Chimie de Coordination (CNRS), Toulouse, France.

Fall National ACS Meeting, Boston, MA.

Department of Chemistry and Biochemistry, University of Missouri-St.Louis.

2008 Department of Chemistry and Biochemistry, Brown University.

Department of Chemistry and Biochemistry, University of Notre Dame.

Annual Hydrogen Symposium, Purdue University.

2009 In symposium entitled "Award for Distinguished Service to Inorganic Chemistry; Alan H. Cowley", Spring National ACS Meeting, Salt Lake City, UT.

In "Symposium in Honor of Jeff Hay", Fall National ACS Meeting, Washington DC.

2010 Department of Chemistry, University of Southern California.

Department of Chemistry and Biochemistry, University of California, Los Angeles.

Department of Chemistry, University of California, Santa Barbara.

2011 26th Rare Earth Research Conference (RERC 11), Santa Fe,

NM. IME Boron XIV Conference, Niagara Falls, Canada.

Southwest Regional ACS Meeting, Austin, TX.

2012 Spring National ACS Meeting, San Diego, CA.

Organometallic Chemistry Gordon Research Conference, Salve Regina University, Newport, RI.

2013 Summer Lecture Series, Los Alamos National Laboratory.

2014 Department of Chemistry, University of Oxford, Oxford, England, UK.

School of Chemistry, University of Nottingham, Nottingham, England, UK.

School of Chemistry, University of Edinburgh, Edinburgh, Scotland, UK.

Department of Pure and Applied Chemistry, University of Strathclyde, Glasgow, Scotland, UK.

19th International Symposium on Homogeneous Catalysis, Ottawa, Canada.

In symposium entitled "Biofuels for Powering the World" at the 248th ACS National Meeting, San Francisco, CA.

2nd International Symposium on Energy Challenges and Mechanics (ECM2), Aberdeen, Scotland, UK.

Department of Chemistry and Biochemistry, Arizona State University, Tempe, AZ (October).

2015 In Symposium entitled "*2015 Recipient of the ACS Award in Organometallic Chemistry"*: in honor of *William J. Evans*"; Spring National ACS Meeting, Denver, CO (March).

Department of Chemistry, University of Nevada at Reno, Reno, NV (May).

Symposium in honor of Prof. Alan Cowley's retirement - University of Texas at Austin (October).

2016 In Symposium entitled **"***2016 Harry Gray Award for Creative Work in Inorganic Chemistry by a Young Investigator*": in honor of *Eric J.* Schelter, Spring National ACS Meeting, San Diego, CA (March)

In Symposium entitled *"Frontiers in Heavy Element Inorganic Chemistry*": in honor of Al Sattelberger, Spring National ACS Meeting, San Diego, CA (March)

In Symposium entitled "*Tackling the Challenging Electronic Structure of Actinides":* in honor of Richard Martin"; Spring National ACS Meeting, San Diego, CA (March).

At *TechConnect 2016*, Gaylord National Resort and Convention Center (May)

Department of Chemistry, University of California at Irvine, Irvine, CA (October)

Department of Chemistry, University of California at San Diego, San Diego, CA (October)

2017 In Symposium entitled "*Glenn T. Seaborg Award for Nuclear Chemistry*": in honor of David L. Clark, Spring National ACS Meeting, San Francisco, CA (March).

2018 Graduate School of Engineering, University of Tokyo, Tokyo, Japan (March)

Graduate School of Science, Tohoku University, Sendai, Japan (March)

RIKEN, Wakō (Tokyo), Japan (March)

Department of Chemical Science and Engineering, Tokyo Institute of Technology, Tokyo, Japan (March)

Graduate School of Science, University of Nagoya, Nagoya, Japan (March)

Okinawa Institute for Science and Technology (OIST), Graduate University, Okinawa, Japan (March)

98th Annual Meeting of the Chemical Society of Japan (*Plenary Lecture - Special Invited Lecture by a Foreign Guest*), Funabashi Campus, College of Science and Technology, Nihon University, Funabashi, Japan (March)

National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba Science City, Ibaraki, Japan (March)

Brown University, Providence, RI, November, 2018

2019 Invited talk in special symposium for Professor Tom Baker, National ACS Meeting, Orlando, FL (April)

Invited keynote lecture at *5th EuChemS Inorganic Chemistry Conference (EICC-5)*, Moscow, Russia - declined due to travel/visa requirements.

OTHER PRESENTATIONS RELATED TO RESEARCH (~70)

- M. J. Chetcuti, J. C. Gordon, B. E. Grant, K. A. Green, S. R. McDonald: "Inorganic and Organometallic Chemistry on Ni-Mo and Ni-W bonds", 194th American Chemical Society National Meeting, New Orleans, LA; September **1987**.

- M. J. Chetcuti, J. C. Gordon, K. A. Green: "Substitution reactions of heterobimetallic bridging alkyne complexes", Purdue-Indiana-Notre Dame Universities' Inorganic Chemistry Symposium, Indiana University; October **1987**.

- M. J. Chetcuti, J. C. Gordon, P. E. Fanwick: "Protonation of Bridging Alkyne Complexes containing a Nickel-Group 6 Metal Bond", Purdue-Indiana-Notre Dame Universities' Inorganic Chemistry Symposium, University of Notre Dame; October **1988**.

- M. J. Chetcuti, J. C. Gordon, B. E. Grant, S. R. McDonald: "Heterobimetallic Chemistry of Group 6 Group 10 Metal Complexes" American Chemical Society Mini-Symposium in Inorganic Chemistry, 197th American Chemical Society National Meeting, Dallas, TX; April **1989**.

- M. J. Chetcuti, J. C. Gordon: "Heterobimetallic Complexes as Building Blocks for Mixed Metal Tetranuclear Clusters", Purdue-Indiana-Notre Dame Universities' Inorganic Chemistry Symposium, Purdue University; October **1989**.

- R. Poli, J. C. Gordon, J. U. Desai: "Thermal decarbonylation reactions of $Cp^*Mo(CO)_2X_3$ complexes",(Cp^* = η-C_5Me_5; X = Cl, Br, I)", Inorganic Gordon Research Conference, Wolfboro, NH; July **1991**.

- R. Poli, J. C. Gordon: "The Question of Metal-Metal Bonding in Edge-Sharing Bioctahedral Mo(III) Complexes", 203rd American Chemical Society National Meeting, San Francisco, CA; April 1992.

- R. Poli, J. C. Gordon, P. E. Fanwick: "Synthesis and properties of Cp*MoXn (Cp^* = η^5-C_5Me_5; X = Cl, Br, I; n = 2, 3)", 204th American Chemical Society National Meeting, Washington D.C.; September 1992.

- D. L. Clark, J. C. Gordon, J. C. Huffman, R. L Vincent, J. G. Watkin, B. D. Zwick: "Synthesis, Properties and X-Ray Structures of Novel Lanthanide η^6-Arene Bridged Dimers [Ln(O-2,6-*i*-$Pr_2C_6H_3)_3]_2$ (Ln = Nd, Sm)", Inorganic Gordon Research Conference, Wolfboro, NH; July **1993**.

- J. U. Desai, J. C. Gordon, H. B. Kraatz, B. E. Owens-Waltermire, R. Poli, A. L. Rheingold: "The Redox Behavior of Cp^*Mo-Bromide Systems: The Unusual Structure of a Compound Containing Mo(III), Mo(IV), and Mo(V), $[Cp^*_2Mo_2Br_4]_2[Cp^*MoBr_4]_3$", Inorganic Gordon Research Conference, Wolfboro, NH; July **1993**.

- D. M. Barnhart, D. L. Clark, J. C. Gordon, J. G. Watkin, B. D. Zwick: "Thorium Alkoxide Chemistry: Preparation and Structural Studies of Thorium Tetrakis(di-*iso*-propylmethoxide) and its Lewis Base Adducts", 206th American Chemical Society National Meeting, Chicago; August **1993**.

- D. L. Clark, J. C. Gordon, J. G. Watkin, B. D. Zwick: "Synthesis, Characterization and Reactivity of Thorium Alkoxides." *Actinides-93* International Conference, Santa Fe, NM; September **1993**.

- D. M. Barnhart, D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "Thorium Alkoxide Chemistry: Preparation and Structural Studies of Thorium Tetrakis(di-*iso*-propylmethoxide) and it's Lewis Base Adducts. X-Ray Structures of $[Th(OCH\text{-}i\text{-}Pr_2)_4]_2$, $Th(OCH\text{-}i\text{-}Pr_2)_4$(quin) and $ThI(OCH\text{-}i\text{-}Pr_2)_3py_2$" 5th Annual Joint Meeting of the New Mexico Sections of the American Ceramics Society and Materials Research Society, Albuquerque, NM; October **1993**.

- D. M. Barnhart, D. L. Clark, J. C. Gordon, J. G. Watkin, B. D. Zwick: "Tetrameric Lanthanide Neopentoxide Complexes with Ln···H-C Interactions: X-Ray Crystal Structure of $Ln_4(OCH_2\text{-}t\text{-}Bu)_{12}$ (Ln = La, Nd)." 5th Annual Joint Meeting of the New Mexico Sections of the American Ceramics Society and Materials Research Society, Albuquerque, NM; October **1993**.

- D. L. Clark, J. C. Gordon, J. C. Huffman, R. L. Vincent, J. G. Watkin, B. D. Zwick: "Synthesis, Properties and X-Ray Structures of Novel Lanthanide η^6-Arene Bridged Dimers [Ln(O-2,6-*i*-$Pr_2C_6H_3)_3]_2$ (Ln = Nd, Sm)." 5th Annual Joint Meeting of the New Mexico Sections of the American Ceramics Society and Materials Research Society, Albuquerque, NM; October **1993**.

- D. L. Clark, J. C. Gordon, J. C. Huffman, J. G. Watkin, B. D. Zwick: "Synthesis and Properties of Lanthanide Aryloxide Complexes Containing the Bulky 2,6-Di-*iso*-propylphenoxide Ligand." 207th American Chemical Society National Meeting, San Diego; March **1994**.

- D. L. Clark, J. C. Gordon, R. L. Vincent-Hollis, J. G. Watkin, B. D. Zwick: "The Synthesis and Reactivity of Transition Metal η^6-Arene Complexes using Metal Vapor Synthesis", 207th American Chemical Society National Meeting, San Diego; March **1994**.

- R. D. Butcher, D. L. Clark, J. C. Gordon, J. G. Watkin, B. D. Zwick: Monocyclopentadienyl Complexes of the f-Elements", Inorganic Gordon Research Conference, Wolfboro, NH; July **1994**.

- J. J. Schwab, J. D. Lichtenhan, K. P. Chaffee, J. C. Gordon, Y. A. Otonari, M. J. Carr, A. G. Bolf: "Investigations into Structure Property Relationships for Polyhedral Oligomeric Silsesquioxane (POSS) Based Methacrylate Polymers." 213th American Chemical Society National Meeting, San Francisco; April **1997.**

- "Actinide-Aluminate Speciation in Alkaline Radioactive Waste"; S. F. Agnew, D. L. Clark, R. J. Donohoe, P. B. Duval, J. C. Gordon, D. W. Keogh, D. E. Morris, M. P. Neu, C. D. Tait; Gordon Research Conference on Inorganic Chemistry, Newport, RI, July 1999.

- S. F. Agnew, D. L. Clark, R. J. Donohoe, P. B. Duval, J. C. Gordon, D. W. Keogh, D. E. Morris, M. P. Neu, C. D. Tait; "Actinide-Aluminate Speciation in Alkaline Radioactive Waste";Gordon Research Conference on Inorganic Chemistry, Newport, RI, July 1999.

- M. P. Neu, D. L. Clark, S. D. Conradson, R. J. Donohoe, J. C. Gordon, D. W. Keogh , D. E. Morris, R. D. Rogers, B. L. Scott, C. D. Tait: "Structure and Stability of Actinides (U, Np, Pu) Under Strongly Alkaline Radioactive Waste Tank Conditions." 218th American Chemical Society National Meeting, New Orleans, LA; August **1999**.

- S. F. Agnew, D. L. Clark, R. J. Donohoe, P. B. Duval , J. C. Gordon, D. W. Keogh. D. E. Morris, M. P. Neu, C. D. Tait : "Uranium Aluminate Speciation Related to High-Level Waste Tank Remediation.**"** 218th American Chemical Society National Meeting, New Orleans, LA; August **1999**.

- D. L. Clark, S. D. Conradson, J. C. Gordon, P. L. Gordon, D. W. Keogh, P. D. Palmer, B. L. Scott, C. D. Tait, J. G. Watkin: "Identification of the Limiting Species in the Pu(IV) and Ln(III) Carbonate System. Solid State and Solution Molecular Structures." *Radionuclides Migration Conference, Lake Tahoe, NV,* **1999**.

- J. C. Gordon, J. T. Brady, D. L. Clark, D. W. Keogh, B. L. Scott, J. G. Watkin: "Some New Sm(II) and Sm(III) Chemistry Containing Alkoxide and Aluminate Ligation." 219th American Chemical Society National Meeting, San Francisco, CA; April **2000.**

- J. C. Gordon, D. L. Bond, D. L. Clark, R. J. Donohoe, P. L. Gordon, D. W. Keogh, B. L. Scott, C. D. Tait, J. G. Watkin: "Lanthanide Carbonates: Synthesis and Characterization of Several New Structural Types." 219th American Chemical Society National Meeting, San Francisco, CA; April **2000.**

- C. D. Tait, D. L. Clark, S. D. Conradson, R. J. Donohoe, J. C. Gordon, P. L. Gordon, D. W. Keogh, W.D. Konze, D. E. Morris "Effect of Aluminate On The Speciation of the Actinides Under Tank Waste Conditions" 222nd American Chemical Society National Meeting, Chicago, IL, Aug **2001**.

- J. C. Gordon, D. L. Clark, G. R. Giesbrecht, P. J. Hay, D. W. Keogh, R. L. Martin, B. L. Scott, J. G. Watkin: **"**New Challenges in Multiple Bonding Between Lanthanides and Main-Group Elements", Inorganic Chemistry Gordon Research Conference, Newport, RI; July **2001**.

- T. M. Cameron, J. C. Gordon, P. J. Melfi, R. Michalczyk, B. L. Scott: "Novel Lutetium Complexes Supported by Sterically Demanding Monoanionic Ligands", Inorganic Chemistry Gordon Research Conference, Newport, RI; July **2003**.

- D. L. Clark, G. R. Giesbrecht, J. C. Gordon, P. J. Hay, B. L. Scott, C. D. Tait: "Mechanisms of Exchange for π-Arene Bridged Anilido and Aryloxide Dimers", Inorganic Chemistry Gordon Research Conference, Newport, RI; July **2003**.

- G. R. Giesbrecht, D. L. Clark, Gordon, J. C. Gordon; Scott, B. L. Scott: "Mono-Cyclopentadienyl Complexes of the Lanthanides" 226th ACS National Meeting, New York, NY, United States, September **2003**.

- P. Shukla, J. C. Gordon, A. H. Cowley, J. N. Jones: "Coordination Chemistry of α-Diimines and β-Aminoenones Bearing Electron Withdrawing Groups", 227th American Chemical Society National Meeting; Anaheim, CA, March **2004**.

- J. C. Gordon, G. R. Giesbrecht, T. M. Cameron, D. L. Clark; Scott, B. L. Scott, P. J Hay, R. Poli: "Lanthanide Metal-Ligand Multiple Bonds: A New Bonding Paradigm for 4f Elements", 227th ACS National Meeting, Anaheim, CA, United States, March **2004**.

- R.T. Baker, B. L. Davis, J. C. Gordon, K. C. Ott, W. Tumas: "Progress in the Regeneration of Spent Ammonia Borane Fuels"234th ACS National Meeting, Boston, MA, United States, August **2007**.

- J. C. Gordon, R. T. Baker, A. K. Burrell, B. L. Davis, H. V. Diyabalanage, C. W. Hamilton; M. Inbody, K. Jonietz, K. C. Ott, V. Pons, *et. al*.: "Chemical Hydrogen Storage at Los Alamos" 234th ACS National Meeting, Boston, MA, United States, August **2007**.

- B. L. Davis, M. H. Matus, F. H. Stephens, D. A Dixon, J. C Gordon: "Regeneration of Spent Ammonia Borane Fuels"**,** 235th American Chemical Society National Meeting; New Orleans, LA, April **2008**.

- A. D. Sutton, J. C. Gordon, D. L. Clark, B. L. Scott, "Covalency Within 4*f*-Element Complexes." 237th ACS National Meeting, Salt Lake City, UT, March **2009**.

- S. K. Hanson, R. T. Baker, J. C. Gordon, B. L. Scott, D. L. Thorn: "Catalytic Aerobic Oxidation of Diols and 1,2-Hydroxyethers Catalyzed by Vanadium(V) Dipicolinate Complexes." *Organometallic Research Gordon Conference,* July **2009**, Salve Regina, RI. *Selected as one of 6 outstanding posters to give a research talk (Dr. Susan K. Hanson, presenter).*

- A. D. Sutton, B. L. Davis, J. C. Gordon: "Regeneration of Ammonia Borane Spent Fuel." 238th ACS National Meeting, Washington, DC, August **2009**.

- J. C. Gordon: "Some Approaches Towards Hydrogen Storage and Biomass Utilization at Los Alamos", University of Southern California, March **2010**.

- N. C. Smythe, R. T. Baker, J. C. Gordon, C. W. Hamilton, B. L. Scott: "Complexes for Ammonia Borane Dehydrogenation using Earth-Abundant Metals", 239th ACS National Meeting, San Francisco, CA, March, **2010**.

- J. C. Gordon: "Low Temperature Catalysis for Transportation Fuels and Chemical Feedstocks", LANL Chemical Sciences Capability Review, Los Alamos National Laboratory, Los Alamos, NM, May **2010**.

- J. C. Gordon: "Biomass Conversion to Fuels and Chemical Feedstocks", invited speaker, Science of Signatures, Biosecurity Workshop, LANL, August **2010**.

- J. C. Gordon: "Upgrading of Biorenewables to High Energy Density Fuels", in symposium entitled "Thermochemical and Metal-Catalyzed Transformations of Biomass to Petrochemical Feedstocks, Polymer Precursors and Fuels", Pacifichem 2010, Honolulu, HI, Dec **2010**.

- J. C. Gordon: "Some Recent Efforts in Chemical Hydrogen Storage at Los Alamos", in symposium entitled "Advances in Chemistry and Materials for Hydrogen Storage", Pacifichem 2010, Honolulu, HI, Dec **2010**.

- A. W Pierpont, E. R Batista, W. Chen, J. C. Gordon, R. L Martin, R. Michalczyk, L. A. ("Pete") Silks III**:** "DFT Studies of Stereoselectivity in Lanthanide-catalyzed Acetal and Ketal Formation from Biorenewable Polyols", 241st ACS National Meeting, Anaheim, CA, March **2011**.

- K. V. Vasudevan, N. A. Smith, B. L Scott, J. C. Gordon, R. E. Muenchausen, "Development of $CeBr_3$ Nanoparticles Using Single Source $CeBr_3$ Solvate Precursors", 241st ACS National Meeting, Anaheim, CA, March **2011**.

- A. W Pierpont, E. R Batista, W. Chen, J. C. Gordon, R. L Martin, R. Michalczyk, L. A. "Pete" Silks III**: "**DFT Studies of Stereoselectivity in Lanthanide-catalyzed Acetal and Ketal Formation from Biorenewable Polyols", 242nd ACS National Meeting, Denver, CO, Aug **2011**.

- C. R. Waidmann, E. R Batista, J. C. Gordon, R. L. Martin, A. W. Pierpont, L.A. Silks III, R. Wu: "Furan ring-opening of biomass-derived substrates", 242nd ACS National Meeting, Denver, CO, Aug **2011**.

- P. Silks, J. K. Kim, W. Chen, R. Wu, J. C. Gordon, R. Michalczyk: "Use of carbohydrates and triglycerides for the production of fuels and chemical feedstocks", 242nd ACS National Meeting, Denver, CO, Aug **2011**.

- J. M. Keith, E. R. Batista, R. L. Martin, R. Wu, L. P. Silks, J. C. Gordon: "Catalyzed conversion of non-food biomass to fuels: Probing the mechanism of the initial C--C bond forming step"**,** 242nd ACS National Meeting, Denver, CO, Aug **2011**.

- R. Wu, P. Silks, J. C. Gordon, R. Michalczyk, C. J. Unkefer: "Catalyzed conversion of non-food biomass to fuels and chemicals: Use of algal and carbohydrate feedstocks", 242nd ACS National Meeting, Denver, CO, Aug **2011**.

- A. W Pierpont, E. R. Batista, R. L. Martin, C. R. Waidmann, J. C Gordon, L. A. P. Silks, R. Wu: "Protonation of Biomass-Derived Substrates: A Computational Challenge", 243rd ACS National Meeting, San Diego, CA, March **2012**.

- K. V. Vasudevan, N. A Smith, J. C Gordon, B. L Scott, R. E Muenchausen: "Development of $CeBr_3$ Materials for Gamma Detection**",** 243rd ACS National Meeting, San Diego, CA, March **2012**.

- C. R Waidmann, E. R Batista, R. L Martin, A. W. Pierpont, B. L. Scott, J. C. Gordon: "Metal Catalyzed Reduction of Olefins and Ketones in Biomass-Derived Substrates", 243rd ACS National Meeting, San Diego, CA, March **2012**.

- N. C. Smythe, J. C. Gordon, N. J. Henson, F. N Rein, B. L. Scott, R. J. Trovitch: "Dinitrogen Functionalization Chemistry at Los Alamos", 243rd ACS National Meeting, San Diego, CA, March **2012**.

- N. C. Smythe, J. Duque, R. K. Feller, J. C Gordon, N. J Henson, M-P. Pasternak, F. N Rein, B. L Scott, R. D. Taylor, R. J Trovitch: "Fe-based Dinitrogen Chemistry at Los Alamos", 245th ACS National Meeting, New Orleans, LA, April **2013.**

- A. D. Sutton, J. C. Gordon, P. Silks, R. Wu, M. Schlaf: Conversion of Oligosaccharides into Alkanes, 245th ACS National Meeting, New Orleans, LA, April **2013**.

- K. V. Vasudevan, N. A. Smith, M. P Hehlen, B. L. Bennett, R. E. Muenchausen, J. C Gordon, B. L Scott: "Progress in $CeBr_3$ Science and Scintillator Technology", 245th ACS National Meeting, New Orleans, LA, April **2013**.

- A. E. King, J. C Gordon, A. D Sutton: "Improvement of the Hydrodeoxygenation of Bioderived Substrates via Mechanistic Studies", 246th ACS National Meeting, Indianapolis, IN, September **2013**.

- J. L. Brown, A J. Gaunt, M. B. Jones, S. D. Reilly, B. L. Scott, T. J. Boyle, C. E. MacBeth, J. C. Gordon: "Coordination Chemistry of Lanthanide and Actinide Complexes with Mixed O- and N-donor Ligand Scaffolds", 247th ACS National Meeting, Indianapolis, IN, March **2014.**

- P. A. Dub, N. Henson, R. Martin, J. Gordon: **"**Unravelling the Mechanism of the Asymmetric Hydrogenation of Acetophenone by [RuX_2(diphosphine)(1,2-diamine)] Catalysts", International Symposium on Homogeneous Catalysis, Ottawa, CA, July **2014**.

- J. C. Gordon, A. E. King, P. Silks, A D. Sutton, R. Wu: "Upgrading Carbohydrates into Hydrocarbons for Fuels Applications", 248th ACS National Meeting, San Francisco, CA, August **2014.**

- P. A. Dub, B. L. Scott, J. Gordon: "A Bifunctional Ir/NH Hydrogenation Catalyst with a Reversed NH/NMe Substitution Effect" Organometallic Chemistry Gordon Research Conference, Salve Regina University, Newport, RI, July **2015**.

- P. A. Dub, J. C. Gordon: "Bifunctional Ir/NH Hydrogenation Catalyst with a Reversed NH/ NMe Substitution Effect", Pacifichem 2015, Honolulu, HI, December **2015**.

- P. A. Dub, J. C. Gordon: "Metal–Ligand Bifunctional Mechanism and Metal–Ligand Cooperation: Critical Analyses of Catalytic Cycles Involving H_2" 251st ACS National Meeting, San Diego, CA, March **2016**.

- P. A. Dub, J. C. Gordon: "Is an N–H Functionality Always Needed to Have a Practical Hydrogenation Catalyst ?". Green Chemistry Gordon Research Conference, Stowe, VT, July **2016**. *Selected as one of 3 outstanding posters to give a research talk (Dr. Pavel A. Dub, presenter).*

- J. C. Gordon, B. L. Scott, P. A. Dub: "Some New Perspectives on the Efficient Outer Sphere Hydrogenation of Ketonic Substrates", 252nd ACS National Meeting, Philadelphia, PA, August, **2016.**

- P. A. Dub, J. C. Gordon: "Why Does Alkylation of the N–H Functionality within M/NH Bifunctional Noyori-Type Catalysts Lead to Turnover", 253rd ACS National Meeting, San Francisco, CA, April, **2017.**

- P. A. Dub, J. C. Gordon: **"**What Does the Revised Mechanism of the Noyori Hydrogenation Reaction Mean for Future Catalyst Design?", Organometallic Chemistry Gordon Research Conference, July 2017, *one of only six posters selected for short talks*.

- J. C. Gordon: " Some Recent Chemistries for Renewable Energy from Brookhaven National Laboratory", Canadian Chemistry Conference and Exhibition (CSC 2023), June 2023, Vancouver, BC, Canada.