CURRICULUM VITAE

John C. Gordon

Laboratory Fellow

Inorganic, Isotope and Actinide Chemistry Group (C-IIAC)
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EDUCATION

Ph.D. in Chemistry (Prof. Michael J. Chetcuti, mentor), University of Notre Dame, Notre Dame, IN, 1990.

B.Sc. (Hons) in Chemistry, University of Glasgow, Glasgow, Scotland, UK, 1985.

PROFESSIONAL EXPERIENCE

Scientist 5, Inorganic, Isotope and Actinide Chemistry Group, Los Alamos National Laboratory, 2010-present

Scientist 4, Inorganic, Isotope and Actinide Chemistry Group, Los Alamos National Laboratory, 2008-2010

Deputy Director, DOE Chemical Hydrogen Storage Center of Excellence, 2008-2010

Group Leader, Inorganic, Isotope and Actinide Chemistry Group, Los Alamos National Laboratory, 2006-2008

Detailee Program Manager, Office of Basic Energy Sciences, US DOE, 2003-2006

Technical Staff Member, Actinide, Catalysis and Separations Group, Los Alamos National Lab, 2001-2006

Associate Director, G. T. Seaborg Institute for Transactinium Science, Los Alamos National Lab, 2002-2003

Technical Staff Member, Nuclear Materials Technology Division, Los Alamos National Lab, 1999-2001

Senior Research Chemist, Schumacher, a Unit of Air Products and Chemicals Inc., Carlsbad, CA, 1996-1998

Principal Scientist, Hughes STX Corporation, USAF Phillips Laboratory, Edwards AFB, CA, 1995-1996

Postdoctoral Research Associate (Drs. David Clark and John Watkin, mentors), CST-Division, LANL, 1992-1995

Postdoctoral Research Associate (Prof. Rinaldo Poli, mentor), University of Maryland, College Park, MD, 1990-1992

CONFERENCE ORGANIZATION ROLES

Chair Elect, *Organometallic Chemistry Gordon Research Conference*, Salve Regina University, Newport, RI 2017.

Vice Chair, *Organometallic Chemistry Gordon Research Conference*, Salve Regina University, Newport, RI 2016.

Organizer, "*Homogeneous Catalysis Methodologies for the Upgrading of Biomass Derived Molecules*"; symposium was 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.

Session Moderator, 2nd International Symposium on Energy Challenges and Mechanics, August 19th-21st, 2014 in Aberdeen, Scotland, UK.

Session Chair, IME Boron XIV Conference, Niagara Falls, Canada, September 2011.

Organizer, "*Recycling Carbon: Catalyzed Conversion of Non-Food Biomass to Fuels & Chemicals*" (I&EC Division, primary sponsor); symposium held during the 242nd ACS National Meeting, Denver, August 2011.

Organizer, LANSCE neutron scattering summer school, LANL, July 2011.

Organizer, DOE OBES Catalysis and Chemical Transformations Contractors' Meeting, 2005.

Session Chair, ACS Award Symposium, (Prof. Bill Evans, recipient), 229th ACS National Meeting, 2005.

Organizer, DOE OBES Catalysis and Chemical Transformations Contractors' Meeting, 2004.

Session Chair, Inorganic Research Gordon Conference, July 2003.

Organizer, Schumacher Annual Dielectrics and Metallization Symposium, 1998.

Chemical industry representative, SEMATECH committee reviewing Aluminum CVD Technologies, 1997.

Session Chair, Organometallic Chemistry Session, 210th National ACS Meeting, 1995.

Session Chair, DOE/OBES Separations Conference, Santa Fe, NM; June 1995.

SERVICE TO PROFESSIONAL JOURNALS AND FUNDING AGENCIES

Member, International Advisory Board, *European Journal of Inorganic Chemistry* (*EurJIC*), currently.

Member, Editorial Advisory Board, *Main Group Chemistry*, 2012-present.

Member, Editorial Advisory Board, *Inorganic Chemistry*, 2011-2014.

Guest Editor, Special Forum Issue, *Inorganic Chemistry*, entitled "Aspects of Inorganic Chemistry Related to Nuclear Energy" (**2013,** *52*, Issue 7) .

Guest Editor, *Main Group Chemistry*: Special Edition (Vol 11(1), 2012) Highlighting 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).*

Manuscript reviewer for ACS journals; *Inorganic Chemistry, Organometallics, J. Am. Chem. Soc., I&E Chemistry Research, Chemistry of Materials, ACS Catalysis.*

Manuscript reviewer for RSC journals; *Chemical Communications, Dalton Transactions, Energy & Environmental Science, Chemical Science.*

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*.

ADVISORY ROLES AND COMMITTEES

Member, Fellows Prize Selection Committee, LANL, 2016.

Member, Laboratory Fellow Selection Committee, LANL, 2016.

Review Panelist, DOE EFRCs, Bethesda, MD, January 2016.

Member, Laboratory Fellow Selection Committee, LANL, 2015.

Member, Fellows Prizes Selection Committee, LANL, 2015.

Member, LANL Synthesis Capability Assessment Team (supported by the Associate Directorate for Science, Technology and Engineering), currently.

Committee Member, Complex Natural and Engineered System component, FY16 LDRD-DR Strategic Investment Plan (SIP), LANL (2015).

Member, Director's Colloquium Advisory Board, LANL, 2013-present.

Chair, Inorganic, Isotope and Actinide Chemistry Group Leader Search Committee, LANL, 2013.

Proposal reviewer, scientific program content for AAAS Annual Meeting, 2013.

LANL LDRD Directed Research Category; Institutional Strategy Team Member, 2012.

Chair, Chemistry Deputy Division Leader Search Committee, LANL, 2011-2012.

Invited Onsite Reviewer, DOE Office of Basic Energy Sciences (Catalysis and Chemical Transformations Program), Oak Ridge National Laboratory, November 2011.

Chair, LANL Committee tasked by ADCLES and SPO-SC with internal OBES programs self assessment, 2011.

LANL Laboratory Directed Research and Development Program, Science Advisory Panel Member, 2010, 2011.

LANL LDRD program, Early Career Research Award Committee member, 2010.

LANL Chemistry Division, "Red Team" member for review of LDRD DR category pre-proposals, 2009-2012.

Chair, ADCLES "Red Team" for review of LDRD DR category pre-proposals, 2011, 2012.

LANL ADCLES "Red Team" member for review of LDRD DR category pre-proposals, 2009, 2010.

LANL Postdoctoral Program Committee Member, representing Chemistry Division, 2007-2010.

External Member, Chemistry Ph.D. Thesis Committees, University of Texas at Austin (2003, 2006, 2009).

Invited to contribute a book chapter for "Reaction Pathways and Mechanisms in Thermocatalytic Biomass Conversion". This book is planned as a special volume in the Springer book series "Green Chemistry and Sustainable

Participated in "Faces of Science" for LANL's public website and LANL's 70th anniversary. Research highlighted in the Bradbury Science Museum in Los Alamos.

OTHER PROFESSIONAL ACTIVITIES

Participated in "Faces of Science" for LANL's public website and LANL's 70th anniversary. Research highlighted in the Bradbury Science Museum in Los Alamos.

PROFESSIONAL HONORS AND AWARDS

Fellow, American Institute of Chemists (AIC), 2015.

Laboratory Fellow, Los Alamos National Laboratory (LANL), 2014.

Fellow, Royal Society of Chemistry (RSC), 2014.

Fellow, American Association for the Advancement of Science (AAAS), 2011.

Fellows Prize, Los Alamos National Laboratory (LANL), 2011.

Exceptional Mentor Award, Chemistry, Life and Earth Sciences Directorate, LANL, 2010.

PATENTS GRANTED

"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

PATENT APPLICATIONS FILED

"Reduction of Olefin and Ketone Groups in Non-food Biomass Derived Substrates Using Copper-Phosphine Catalysts", US Provisional Patent Application No. 61/614,414, filed on March 22, 2012.

"One Step Conversion of Oligomeric Starch or Cellulose to Single C_{10} or C_{11} Carbon Chains Furans and their Conversion to Fuel Hydrocarbons", US Provisional Patent Application No. 61/669,980, filed July 10th, 2012.

"Conversion of Oligomeric Starch, Cellulose or Sugars to Hydrocarbons", International Patent Application No. PCT/US2012/055337 filed Sept. 14, 2012 (claiming priority of US provisional application no. 61/669,980, filed July 10, 2012)

"Ligands and Complexes for Catalytic Hydrogenation of Carboxylic and Carbonic Acid Derivatives", US Provisional Patent Application No. 62/009,483, filed June 9th, 2014.

"Iron Complexes for Coupling of Ketones or Aldehydes", US Provisional Patent Application No. 62/033,032, filed August 4th, 2014.

"Ligands and Complexes for Catalytic Hydrogenation", US Provisional Patent Application No. 62/118386, filed February 19th, 2015.

"Ligands and Complexes for Catalytic Hydrogenation", US Provisional Patent Application No. 62/130,977, filed March 10, 2015.

"Ligands and Complexes for Catalytic Hydrogenation", US Provisional Patent Application No. 62/136,085, filed March 20, 2015.

"Polydentate Ligands and Their Complexes for Molecular Catalysis", International Patent Application No. PCT/US2015/034793 filed June 9, 2015 claiming priority of US Provisional Patent Appl. Nos. 62/009,483 filed June 9, 2014; 62/118,386 filed Feb. 19, 2015; 62/130,977 filed March 10, 2015 and; 62/136,085 filed March 20, 2015.

PROFESSIONAL SOCIETIES

Member, American Association for the Advancement of Science, *currently*.

Member, American Chemical Society (also Inorganic Chemistry Division), *currently*.

Member, Royal Society of Chemistry, *currently*.

RECENT FUNDING PORTFOLIO

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).

DOE EERE BETO “NFVSO (New Fuels and Vehicle Systems Optima) – Co-optimization of Fuels and Engines” Multi-Lab Project (LANL, Co-I) FY16-18 $2.1M

PI: DOE-EERE (BETO): “Economical Catalytic Routes to Fuels and Chemicals Utilizing Hydrolysates & Fully Bio-Derived Inputs”, $300k/yr (FY’16-18).

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: DOE-EERE (BETO): “Hydrolyzed Lignocellulose as a Feedstock for Fuels Synthesis”, $484k (FY’14, 15).

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: “New Earth Abundant Metal Catalysis for Hydrogenation of Biomass Derived Substrates”, $275k (FY’14).

PI: J. R. Oppenheimer Distinguished Postdoctoral Fellowship (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: LANL Director’s PD Research Fellowship (awarded to Dr. Owen Summerscales), ~ $150k/yr (FY’ 2012-2014).

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: LANL Director’s PD Research Fellowship (awarded to Dr. Owen Summerscales), ~ $150k/yr (FY’ 2012-2014).

PI: “Developing a Mild Catalytic Route for the Reduction of N_2 to NH_3” Laboratory Directed Research and Development Program (LANL): ~$350k/yr (FY’2011-2013).

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

My research interests fall into areas broadly defined as; (1) synthesis, structure and bonding of p-, d-, and f-block elements; (2) catalysis for energy applications, including energy storage and release, and; (3) f-element materials chemistry.

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 PhD., 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.*

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*.

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

NOTABLE EXTERNAL COLLABORATORS

Professor Rinaldo Poli: ENSIACET and Laboratoire de Chimie de Coordination, Toulouse, France.

Professor Alan H. Cowley, FRS: University of Texas at Austin.

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

NOTABLE LANL COLLABORATORS

Dr. Dave Clark, National Security Education Center

Drs. Jeff Hay (retired), Rich Martin, Enrique Batista and Neil Henson (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 Argonne National Laboratory)

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
*(corresponding author highlighted by #; reviews and cover articles highlighted by***)*

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^* = $\eta^5\text{-}C_5Me_5$) 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.

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.

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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. 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.[#]

103. 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.[#]

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, featured as back cover article, *ChemSusChem*., **2016**, *9*, 1051.

105. T. K. 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.

106. A. D. Sutton, J. K. Kim, R. Wu, C. B. Hoyt, D. B. Kimball, L. A. Silks III, J. C. Gordon: "The Conversion of Sugars into Branched Hydrocarbons", *ChemSusChem*, ***appeared online, 18th July 2016***, DOI: 10.1002/cssc.201600669.[#] *Will appear as a front cover article when published with volume and page numbers.*

107. P. A. Dub, B. L. Scott, J. C. Gordon: "Challenging the Metal–Ligand M/NH Bifunctional Concept: Is an NH Functionality Always Needed?", *Science Advances*, ***submitted***.

108. C. M. Moore, R. W. Jenkins, J. C. Gordon, A. D. Sutton: "Recent Advances in Selective Catalysis for Biomass Valorization", review article, *ACS Catalysis*, ***submitted.***

109. P. A. Dub, S. Kozuch, J. C. Gordon: "A New Mechanistic Philosophy of Bifunctional Catalysis", for submission to *J. Am. Chem.Soc.*

110. N. C. Smythe, J. Duque, R. K. Feller, J. C. Gordon, N. J. Henson, M. Paz-Pasternak, F. N. Rein, B. L. Scott, R. D. Taylor, R. J. Trovitch: "Cooperative N_2 Binding by a Formally Fe(0) Complex" for submission to *J. Am. Chem. Soc.*

111. A. D. Sutton, T. Nakagawa, A. K. Burrell, J. C. Gordon: "Efficient Regeneration of Ammonia Borane from Hydrogen Depleted (Poly)aminoborane and Borazine", for submission to *Angew. Chem. Int. Ed.*

112. A. E King, S. C. E. Stieber, V. Fleischauer, J. G. Murphy, N. J. Henson, S. A. Kozimor, B. L. Scott, A.D. Sutton, N. C. Smythe, M. L. Neidig, and J. C. Gordon: "Establishing the Electronic Structure of Formally Iron(0) BIAN Arene Complexes: How Innocent is the BIAN Ligand?", for submission to *Organometallics*.

113. O. T. Summerscales, J. C. Gordon, B. L. Scott: "Metal-Metal Bonded Transition Metal Dimers Based on the Diamino-Amide Ligand", for submission to *Eur. J. Inorg. Chem.*

114. A. D. Sutton, J. C. Gordon, D. L. Clark, B. L. Scott: "Synthesis and Derivatization of Lutetium β-Diketonate Complexes", for submission to *Inorg. Chem.*

INVITED TALKS AND SEMINARS

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 Cnference 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.

Keynote Lecture at 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: 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 aYoung 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).

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

OTHER PRESENTATIONS RELATED TO RESEARCH

1. 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**.

2. 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**.

3. 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**.

4. 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**.

5. 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**.

6. 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**.

7. 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**.

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

9. 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 $[Ln(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_3]_2$ (Ln = Nd, Sm)", Inorganic Gordon Research Conference, Wolfboro, NH; July **1993**.

10. 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**.

11. 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**.

12. 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**.

13. 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**.

14. 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**.

15. 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 $[Ln(O\text{-}2,6\text{-}i\text{-}Pr_2C_6H_3)_3]_2$ (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**.

16. 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**.

17. 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**.

18. 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**.

19. 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.**

20. "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**.

21. 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**.

22. 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**.

23. 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**.

24. 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.**

25. 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.**

26 C. D. Tait, D. L. Clark, S. D. Conradson, R. J. Donohoe, J. C. Gordon, P. L. Gordon, D. W. Keogh, W. V. 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**.

27. 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**.

28. 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**.

29. 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**.

30. 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**.

31. 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**.

32. 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**.

33. 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**.

34. 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**.

35. 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**.

36. 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**.

37. 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).*

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

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

40. 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**.

41. 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**.

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

43. 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**.

44. 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**.

45. 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**.

46. 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**.

47. 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**.

48. 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**.

49. 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**.

50. 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**.

51. 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**.

52. 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**.

53. 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**.

54. 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**.

55. 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**.

56. 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.**

57. 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**.

58. 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**.

59. 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**.

60. 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.**

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