WAYNE STATE UNIVERSITY

PROFESSIONAL RECORD

Date prepared: October 25, 2002
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Name: **Cláudio Nazari Verani**

Office address:
Department of Chemistry, Room 143
5101 Cass Ave, Detroit, MI 48202
Office phone: **313 577 1076**

Home address:
15453 N. Royal Doulton Blvd.
Clinton Township 48038
Cell phone: **586 838 6174**

DEPARTMENT/COLLEGE: Department of Chemistry / College of Liberal Arts and Sciences

PRESENT RANK & DATE OF RANK: Full Professor, August 2013

WSU APPOINTMENT HISTORY:

Year appointed: **2002** Rank: **Full Professor - Tenured**
Year awarded Tenure: **2008**
Year promoted to Associate Professor: **2008**
Year promoted to Full Professor: **2013**
Year appointed to CLAS - Associate Dean of Research: July 2017
Year renewed to CLAS - Associate Dean of Research: July 2020

DATE & PLACE OF BIRTH: May 09, 1970 in Orleans, Brazil
CITIZEN OF: U.S.A., Brazil

EDUCATION:

High School:

1985-1986 **Maximiliano Gaidzinky Ceramic Technology Institute, Cocal do Sul, Brazil**
1987 **Dehon High School, Tubarão, Brazil**

Undergraduate (Bacharelado):

1988 **Chemical Engineering, Federal University of Sta. Catarina (UFSC), Florianopolis, Brazil**
1989-1993 **B.Sc. in Chemistry, UFSC, Brazil**
Undergraduate research:
1992-1993, Synthesis of organic macrocycles (Advisor: B. Szpoganicz)
1990-1992, Photochemistry of asymmetric porphyrins (Advisor: C. Franco)

M.Sc. Degree (Mestrado):

1996 **M.Sc. in Inorganic Chemistry, UFSC, Brazil**
Thesis title: Synthesis and characterization of models for copper enzymes
Advisor: Ademir Neves
Final grade: Distinção e Louvor (Summa cum laude)

Ph.D. Degree (Doktor der Naturwissenschaft):

2000 **Max-Plank Institute for Radiation Chemistry (MPI - Strahlenchemie) & Ruhr-University Bochum, Germany**

Signature: _____ 11/15/21

Thesis title: Rational synthesis of paramagnetic heteropolynuclear systems containing $[M_A\text{-}M_B\text{-}M_C]$, $[M_A\text{-}M_B]_2$ and $[M_{1\text{-}2}(\bullet R)_{1\text{-}2\text{-}3}]$ cores
Advisors: Karl Wieghardt and Phalguni Chaudhuri
Final grade: "A" (Sehr Gut)

Graduate work (postdoctoral):

3/2000- 8/2000 **Invited scientist, MPI für Strahlenchemie Mülheim/Ruhr, Germany**
Mentor: Karl Wieghardt

9/2000 to 7/2002 **Post-doctoral associate, Johns Hopkins University, Baltimore, MD**
Mentor: Kenneth Karlin

PROFESSIONAL SOCIETY MEMBERSHIPS: American Chemical Society – ACS

BIOGRAPHICAL CITATIONS: *h*-index* of 28 (Web of Knowledge)

*The *h*-index is an attempt to measure both the productivity and impact of the published work of a scientist or scholar. A scientist has index *h* if a number *h* of the total number of papers published has at least *h* citations each. By this measure, at least 20 of my papers have been cited 20 or more times.

HONORS/AWARDS/DISTINCTIONS:

1990-1993 CNPq-sponsored* scholarship for undergraduate research
Nationwide competition in Brazil
* CNPq is the National Council for Research or Conselho Nacional de Pesquisa

1994-1996 CNPq-sponsored scholarship for graduate studies
Nationwide competition in Brazil

1997-2000 DAAD-sponsored** scholarship for graduate studies in Germany
Nationwide competition in Brazil
** DAAD is the German Service of Academic Exchange or Deutscher Akademischer Austausch Dienst

1997 DAAD guest at the Meeting of Nobel Prize Laureates - Lindau, Germany.

2000 Max-Planck-Society fellowship
Invited scientist (*Gastwissenschaftler*) at the Max Planck Institut für Strahlenchemie, Mülheim an der Ruhr, Germany

2009 WSU-Karmanos Cancer Institute, Fellow

2011 Recipient of the WSU 2011-2012 Career Development Chair

2011 Profile in the WSU magazine *New Science*; "*Inspiration… from nature to inorganic chemistry*"

2012 Young Investigator Award – Gordon Research Conference of Metals in Medicine

2013 Research on metallosurfactants showcased on the cover of *RSC-Dalton Transactions*

2014 Visiting scholar (sabbatical leave) at Argonne National Laboratory, Chicago, IL

2014-2016 "Special Guest Researcher and Lecturer" at Federal University of Niteroi, Brazil (1 month each year)

2015 Profile in the Brazilian newspaper *Notícias do Dia* (Daily News); *"The Santa Catarina-born Claudio Verani wanted to be a scientist by age 3… At 44 he is professor and scientist at Wayne State University in Detroit, United States*

2015 WSU-Outstanding Graduate Mentor Award

2015 IUPAC-Young Investigator Award – Busan, Korea

2016 WSU-President's Award for Excellence in Teaching

2017 Ebbing Faculty Development Award

I. TEACHING

A. Years at Wayne State: 19 years and 4 months

B. Years at Other Colleges/Universities (please list): no previous appointments

C. Courses Taught at Wayne State in the Last Five Years: (F = fall; W = winter)

1. Undergraduate
CHM 1000 – Chemistry and Your World (2008W, 2013W)
CHM 3000 – Metals in Biology (2014F, 2015F, 2016F)
CHM 3020 – Intermediate Inorganic Chemistry (2004W, 2005W, 2010W)
CHM 6070 – Advanced Bioinorganic Chemistry (2011W, 2015W, 2016W, 2017W)

2. Graduate
CHM 7020 – Physical Inorganic Chemistry (2007W; 2009W; 2010F)
CHM 8090 – Adv. Topics in Coordination Chemistry (2007F; 2008F; 2010W, 2012F)
CHM 8820 – Inorganic Seminars (2008F; 2010F; 2013W; 2016W; 2017W)
CHM 7070 – Advanced Bioinorganic Chemistry (2011W, 2015W, 2016W, 2017W)
CHM 7770 – Writing Proposals in Chemical Research (2017F, 2018F, 2019F)

3. Mentoring
CHM 5999 – Senior Research in Chemistry (continuously since 2002)
CHM 8700 – Research in Chemistry (continuously since 2003)
CHM 8999 – Master's Thesis Research and Direction (continuously since 2004)
CHM 999X – Doctoral Candidacy Status (continuously since 2004)

D. Essays/Theses/Dissertations Directed:
1. Students by Name, Level, Title of Project, Year:

Masters students:

1. Camille Imbert Hoffman — *M.Sc. Thesis - 2005*
"Redox, Magnetic and Structural Behavior of Iron(III), Cobalt(III), and Gallium(III) Complexes of Electroactive Asymmetric Ligands" - *Currently a senior director for Galapagos Pharma*

2. Sarmad Hindo — *M.Sc. Thesis – 2005*
"Synthesis, Structure, Electrochemistry, Spectroscopy, and Reactivity of Phenolate-based Copper(II) Archetypes and Modules for Magnetic Soft Materials"
- Currently an assistant professor at Wake Forest U. Greensboro, NC

3. Brittany Venglarcick *M.A. 2016*
- Currently a materials engineer at General Motors, Warren, MI

Doctoral students:

1. Rajendra Shakya — *Ph.D. Dissertation -2007*

	"Asymmetry and Cluster Incorporation in Metal-containing Soft Materials" *- Currently an assistant professor at Broward College, Fort Lauderdale, FL*
2. Jeffery Driscoll	*Ph.D. Dissertation -2008* "Copper-containing Surfactants: Synthesis, Amphiphilic and Mesogenic Properties *- Currently an Intelligence specialist with the U.S. NAVY*
3. Sarmad Hindo	*Ph.D. Dissertation -2009* "Renaissance of Phenolate Chemistry: From Materials to Drugs" - *Currently an assistant professor at Wake Forest U. Greensboro, NC*
4. Marco Allard	*Ph.D. Dissertation -2010* "Experimental and Theoretical Analysis of the Electronic Behavior in Five-coordinate Iron(III) and Six-coordinate Cobalt(III) Complexes with Electroactive Phenol-rich Ligands" *- Currently an associate professor at La Sierra University, Riverside, CA*
5. Sree Rama Shanmugam	*Ph.D. Dissertation -2011* "Synthesis, Redox Properties, and Langmuir Monolayer Formation of Selected 3*d* and 4*d* Metalloamphiphiles" *- Currently an adjunct professor at Kean University, Union County, NJ*
6. Frank D. Lesh	*Ph.D. Dissertation-2012* "Synthesis, Spectroscopic and Electrochemical Properties of 3*d* Metal and Ruthenium Complexes" *- Currently a research chemist at Henkel North America, Warren, MI*
7. Dakshika Wanniarachchi	*Ph.D. Dissertation-2013* "Development of New Ruthenium/terpyridine Complexes for Water Oxidation" *- Currently a lecturer II at U. Kelanyia, Sri Lanka*
8. Lanka Wickramasinghe	*Ph.D. Dissertation-2014* "Redox-active Trivalent Metallosurfactants with Low Global Symmetry for Molecule-based Electronics" *- Currently a senior chemist at Solvay, Houston, TX*
9. Dajena Tomco	*Ph.D. Dissertation-2014* "Probing Proteasome Inhibition by Metal Complexes as a New Route for Anticancer Therapy" *- Currently a chemistry lecturer at Wayne State U.*

	Detroit, MI
10. Ryan Thomas	Ph.D. Dissertation-2015 (Co-advised with J. F. Endicott) "On the nature of excited states in ruthenium complexes: towards renewable energy *- Currently a Sr. environmental scientist at GHD Group, Buffalo, NY.*
11. Debashis Basu	*Ph.D. Dissertation-2015* "Investigation of New Ligand Architectures towards Proton and Water Reduction Catalysis by Cobalt Complexes" *- Currently a research assistant professor at U. Illinois, Chicago, IL.*
12. Sunalee Gonawala	*Ph.D. Dissertation-2016* "Electron Transfer Studies in Langmuir-Blodgett Films of Metallosurfactants for Current Rectification, Corrosion Mitigation, and Water Oxidation" *- Currently a research chemist at Qenos, Melbourne, Australia*
13. Kenneth Kpogo	*Ph.D. Dissertation-2017* "Evaluation of Earth-abundant Monometallic and Bimetallic Complexes for Catalytic Water splitting" *- Currently a Sr. research chemist at Moses Lake Industries, Moses Lake, WA*
14. Habib Baydoun	*Ph.D. Dissertation-2017* "Water Splitting Using Cobalt-based Amidopyridine Complexes" *- Currently a Sr. research chemist at Bissell Homecare in Grand Rapids, MI.*
15. Pavithra Kankanamalage	*Ph.D. Dissertation-2018* "Pyridine platforms for catalytic water reduction based on nickel and iron complexes" *- Currently a postdoctoral fellow at Argonne National Labs, Chicago, IL*
16. Danushka Ekanayake	*Ph.D. Dissertation-2019* "Insights and challenges in the development of molecular copper-based electrocatalysts for water reduction" *- Currently a postdoctoral researcher at Marquette U., Milwalkee, WI*
17. Nour El-Harakeh	*Ph.D. Dissertation-2019/2020* "Investigation of Mechanisms in 3d-containing Electro/Photocatalysts for Water/Proton Reduction" *- Currently a free-lancer in the Kansas City Metro Area.*

18. Isuri Weeraratne	*Ph.D. Dissertation-2021* "Induction and prevention of electron transport in Langmuir-Blodgett films of 3d-based metallosurfactants: Studies on current rectification and corrosion inhibition" - *Currently in between jobs in Sri Lanka*

Co-advised doctoral students:

1. Renata Crispim Batista	*Ph.D. Dissertation-2018; Advisor: M. Lanzanaster Universidade Federal Fluminense, Niteroi, Brazil* "Complexos de Cobalto(III) como Possíveis Modelos de Pró-drogas Seletivas para o Tratamento de Câncer" - *Currently faculty* (professor titular I) *at Serra da Mesa College, Goiania, Brazil*
2. Ana Carolina Precioso	*Ph.D. Dissertation-2019; Advisor: M. Lanzanaster Universidade Federal Fluminense, Niteroi, Brazil* "Complexos Mono-, Bi- e Trinucleares como Eletro- e Fotocatalisadores Moleculares para Produção de Hidrogênio" - *Currently living in Cologne, Germany*

E. Course or Curriculum Development:

1. Course development of "Writing Proposals in Chemical Research" (with Tom Linz)
2. New syllabi for CHM 8090, 7040, 7020, 3020, and 3000
3. Syllabus redesign in CHM 3000 to include Symmetry & Group Theory
4. New course development and syllabus for CHM 6070/7070

F. Course Materials (Unpublished):

1. Series of handouts for CHM 3000, 3020, 7020, 7040, and 8090
2. Series of PowerPoint slides in selected topics for CHM 7020, 7040, and 6070/7070
3. Series of PowerPoint slides for the entire course in CHM 1000 and 8090
4. Series of PowerPoint slides for CHM 3020
5. PowerPoint-based discussion for CHM 3020: Origin of elements and Cosmochemistry
6. PowerPoint-based discussion for CHM 3020: Saponification reactions
7. PowerPoint-based discussion for CHM 3020: Hydrogen economy
8. PowerPoint-based discussion for CHM 3020: Recycling & waste management
9. Experiment with Iodine, I_2, in different solvents to explain Lewis adduct formation
10. PowerPoint-based discussion for CHM 8090: Maya blue and Archaeochemistry
11. Cycle of student-based seminars for CHM 3000, 6070/7070, and 8090

II. RESEARCH

A. Research in Progress, Not Funded (Target agency for funding indicated):

1. Use of Langmuir-Blodgett films of metallosurfactants as pretreatment for corrosion mitigation in iron surfaces

B. Funded Research:

Current:

1. Department of Energy:
"Strategies for Water Oxidation with Abundant Metals: Catalyst Design, Immobilization on Conducting Substrates, and Sensitizer Integration"
Status: Verani, P.I.
Amount granted: **$ 650,000**
Funding date: August 2021 – September 2024

1. U.S. Army Corps of Engineers:
"Rare Earths from US Extractions (REUSE)" Y1
Status: Verani, collaborator.
Amount granted: **$ 100,000**
Funding date: September 2021 – September 2022

2. National Science Foundation:
"Attaining Configuration and Ligand Field Control over the SOMO/Fermi Gap in Molecular LB Films"
Status: Verani, P.I.
Amount granted: **$475,000**
Funding date: August 2019– August 2022

C. Previous Funding:

1. Department of Energy:
"A Concerted Synthetic, Spectroscopic, and Computational Approach towards Water Splitting by Multimetallic Complexes in Solution and on Surfaces" (Renewal)
Status: Verani, P.I. (John Endicott, Bernhard Schlegel, co-PIs)
Amount granted: **$ 170,000**
Funding date: October 2015 – September 2016

2. National Science Foundation:
"Redox, Electronic, and Rectifying Response of Five- and Six-coordinate Metallosurfactants in Solution, as Films, and on Electrodes"
Status: Verani, P.I.
Amount granted: **$449,000**
Funding date: June 2015 – May 2018 (at no cost extension to May 2019)

3. Conselho Nacional de Pesquisa (Brazilian Research Council)
"Development of new complexes of Co(III) as prototypes for photoactive and bioreductible metallopharmaceuticals"
Status: M. Lanznaster, P.I.; Verani, co-P.I.
Amount granted: ~ **$ 100,000** (from this amount travel and lodging will be covered for the co-P.I. as "Special Guest Researcher and Lecturer" for one month stay in Brazil every year over the funding period)
Funding date: October 2014 – September 2016

4. Department of Energy:

"A Concerted Synthetic, Spectroscopic, and Computational Approach towards Water Splitting by Multimetallic Complexes in Solution and on Surfaces" (Renewal)
Status: Verani, P.I. (John Endicott, Bernhard Schlegel, co-PIs)
Amount granted: **$ 1,505,000**
Funding date: October 2012 – September 2015

5. National Science Foundation:

"Redox-switching and Topology Control in Metallosurfactant Precursors for Supramolecular Films"
Status: Verani, single P.I.
Amount granted: **$ 489,822**
Funding date: June 1, 2010- May 31, 2013 (no cost extension through 2015)

6. Department of Energy:

"A Concerted Synthetic, Spectroscopic, and Computational Approach towards Water Splitting by Multimetallic Complexes in Solution and on Surfaces"
Status: Verani P.I. (John Endicott, Bernhard Schlegel, co-PIs)
Amount granted: **$ 1,320,000**
Funding date: May 2009 – April 2012

7. National Science Foundation:

"Bioinspired Complexes of Asymmetric Ligands as Redox-responsive Precursors toward Surface-based Molecular Electronics"
Status: Verani, single P.I.
Amount granted: **$ 350,000**
Funding date: June 2007-May 2010

8. American Chemical Society - Petroleum Research Fund type G:

"Ligand Design and Geometry Control in Electroactive Heterospin Precursors for Magnetic Switching"
Status: Verani, single P.I.
Amount granted: **$ 35,000**
Funding date: September 2005-August 2008

D. Fellowships/Grants/Special Awards:

1. WSU-OVPR-Graduate Research Assistant Support (Ms. Dajena Tomco):

"Probing the Inhibition Mechanisms of the 26S Proteasome by Metal Complexes"
Status: Verani, P.I.
Amount granted: **$ 19,646**
Award period: September 2011- August 2012

2. Karmanos Cancer Institute Pilot Fund:

"Prostate Cancer Proteasome as a Novel Molecular Target of Metal Complexes"
Status: Verani (P.I., 50 %), P. Dou (co-PI)
Amount granted: **$ 25,000**
Award period: July 2009- June 2010

3. Wayne State University Transformational Nanoscience Program,
"Water-splitting and Dioxygen Production Supported by Supramolecular Multimetallic Scaffolds in Solution, at Interfaces, and on Surfaces"
Status: Verani (P.I., 50 %), J. Endicott (co-PI)
Amount granted: **$ 99,000**
Award period: May 2008 to March 2010

E. Pending or Near-submission Proposals:

1. ACS - Petroleum Research Fund:
"PRF-ND - Selective metal recovery by ion flotation: Using coordination chemistry to accomplish specific interactions in metal:ligand:surfactant systems"
Status: Verani, P.I.
Amount granted: **$110,000**
Proposed funding date: September 2022– August 2023

2. U.S. Army Corps of Engineers:
Rare Earths from US Extractions (REUSE) Y2-3
Status: Verani, collaborator.
Amount granted: **$ 100,000-150,000 per year**
Funding date: September 2022 – September 2024

III. PUBLICATIONS:

Refereed Journals:

M.S., Ph.D., and Post-doctoral:

1. A. Neves, I. Vencato, **C. N. Verani** "Bis[2-(2-pyridilmethylaminomethyl)-phenol] Copper(II)diacetate trihydrate $[Cu^{II}(HBPA)_2](OAc)_2 . 3H_2O$" *Acta Crystallographica* **1996**, *C52*, 1648-1651

2. A. Neves, I. Vencato, **C. N. Verani** "Synthesis and characterization of the novel pseudo-octahedral complex bis[(2-hydroxybenzyl) - (2-methylpyridil)-amine] zinc(II), $[Zn^{II}(bpa)_2].2H_2O$ as a model for astacin" *Journal of the Brazilian Chemical Society* **1997**, *08*, 265-270

3. **C. N. Verani**, T. Weyhermüller, E. Rentschler, E. Bill, P. Chaudhuri "A rational assembly of a series of exchanged linear heteronuclear complexes of the type $M_AM_BM_C$ as exemplified by $Fe^{III}Cu^{II}Ni^{II}$, $Fe^{III}Ni^{II}Cu^{II}$ and $Co^{III}Cu^{II}Ni^{II}$" *Chemical Communications* **1998**, 2475-2476
(top 10 most accessed online articles)

4. A. Neves, **C. N. Verani**, M.A. de Brito, I. Vencato, A. Mangrich, G. Oliva, D.H.F. Souza, A. Batista "Copper(II) complexes with (2-hydroxybenzyl)(2-pyridilmethyl) amine – HBPA: Syntheses, characterization and crystal structures of the ligand and $[Cu^{II}(Hbpa)_2](ClO_4)_2 . 2H_2O$" *Inorganica Chimica Acta* **1999**, *290*, 207-212

5. **C. N. Verani**, S. Gallert, E. Bill, T. Weyhermüller, K. Wieghardt, P. Chaudhuri "[Tris(o-iminosemiquinone) cobalt(II) – a radical complex with an S = 3/2 ground state" *Chemical Communications* **1999**, 1747-1748

6. **C. N. Verani**, E. Rentschler, T. Weyhermüller, E. Bill, P. Chaudhuri "Exchange coupling in a bis(heterodinuclear) $[Cu^{II}Ni^{II}]_2$ and a linear heterotrinuclear complex $Co^{III}Cu^{II}Ni^{II}$. Synthesis, structures and properties" *Dalton Transactions* **2000**, 251-258

7. A. Doyle, J. Felcman, M.T.P. Gambardella, **C. N. Verani**, M.L.B. Tristão "Anhydrous copper(II) hexanoate from cuprous and cupric oxides. Crystal and molecular structure of $[Cu_2(O_2CC_5H_{11})_4]$" *Polyhedron* **2000**, *19*, 2621-2627

8. **C. N. Verani**, E. Rentschler, T. Weyhermüller, E. Bill, P. Chaudhuri "On the rational synthesis and properties of exchange-coupled heterotrinuclear systems containing $[M_A\text{-}M_B\text{-}M_B]$ and $[M_A\text{-}M_B\text{-}M_C]$ cores" *Dalton Transactions,* **2000**, 4263-4271

9. P. Chaudhuri, **C. N. Verani**, E. Bill, E. Bothe, T. Weyhermüller, K. Wieghardt "Electronic structure of [bis(o-iminobenzosemiquinonato)metal complexes (Cu, Ni, Pd). The art of stablishing physical oxidation states in transition metal complexes" *Journal of the American Chemical Society* **2001**, *123*, 2213-2223

10. **C. N. Verani**, E. Bothe, D. Burdinski, T. Weyhermüller, U. Flörke, P. Chaudhuri "Synthesis, structure, electrochemistry and magnetism of $[Mn^{III}Mn^{III}]$, $[Mn^{III}Fe^{III}]$ and $[Fe^{III}Fe^{III}]$ cores and the generation of phenoxyl-radical $[Fe^{III}Fe^{III}]$ species" *European Journal of Inorganic Chemistry* **2001**, 2161-2169

11. H. Chun, **C. N. Verani**, P. Chaudhuri, E. Bothe, E. Bill, T. Weyhermüller, K. Wieghardt "Molecular and electronic structure of octahedral o-aminophenolato and o-iminibenzosemiquinonato complexes of V(V), Cr(III), Fe(III), and Co(III). *Inorganic Chemistry* **2001,** *40*, 4157-4166

12. I. Wasser, C. F. Martens, **C. N. Verani**, E. Rentschler , H.-w.Huang, P. M. Loccoz, L. N. Zakharov, A. L. Rheingold, K. D. Karlin: Synthesis and spectroscopy of oxo (O^{2-})-bridged Heme/Nonheme diiron complexes. *Inorganic Chemistry* **2004**, *43*, 651-662

13. E. Chufan, **C. N. Verani**, S. Puiu, E. Rentschler, U. Schatzschneider, C. Incarvito, A. Rheingold, K. D. Karlin "Generation and Characterization of $[(P)M\text{-}(X)\text{-}Co(TMPA)]^{n+}$ Assemblies; P = Porphyrinate, M = Fe^{III} and Co^{III}, X = O^{2-}, OH^-, $O2^{2-}$, and TMPA = Tris(2-pyridylmethyl)amine" *Inorganic Chemistry* **2007**, *46*, 3017-3026

<u>Independent Research:</u> This research was developed at Wayne State University
The asterisk symbol (*) *denotes corresponding author*

14. C. Imbert, H. P. Hratchian, M. Lanznaster, M. J. Heeg, L. Hryhorczuk, B.R. McGarvey, H. B. Schlegel, **C. N. Verani*** "Influence of ligand rigidity and ring substitution on the structural and electronic behavior of trivalent iron and gallium complexes with asymmetric tridentate ligands" *Inorganic Chemistry* **2005**, *44*, 7414-7422

15. M. Lanznaster, H. P. Hratchian, M. J. Heeg, L. Hryhorczuk, B. R. McGarvey, H. B. Schlegel, **C. N. Verani*** "Structural and electronic behavior of unprecedented five-coordinate iron(III) and gallium(III) complexes with a new phenol-rich electroactive ligand" *Inorganic Chemistry* **2006**, *45*, 955-957

16. R. Shakya, C. Imbert, H. P. Hratchian, M. Lanznaster, M. J. Heeg, B. R. McGarvey, M. Allard, H. B. Schlegel, **C. N. Verani*** "Structural, spectroscopic, and electrochemical behavior of trans-phenolato

cobalt(III) complexes of asymmetric NN'O ligands as archetypes for metallomesogens" *Dalton Transactions* **2006**, 2517-2525 (selected to provide the cover art)

17. R. Shakya, F. Peng, J. Liu, M. J. Heeg, **C. N. Verani,*** "Synthesis, structure, and anticancer activity of gallium(III) complexes with asymmetric tridentate ligands: growth inhibition and apoptosis induction of cisplatin-resistant neuroblastoma cells" *Inorganic Chemistry* **2006**, *45*, 6263-6268

18. R. Shakya, P. H. Keyes, M. J. Heeg, A. Moussawel, P. A. Heiney, **C. N. Verani*** "Thermotropic mesomorphism of soft materials bearing carboxylate-supported μ_4-oxo tetracupric clusters" *Inorganic Chemistry* **2006**, *45*, 7587-7589

19. M. Lanznaster, M. J. Heeg, G. T. Yee, B. R. McGarvey, **C. N. Verani*** "Design of molecular scaffolds based on unusual geometries for magnetic modulation of spin-diverse complexes with selective redox response" *Inorganic Chemistry* **2007**, *46*, 72-78

20. D. Chen, M. Frezza, R. Shakya, C. Q. Cui, V. Milacic, **C. N. Verani,*** Q. P. Dou* **"**Inhibition of the proteasome activity by gallium(III) complexes contributes to their anti-prostate tumor effects" *Cancer Research* **2007**, *67*, 9258-9265 (both P.I.s contributed equally to the publication)

21. R. Shakya, S. S. Hindo, L. Wu, S. Ni, M. Allard, M. J. Heeg, S. R. P. da Rocha, G. T. Yee, H. P. Hratchian, **C. N. Verani,*** "Amphiphilic and magnetic properties of a new class of cluster-bearing $[L_2Cu_4(\mu_4\text{-}O)(\mu_2\text{-carboxylato})_4]$ soft materials" *Chemistry, A European Journal* **2007**, *13*, 9848-9956

22. R. Shakya, S. S. Hindo, L. Wu, M. Allard, M. J. Heeg, H. P. Hratchian, B. R. McGarvey, S. R. P. da Rocha, **C. N. Verani*** "Archetypical modeling and amphiphilic behavior of cobalt(ii)-containing soft-materials with asymmetric tridentate ligands" *Inorganic Chemistry* **2007**, *46*, 9808-9818

23. S. S. Hindo, R. Shakya, N. S. Rannulu, M. J. Heeg, M. T. Rodgers, S. R. P. da Rocha, **C. N. Verani*** "Synthesis, redox, and amphiphilic properties of responsive salycilaldimine-copper(II) soft materials" *Inorganic Chemistry* **2008**, *47*, 3119-3127

24. M. Frezza, **C. N. Verani,** D. Chen, Q. P. Dou,* "The therapeutic potential of gallium-based complexes in anti-tumor drug design" *Letters in Drug Design & Discovery* **2007**, *4*, 311-317 (selected to provide the art cover for Benthan Science Publishers sister journals Mini Reviews in Medicinal Chemistry and Current Medicinal Chemistry, where this work is highlighted)

25. J. A. Driscoll, P. H. Keyes, M. J. Heeg, P. A. Heiney, **C. N. Verani** "Influence of the apical ligand in the thermotropic mesomorphism of cationic copper-based surfactants" *Inorganic Chemistry* **2008**, *47*, 7225-7232

26. J. A. Driscoll, M. M. Allard, L. Wu, M. J. Heeg, S. R. P. da Rocha, **C. N. Verani** "Interfacial behavior and film patterning of redox-active cationic copper(II)-containing surfactants" *Chemistry, A European Journal* **2008**, *14*, 9665-9674

27. F. D. Lesh; S. S. Hindo, M. M. Allard, P. Jain, B. Peng, L. Hryhorczuk, **C. N. Verani**, "On the effect of coordination and protonation preferences in the amphiphilic behavior of metallosurfactants with asymmetric headgroups" *European Journal of Inorganic Chemistry* **2009,** 345-356

28. H. Jayathilake, J. Driscoll, A. Bordenyuk, L. Wu, S. R. P. da Rocha, C. N. Verani, A.V. Benderskii* "Molecular order in Langmuir-Blodgett monolayers of metal-ligand surfactants" *Langmuir* **2009**, *25*, 6880–6886

29. M. Frezza, S. S. Hindo, D. Tomco, M. Allard, Q. C. Cui, M. J. Heeg, D. Chen, Q. P. Dou*, **C. N. Verani* "**Comparative activities of nickel(II) and zinc(II) complexes of asymmetric [NN'O] ligands as 26S proteasome inhibitors" *Inorganic Chemistry* **2009**, *48***,** 5928–5937

30. S. Hindo, M. Frezza, D. Tomco, M. J. Heeg, L. Hryhorczuk, B. R. McGarvey, Q. P. Dou*, **C. N. Verani*** "Metals in anticancer therapy: Copper(II) complexes as inhibitors of the 20S proteasome" *European Journal of Medicinal Chemistry* **2009**, *44*, 4353-4361

31. S. S. Hindo, R. Shakya, R. Shanmugam, M. J. Heeg, **C. N. Verani* "**Metalloamphiphiles with $[Cu_2]$ and $[Cu_4]$ headgroups: Syntheses, structures, langmuir films, and effect of subphase changes" *European Journal of Inorganic Chemistry* **2009,** *31*, 4686-4694

32. C. N. Verani "Films of metal-containing surfactants" *The McGraw-Hill Yearbook of Science and Technology* **2010**, 142-145

33. F. D. Lesh, R. Shanmugam, M. M. Allard, M. Lanznaster, M. J. Heeg, M. T. Rodgers. J. M. Shearer, **C. N. Verani*** "A modular approach to redox-active multimetallic hydrophobes of discoid topology" *Inorganic Chemistry* **2010**, *49*, 7226–7228

34. F. Lesh, M. Allard, R. Shanmugam, L. Hryhorczuk, J. Endicott, H. B. Schlegel, and **C. N. Verani*** "Investigation of the electronic, photosubstitution, redox, and surface properties of new ruthenium(II)-containing amphiphiles" *Inorganic Chemistry* **2011**, *50*, 969–977 (article figured among the top publications of January 2011)

35. R. Shakya, M. Allard, M. J. Heeg, J. Shearer, B. ,McGarvey, **C. N. Verani*** "Modeling the geometric, electronic, and redox properties of iron(III)-containing amphiphiles with asymmetric [NN'O] headgroups" *Inorganic Chemistry* **2011**, *50*, 8356–8366

36. D. Tomco, S. Schmitt, B. Ksebati, M. J. Heeg, Q. P. Dou, **C. N. Verani*** "Effects of tethered ligands and of metal oxidation state on the interactions of cobalt complexes with the 26S proteasome" *Journal of Inorganic Biochemistry* **2011**, *105*, 1759-1766 (selected to provide the cover art)

37. F. D. Lesh, R. L. Lord, M. J. Heeg, H. B. Schlegel, **C. N. Verani*** "Unexpected formation of a cobalt(III) phenoxazinylate electron reservoir" (Invited article for the Cluster Issue 'Coopertive & Redox Non-Innocent Ligands in Directing Organometallic Reactivity') *European Journal of Inorganic Chemistry* **2012**, *3*, 463–466

38. M. Frezza, S. Hindo, D. Chen, A. Davenport, S. Schmitt, D. Tomco, **C. N. Verani**, Q. P. Dou*, "Metal-based complexes as suitable platforms for anticancer drug design" *Encyclopedia of Proteins* **2012**

39. C. N. Verani "Probing the inhibition mechanisms of the 26S proteasome by metal complexes in tumorous cells" (*Invited review*) *Journal of Inorganic Biochemistry* **2012**, *106*, 59–67 (selected to provide the cover art)

40. M. Allard, J. Sonk, M. J. Heeg, B. McGarvey, H. B. Schlegel, **C. N. Verani*** "Bioinspired five-coordinate iron(III) complexes for stabilization of phenoxyl radicals" *Angewandte Chemie International Edition* **2012,** *51*, 3178–3182 (selected to provide the back cover art)

41. M. M. Allard, F. Xavier, M. J. Heeg, H. B. Schlegel, **C. N. Verani*** "Sequential phenolate oxidation in octahedral cobalt(III) complexes with $[N_2O_3]$ ligands." *European Journal of Inorganic Chemistry* **2012**, 4622–4631 (Invited article for the cluster issue 'Modern coordination chemistry and its impact for meeting global challenges')

42. D. Tomco, F. R. Xavier, **C. N. Verani*** "Probing ligand dissociation in cobalt(III) complexes as a viable mechanism for the inhibition of the 20S Proteasome" *Inorganica Chimica Acta* **2012** *393*, 269-275 (invited article for the special issue "Metals in Medicine" - James Dabrowiak, guest editor)

43. R. Shanmugam, F. R. Xavier, M. J. Heeg, **C. N. Verani*** "Electronic and interfacial behavior of bimetallic surfactants with copper(II)/pseudohalide cascade cores" *Dalton Transactions* **2013**, *2013, 42*, 15296–15306 DOI: 10.1039/c3dt50788b (selected to provide the back cover art)

44. L. D. Wickramasinghe, M. M. Perera, L. Li, G. Mao, Z. Zhou, **C. N. Verani*** "Rectification in Nanoscale Devices Based on an Asymmetric Five-Coordinate Iron(III)/Phenolate Complex" *Angewandte Chemie International Edition* **2013** *52,* 13346 –13350 DOI: 10.1002/anie.201306765

45. N. Farrell, A. Neves, M. Vargas, C. Verani (Guest Editors) "Preface for the JIB Special Issue on Latin American Bioinorganic Chemistry" *Journal of Bioinorganic Chemistry* **2014** *132*, 1 DOI:10.1016/j.jinorgbio.2014.01.017

46. D. Tomco, S. Schmitt, M. J. Heeg, Q. P. Dou, **C. N. Verani*** "Inhibition of the 26S Proteasome as a Possible Mechanism for Toxicity of Heavy Metal Species" *Journal of Bioinorganic Chemistry* **2014** *132*, 96-103

47. D. C. Wanniarachchi, M. J. Heeg, **C. N. Verani*** "Effect of Substituents on the Water Oxidation Activity of $[Ru^{II}(terpy)(phen)Cl]^{+}$ Procatalysts" *Inorganic Chemistry* **2014**, *53*, 3311–3319

48. **C. N. Verani**,* J. Driscoll, P. H. Keyes, M. J. Heeg "Cationic Copper(II)-containing Surfactants: Molecular Structures, Film Morphology and Influence on the Alignment of Nematic Mesogens" *Inorganic Chemistry* **2014**, *53,* 5647−5655

49. L. D. Wickramasinghe, S. Mazumder, S. Gonawala, M. M. Perera, H. Baydoun, B. Thapa, L. Li, L. Xie, G. Mao, Z. Zhou, H. B. Schlegel, **C. N. Verani*** "Mechanisms of Rectification in Au|molecule|Au Devices Based on Langmuir-Blodgett Films of Iron(III) and Copper(II) Surfactants" *Angewandte Chemie International Edition* **2014**, *53*, 14462–14467

50. D. Basu, S. Mazumder, X. Shi, H. Baydoun, J. Niklas, O. Poluektov, H. B. Schlegel,* **C. N. Verani*** "Ligand Transformations and Efficient Proton/Water Reduction with Cobalt Catalysts Based on Pentadentate Pyridine-Rich Environments" *Angewandte Chemie International Edition* **2015**, *54*, 2105 –2110

51. D. Basu, M. Allard, F. Xavier, M. J. Heeg, H. B. Schlegel,* **C. N. Verani*** "Modulation of Electronic and Redox Properties in Phenolate-rich Cobalt(III) Complexes and their Implications for Catalytic Proton Reduction" *Dalton Transactions.* **2015**, *44*, 3454–3466

52. D. Basu, S. Mazumder, X. Shi, R. J. Staples, H. B. Schlegel,* **C. N. Verani*** "Distinct Proton and Water Reduction Behavior with a Cobalt(III) Electrocatalyst Based on Pentadentate Oximes" *Angewandte Chemie International Edition* **2015**, *54*, 7139-7143

53. D. Basu, S. Mazumder, X. Shi, D. Wanniarachchi, J. Niklas, O. Poluektov, R. Staples, H. B. Schlegel,* **C. N. Verani*** "Evaluation of the Mechanistic and Catalytic Behavior of Heteroaxial Cobat(III) Oxime Complexes towards Hydrogen Generation" *Chemical Science*, **2016**, *07,* 3264-3278

54. M. Johnson, L. Wickramasinghe, **C. N. Verani**,* R. R. Metzger* "Confirmation of the Rectifying Behavior in a Pentacoordinate [N2O2] Iron(III) Surfactant using a Eutectic Ga-In | LB monolayer | Au Assembly" *The Journal of Physical Chemistry C* **2016**, *120*, 10578−10583

55. D. Li, H. Baydoun, **C. N. Verani**, S. Brock* "Efficient Water Oxidation Using CoMnP Nanoparticles" *Journal of the American Chemical Society*, **2016**, *138*, 4006−4009

56. L. D. Wickramasinghe, S. Mazumder, K. K. Kpogo, R. J. Staples, H. B. Schlegel, **C. N. Verani*** "Electronic Modulation of the SOMO–HOMO Energy Gap in Iron(III) Complexes towards Unimolecular Current Rectification" *Chemistry – A European Journal* **2016**, *22*, 10786-10790

57. S. Gonawala, H. Baydoun, **C. N. Verani*** "Efficient Water Oxidation Using Langmuir-Blodgett Ultrathin Films of Cobalt-[N_2O_3] Surfactants on FTO Electrodes" *Chemical Communications* **2016** *52*, 8440-8443

58. S. Gonawala, V. R. Leopoldino, K. Kpogo, **C. N. Verani*** "Langmuir-Blodgett Films of Salophen-based Metallosurfactants as Surface Pretreatment Coatings for Corrosion Mitigation" *Chemical Communications* **2016** *52*, 11155-11158

59. P. H. A. Kankanamalage, S. Mazumder, V. Tiwari, K. K. Kpogo, H. B. Schlegel,* **C. N. Verani*** "Efficient electro/photocatalytic water reduction using a $[Ni^{II}(N_2Py_3)]^{2+}$ complex" *Chemical Communications* **2016**, *52*, 13357-13360

60. K. K. Kpogo, S. Mazumder, D. Wang, H. B. Schlegel, A. T. Fiedler,* **C. N. Verani*** "Bimetallic Cooperativity in Proton Reduction with an Amido-bridged Cobalt Catalyst" *Chemistry – A European Journal* **2017**, *23*, 9272 – 9279

61. H. Baydoun, S. Mazumder, H. B. Schlegel, **C. N. Verani*** "Deactivation of a Cobalt Catalyst for Water Reduction via Valence Tautomerism" *Chemistry – A European Journal* **2017** *23*, 9266 – 9271

62. D.M.B. Ekanayake, K. M. Kulesa, S. Mazumder, K. K. Kpogo, H. B. Schlegel, **C. N. Verani*** "Evidence for proton relay mechanisms in a copper-based polypyridine electrocatalyst capable of efficient water reduction" *Dalton Transactions* **2017**, *46*,16812–16820

63. M. S. Johnson, C. L. Horton, S. Gonawala, **C. N. Verani**,* R. M. Metzger* "Observation of current rectification bya new asymmetric iron(III) surfactant in a eutectic GaIn|LB monolayer|Au sandwich" *Dalton Transactions* **2018**, *47*, 6344–6350

64. H. Baydoun, J. Burdick, B. Thapa,L. Wickramasinghe, D. Li, J. Niklas, O. G. Poluektov, H. B. Schlegel, **C. N. Verani*** "Immobilization of an Amphiphilic Molecular Cobalt Catalyst on Carbon Black for Ligand-Assisted Water Oxidation" *Inorganic Chemistry* **2018**, *57*, 9748−9756

65. I. Brand,* J. Juhaniewicz-Debinska, L. Wickramasinghe, **C. N. Verani*** "An *in situ* spectroelectro-chemical study on the orientation changes of an $[Fe^{III}L^{N2O3}]$ metallosurfactant deposited as LB Films on gold electrode surfaces *Dalton Transactions* **2018**, *47*, 14218–14226 DOI: 10.1039/c8dt00333e

66. A. D. K. I. Weeraratne, H. Baydoun, R. Shakya, J. Niklas, L. Xie, G. Mao, S. A. Stoian, O. Poluektov **C. N. Verani*** "Observation of Current Rectification by the New Bimetallic Iron(III) Hydrophobe $[Fe^{III}{}_2(L^{N4O6})]$ on Au|LB-Molecule|Au Devices" *Dalton Transactions* **2018**, *47*, 14352–14361

DOI: 10.1039/c8dt03158d

67 D. Wang, D. M. Ekanayake, S. V. Lindeman, **C. N. Verani**,* A. T. Fiedler* "Multielectron Redox Chemistry of Transition Metal Complexes Supported by a Non-Innocent N3P2 Ligand: Synthesis, Characterization, and Catalytic Properties" *European Journal of Inorganic Chemistry* **2018,** 4133–4141 DOI: 10.1002/ejic.201800843

68 C. N. Verani* "Perspective review: Molecular rectifiers based on five-coordinate iron(III)-containing surfactants" *Dalton Transactions* **2018,** *47*, 14153–14168 DOI: 10.1039/C8DT02891E

69. **C. N. Verani**,* R. A. Layfield "Molecular metal-containing soft materials" (editorial to guest-edited theme issue) *Dalton Transactions* **2018**, *47*, 14123-14124 DOI: 10.1039/C8DT90168F

70. P. H. A. Kankanamalage, D. M. Ekanayake, N. Singh, A. C. P. de Morais, S. Mazumder,* **C. N. Verani**,* A. Mukherjee,* M. Lanznaster* "Effect of ligand substituents on nickel and copper [N4] complexes: electronic and redox behavior, and reactivity towards protons" *New Journalof Chemistry*, **2019**, *New J. Chem.*, **2019**, *43*, 12795-12803 DOI: 10.1039/C9NJ01283D

71. D. Basu, S. Mazumder, K. K. Kpogo, C. N. Verani "Influence of nitro substituents on the redox, electronic, and proton reduction catalytic behavior of phenolate-based [N2O3]-type cobalt(III) complexes" *Dalton Trans.*, **2019**, *48*, 14669–14677 DOI: 10.1039/c9dt03158h

72. A. D. K. I Weeraratne, C. C. Hewa-Rahinduwage, S. Gonawala, L. Luo, **C. N. Verani*** "A Molecular Approach for Mitigation of Aluminum Pitting based on Films of Zinc(II) and Gallium(III) Metallosurfactants" *Chemistry – A European Journal* **2019,** *25*, 14048-14053

73. A. D. K. I Weeraratne, C. C. Hewa-Rahinduwage, L. Luo,* **C. N. Verani*** "Electrochemical Quantification of Corrosion Mitigation on Iron Surfaces with Gallium(III) and Zinc(II) Metallosurfactants" *Langmuir*, **2020**, *36*, 14173-14180

74. I. M. Marzano, D. Tomco, R. J.Staples E. H. Lizarazo-Jaimes, D. Assis Gomes, Mônica Bucciarelli-Rodriguez, W. Guerrag, Í. P.de Souza, C. N.Verani* E. C.Pereira Maia* "Dual anticancer and antibacterial activities of bismuth compounds based on asymmetric [NN'O] ligands" *J. Inorg. Biochem.* **2021**, *222*, 111522

75. N. El-Harakeh, A. C. P. de Morais, N. Rani, J. A. G. Gomez, A. Cousino, M. Lanznaster,* S. Mazumder,* **C. N. Verani***, "Reactivity and Mechanisms of Photoactivated Heterometallic [$Ru^{II}Ni^{II}$] and [$Ru^{II}Ni^{II}Ru^{II}$] Catalysts for Dihydrogen Generation from Water" *Angew. Chem. Int. Ed.* **2021**, *60*, 5723-5728

Papers 14-31, 33-55, 58-59, 62, and 64 include mentored undergraduate students as co-authors.

A. Papers and Posters in Conference Proceedings and Abstracts

***Undergraduate, M.S., Ph.D., and Post-doctoral* (Presenting author is underlined)**

1993 XVI Annual Meeting of the Brazilian Chemical Society, Caxambú, Brazil

Poster. C. N. Verani, F. G. Mittelstadt, C. V. Franco "Optimization of the synthesis of H_2tppyp and use of spectrophotometric methods for purity determination of meso-tetraaryl porphyrins" (Undergraduate research)

1995 XVIII Annual Meeting of the Brazilian Chemical Society, Caxambú, Brazil
1. *Poster* . A. Neves, C. N. Verani "Synthesis and properties of the first copper complex with the ligand H_3bbppnol"
2. *Poster.* A. Neves, C. N. Verani, M. Brito, A. Horn "Synthesis and properties of the first copper complexes with the ligand H_3bbpmp"
3. *Poster.* A. Neves, S. Erthal, C. N. Verani, G. Zagonel, C. Figueiredo "Synthesis and properties of mononuclear complexes of Mn(II) and Cu(II) with the ligand Hbpa.
4. *Poster.* A. Neves, G. Martins, C. N. Verani "PAP's analogues: Synthesis and characterization of the complex Na[Fe_2(bbpmp)(MoO_4)]"

1995 XIII Meeting of the Brazilian Crystallographic Society, Campinas, Brazil
Poster. A. Neves, C. N. Verani, I. Vencato "Crystal structure of bis[(2-hydroxybenzyl)(2-pyridylmethyl)-amine]-copper(II) diacetate trihydrate"

1995 7th International Congress on Bioinorganic Chemistry – ICBIC7, Lübeck, Germany
Poster. A. Neves, C. N. Verani, I. Vencato "Copper protein analogues: Synthesis and properties of the [Cu_2 (H_2bbpmp)(OAc)(H_2O)].4H_2O complex"

1996 IV Southern-Brazilian Regional Meeting in Chemistry, Blumenau, Brazil
Poster. C. N. Verani, D.R. Gonçalves "Dialectic-cognitivist concepts in teaching high-school chemistry" (in Portuguese)

1996 XIX Annual Meeting of the Brazilian Chemical Society, Poços de Caldas, Brazil
1. *Poster*. A. Neves, C. N. Verani, A. S. Mangrich, K. Griesar, W. Haase "Dopamine-β-hidroxy lase analogues: EPR e magnetochemistry of copper complexes with the ligand H_3bbpmp"
2. *Poster*. A. Neves, C. N. Verani, I. Vencato, A.S. Mangrich "Galactose oxidase analogues: spectroscopy of copper complexes with the ligand Hbpa"

1996 XXII Latin-American Chemical Meeting, Concepción, Chile
Poster. I. Vencato, C. N. Verani "Synthesis and crystal structure of bis(hydroxy-benzylpyrydil methyl) –amino zinc(II), Zn$(Bpa)_2$"

1998 33th International Congress on Coordination Chemistry-ICCC33, Florence, Italy
Poster. C. N. Verani, T. Weyhermuller, E. Bill, K. Wieghardt, P. Chaudhuri "Exchange-coupled trinuclear M_A-M_B-M_C complexes: The $Fe^{III}Cu^{II}Ni^{II}$ species"

1999 9th International Congress on Bioinorganic Chemistry-ICBIC9, Minneapolis, MN
Poster. C. N. Verani, E. Rentschler, S. Gallert, E. Bill, T. Weyhermuller, K. Wieghardt, P. Chaudhuri "Studies on heteronuclear $M_AM_BM_C$, M-R, M-R_2 and M-R_3 systems (M = metal, R = radical)"

2000 34th International Congress on Coordination Chemistry-ICCC34, Edinburgh, Scotland
Poster. C.N. Verani, T. Weyhermüller, E. Bothe, E. Bill, K. Wieghardt, P. Chaudhuri "On iminosemiquinone-based polyradical complexes"

2001 10th International Congress on Bioinorganic Chemistry-ICBIC9, Florence, Italy

1. *Poster.* E. Bothe, C. N. Verani, T. Weyhermuller, P. Chaudhuri, K. Wieghardt "The redox chemistry of bis(o-iminobenzosemiquinonato)metal complexes (Cu, Ni, Pt) investigated by electrochemical methods.
2. *Poster.* S. M. Drechsel, R. Kaminski, C.N. Verani "A new binuclear complex as model for iron non-heme metalloproteins"

2001 34th ACS Middle Atlantic Regional Meeting, Towson, MD
Talk. C.N. Verani, N. Nanthakumar, R. Ghiladi, K. D. Karlin "The O_2 chemistry of cobalt and cobalt/iron species"

Independent Research

2004 Gordon Research Conference on Inorganic Chemistry, Newport, RI
Poster. "Ligand design and geometry control in heterospin precursors for magnetic switching"

2004 228th ACS National Meeting, Philadelphia, PA
1. *Talk*. "Design of phenanthroline-based modules for pentacoordinate M(III)M(II) cores"
2. *Poster.* M. Lanznaster, C. N. Verani "Pentacoordinate transition metal complexes based on phenanthroline polypodal ligands as new building blocks for heterospin systems"
3. *Poster.* P. Jain, C. N. Verani "Structure, properties and characterization of complexes of first-row transition metal ions with electroactive ligands"

2005 Gordon Research Conference on Inorganic Mechanisms, Ventura, CA
Poster. "On the chemistry of $3d^{5\text{-}10}$ *c*omplexes with asymmetric tridentate ligands"

2005 International Symposium on Metallomesogens, Lake Arrowhead, CA
1. *Talk*. "Design of phenol/pyridine-containing metallomesogens with 3d metals"
2. *Poster*. R. Shakya, C. N. Verani: "Design of phenol/pyridine-containing metallomesogens with 3d metals"

2005 Gordon Research Conference on Inorganic Chemistry, Newport, RI
1. *Poster*. "Redox-driven magnetic switching in hybrid multi-spin systems"
2. *Poster*. "Phenol- and pyridine-containing metallosurfactants and metallomesogens with 3*d* metals: Synthesis, structure, optical and redox properties"

2005 230th ACS National Meeting, Aug. 28-Sept. 1, Washington, DC
Talk. **"**Structural and electronic behavior of five-coordinate iron(III) and gallium(III) complexes with a new phenol-rich electroactive ligand"

2006 231st ACS National Meeting, March 26-30, Atlanta, GA
1. *Talk.* "Synthesis, structure and magnetic properties of metallomesogens bearing carboxylate-supported tetracopper(II) clusters"
2. *Poster*. R. Shakya, C. N. Verani "Trans-phenolato cobalt(III) complexes of asymmetric NN'O ligands as archetypes for metallomesogens"

2006 NSF Inorganic Workshop, June 6-9, Blaine, WA
Talk. "Bioinspired approaches for molecule-based materials"

2006 61st Northwest Reg. Meeting of the American Chemical Society, June 26, Reno, NV
*Invited talk. "*Use of bioinspired approaches in the development of molecule-based materials"

2006 Brazilian Meeting on Inorganic Chemistry - September 1 -7, Fortaleza, Brazil

Invited talk. "Use of bioinspired approaches in the development of molecule-based materials"

2007 233th ACS National Meeting - March 25-29, Chicago, IL
1. *Talk*. "On the challenge of understanding metal-containing amphiphiles with asymmetric ligands: The cobalt and the iron cases"
2. *Poster*. J. Driscoll, C. N. Verani "Copper-containing surfactants: Synthesis, characterization and Langmuir-Blodgett film formation"
3. *Poster*. M. Allard, C. N. Verani "Redox electroactive asymmetrical N_2O_3-type complexes with selected first-row transition metals"
4. *Poster*. R. Shakya, C. N. Verani "Mesomorphic and amphiphilic properties of a new class of soft-materials bearing carboxylate-supported oxo tetracupric clusters"
5. *Poster*. S. Hindo, C. N. Verani "Metal-containing surfactants and functional materials as precursors for Langmuir-Blodgett and self-assembled monolayers"

2007 Gordon Research Conference on Inorganic Chemistry, Newport, RI
Poster. "Metal complexes as precursors for responsive films: Electronic structures and amphiphilic properties"

2007 Emerging Nanoscience Applications in Technology & Biomedicine, Oct. 15-16, Detroit, MI
1. *Talk*. "Asymmetric metal complexes as precursors for responsive films: Coordination modes, electronic and amphiphilic properties"
2. *Poster*. M. Allard, C. N. Verani "Electroactive assymetrical N_2O_3 type complexes with trivalent iron as prototypes for molecular switches"
3. *Poster*. J. Driscoll, C. N. Verani "Copper-containing surfactants: Synthesis, characterization, Langmuir-Blodgett film formation, Brewster angle microscopy, and liquid crystal studies"
4. *Poster*. R. Shakya, C. N. Verani "Acquired amphiphilicity in coordination complexes via counterion-for-surfactant metathesis. Synthesis, isolation, and compression isotherms for the 1:1 adduct $[Co^{III}(L^{NN'O})_2]C_{17}H_{39}COO$"
5. *Poster*. S. Hindo, C. N. Verani "Cobalt and copper-containing surfactants as precursors for Langmuir-Blodgett films"
6. *Poster*. F. Lesh, C. N. Verani "Amphiphilic behavior and coordination modes of single- and double-tailed nickel, copper, and zinc complexes with asymmetric NN'O headgroups"

2008 CERMACS Central Regional Meeting, June 11-13, Columbus, OH
Invited Talk. **"**Cuproamphiphiles as precursors for responsive films"

2008 Gordon Research Conference on Inorganic Chemistry, July 13-18, Newport, RI
Poster. "Metalloamphiphiles as precursors for responsive films: structures, responsiveness, and patterning"

2008 236th ACS National Meeting, August 17-21, Philadelphia, PA
Symposium Guilty Pleasures: The Joys of Metal Complexes of Non-Innocent, Redox-Active Ligands (A. Heyduk & S. Brown, organizers)
Invited talk. "Transition metal complexes of redox-active ligands as thin film precursors for molecular electronics"

2008 Efficient Conversion of Solar Energy, August 13-15, Boulder, CO
Poster. C. N. Verani and J. Endicott "Multimetallic scaffolds for multi-electron transfer and dioxygen production"

2009 237th ACS National Meeting, March 22-26, Salt Lake City, UT

Symposium Cotton Award to Kenneth Karlin (R. Ghiladi & E. Solomon, organizers)
Invited talk. "Metals in anticancer therapy: Complexes as inhibitors of the 20S proteasome"

2009 **238th ACS National Meeting, August 16-20, Washingon, D.C.**
Symposium Metal-Containing and Metallo-Supramolecular Polymers and Materials III, (U. Schubert, organizer)
Invited talk. "Efforts toward mono and multimetallic redox-active amphiphiles"

2010 **DOE Contractors Meeting, June 6-9, Annapolis, MD**
Poster. F. Lesh, M. Allard, R. Shanmugan, R. Shakya, L. Wickramasinghe, D. Basu, H. B. Schlegel, J. Endicott, C. N. Verani "Multimetallic complexes for photoinduced reactions: Synthetic and surface-based efforts"

2010 **Gordon Research Conference on Metals in Medicine, June 27- July 2, Andover, NH**
Poster. C. N. Verani and Q. Piong Dou "Metal complexes for inhibition of the 26s proteasome and apoptosis of prostate cancer cells"

2010 **XV Brazilian Meeting on Inorganic Chemistry, August 16-20, Angra dos Reis, Brazil**
Invited talk. "Probing metal complexes for inhibition of the 26S proteasome in tumorous prostate cells"

2010 **International Chemical Congress of Pacific Basin Societies – Pacifichem, December 15-20, Honolulu, HI**
Invited talk. "Electronic and amphiphilic behavior in five-coordinate iron(III) complexes"

2011 **(Outreach) Junior Science and Humanities Symposium, March 11, Detroit, MI**
Symposium keynote speech "Renewable energy, the future of earth and how you, JSHS student, can help!"

2011 **34th Annual Meeting of the Brazilian Chemical Society, May 23-26, Florianopolis, Brazil.**
Invited talk. "Electrochemical cycling and amphiphilic properties in complexes containing pentacoordinated iron and phenoxyl radicals"

2011 **33rd DOE Solar Photochemistry Research Conference, June 5-8, Wintergreen, VA**

2011 **240th ACS National Meeting, August 16-20, Denver, CO.**
1. *Talk*. "Metal complexes for selective inhibition of the 26S Proteasome in tumorous cells"
2. *Talk*. "Efforts towards multimetallic complexes for multielectronic photoinduced reactions"

2011 **ZING Conference in Coordination Chemistry, December 9-13, Xcaret, Mexico**
Invited talk: "In search of acceptors, antennae, and active sites for photoinduced reactions on films"

2012 **243st ACS National Meeting, March 25-29, San Diego, CA**
Talk. "Evaluation of interactions between the proteasome and metal complexes"

2012 **34th DOE Solar Photochemistry Research Conference, June 3-6, Annapolis, MD**
Talk. "A concerted synthetic, spectroscopic and computational approach towards water splitting by heterometallic complexes in solution and on surfaces"

2012 Gordon Research Conference on Metals in Medicine, June 24-29 Andover, NH
Invited talk. "Interactions between the 26S proteasome and metal complexes"

2013 245th ACS National Meeting, April 7-11, New Orleans, LA
Talk. "Electronic and amphiphilic characterization of modular multimetallic systems for photocatalytic water splitting"

2013 20th International Symposium on the Photophysics and Photochemistry of Coordination Compounds July 7-11, Traverse City, MI
Posters:
1. H. Baydoun & C. N. Verani: "Towards newbimetallic candidates for photocatalysis: Synthesis of trivalent homobimetallic species"
2. D. Basu & C. N. Verani:"Investigation of the electronic and catalytic properties of monometallic cobalt(III) and heterobimetallic [Ru(II)-Co(III)] system towards proton reduction
3. K. K. Kpogo & C. N. Verani: "Synthesis, electrochemical and photophysical properties Of [Ru-Fe] and [Ru-Mn] complexes for water oxidation"
4. R. A. Thomas, C. N. Verani, J. F. Endicott: "Investigations of ruthenium-sulfur macrocyclic complexes: Possible higher energy excited state 77 K emission"
5. D. Wanniarachchi & C. N. Verani: "Amphiphilic mononuclear ruthenium complex: new route to surface deposition of water oxidation catalysts from monolayers to multilayers"
6. L. Wickramasinghe & C. N. Verani: "New asymmetric manganese(III) species for multicomponent photocatalysis: synthesis, redox, spectroscopic, and amphiphilic properties"

2013 246th ACS National Meeting, September 8-12, Indianapolis, IN
Talk 1. "New modules for multimetallic water splitting: Electronic, amphiphilic, and catalytic properties"
Talk 2. "Comparison on the rectifying behavior of LB-films of metallosurfactants in nanodevices"
Student Talks:
1. Ryan A Thomas: "Spectroscopic and DFT comparisons of ruthenium-sulfur macrocycles"
2. Debashis Basu: "Towards proton reduction catalysis: Redox, electronic, and catalytic properties of new cobalt(III) complexes and their [$Ru^{II}Co^{III}$] analogs"
3. Kenneth K. Kpogo "Synthesis, characterization, and electrochemical properties of [RuFe] and [RuMn] complexes for water oxidation"
4.Habib Baydoun "Synthesis and characterization of homobimetallic iron(III) and gallium(III) complexes"
5. Sunalee J. M. Gonawala "Salen-based amphiphilic copper(II) and nickel(II) complexes for Langmuir Blodgett film formation"
6. Lanka Wickramasinghe: "Isolation Isolation of pentacoordinate iron(III) and manganese(III) complexes for nano-scale devices"
7. Dakshika C Wanniarachchi: "Langmuir-Blodgett film formation and characterization of ruthenium based amphiphilic water oxidation precatalyst"

2014 ANSER Solar Energy Symposium, May 22-23, Evanston, IL

2014 36th DOE Solar Photochemistry Research Conference, June 1-4, Annapolis, MD
Talk. "A concerted synthetic, spectroscopic and computational approach towards water splitting by heterometallic complexes in solution and on surfaces"
Poster: **"**Reactivity of New Cobalt Catalysts for Proton Reduction"
Poster: "Studies on the ^{3}MLCT Excited State, Amphiphilicity, and Catalytic Water Oxidation Properties of Ruthenium Complexes"

Poster: **"**Electronic Structure of Molecular Based Co and Ni Catalysts for Solar Fuel Production as Revealed by EPR and DFT"

2014 **XVII Brazilian Meeting on Inorganic Chemistry (BMIC), August 10-14, Araxá, Brazil**
Poster: Fernando Xavier, Kassem Faraj, Lanka Wickramasinghe, Cláudio Verani "Metalloamphiphiles with Fe^{III} and Mn^{III} headgroups: Synthesis, crystal structures, electronic properties, and Langmuir-Blodgett Films"

2014 **248th ACS National Meeting, September 8-12, San Francisco, CA**
Talk 1: Concerted Efforts toward New Cobalt-based Catalysts for Proton and Water Reduction
Talk 2: New Redox-active Metallosurfactants for Molecular Electronics

2015 **37th DOE Solar Photochemistry Research Conference, June 1-4, Annapolis, MD**
Poster: Concerted Experimental and Theoretical Efforts towards the Design of New Cobalt-based Catalysts for Proton/Water Reduction.
Poster: "Water Reduction with Cobalt, Nickel, and Copper Complexes Based on an $[N_2N'_3]$ Ligand"
Poster: **"**Water Oxidation with Langmuir-Blodgett Films of Cobalt $[N_2O_3]$ Amphiphiles"
Poster: **"**Spectroscopic and DFT Studies Related to the Design of Transition Metal Solar Photosensitizers"

2015 **45th IUPAC World Chemistry Congress, August 9-14, Busan, Korea**
Talk: Reactivity Mechanisms in New Cobalt Oximes for Proton and Water Reduction"

2016 **38th DOE Solar Photochemistry Research Conference, June 6-9, Gaithersburg, MD**
Poster: A Concerted Synthetic, Spectroscopic, and Computational Approach toward Water Splitting by Homo- and Hetero-metallic Complexes

2017 **ISACS: Challenges in Inorganic Chemistry April 10 – 13 Manchester, UK**

2018 **Gordon Research Conference on Inorganic Chemistry, June 17-22, Biddeford, ME**
Poster. "Understanding the Pathways for Proton and Water Reduction with 3dn-based Molecular Catalysts"

2018 **Gordon Research Conference on Electron Donors and Acceptors, August 5-10, Newport, RI**
Poster. "Modulation of the Fermi|SOMO Energies in $^{HS}3d^5$ Fe^{III} Complexes for Current Rectification"

2020 **ACS National Meeting, March 22-26, Philadelphia, PA**
Invited talk: The Karlin Symposium - Cancelled due to the Corona Virus world outbreak

2020 **Gordon Research Conference on Inorganic Chemistry, May 31- June 05, Newport, RI**
Poster. Cancelled due to the Corona Virus world outbreak

2020 **International Chemical Congress of Pacific Basin Societies – Pacifichem, December 15-20, Honolulu, HI** *Invited talk*. Cancelled due to the Corona Virus world outbreak

2021 **ACS National Meeting, April 5-16, – Remote presentation.**
Invited talk: The Karlin Symposium - Mechanistic Pathways in 3d-based Catalysts for Proton/Water Reduction.

2021 ACS National Meeting, August 22-26, – Remote presentation.
Invited talk: ACS-PRF at 65 Symposium - From PRF "Electroactive Heterospin Modules" to Metallosurfactants for Directional Electron Transport.

2021 X Chemistry Graduate Week at the Federal University of Sta. Catarina, Florianopolis, Brazil – Celebrating 50 years of the Chemistry Graduate Program, November 10, – Remote presentation.
Invited talk: Directional electron transport in electrode|metallosurfactant junctions.

Regional meetings to promote student inclusion

2004 ACS Student Affiliate Meeting, Oakland, MI
1. *Talk.* P. Jain, C. N. Verani "Nickel(II), copper(II), and zinc(II) ions in electroactive NN'O-, NN''O-, N_2O_2-, and N_2O_3-environments"
2. *Poster.* M. Lanznaster, C. N. Verani "New modules for multimetallic species: iron(III) and gallium(III) ions pentacoordinated to phenanthroline-based polypodal ligands"
3. *Poster.* J. Driscoll, C. N. Verani "Towards metal-containing clusters, detergents, and liquid crystals"
4. *Poster.* C. Imbert, C. N. Verani "Electroactive ligands containing iron(III), cobalt(III), and gallium(III) ions: An experimental and theoretical approach to radical stabilization of facial *vs.* meridional coordination spheres"

2004 Midwest Metals Meeting, Ann Arbor, MI
1. *Talk.* P. Jain, C. N. Verani "Structure, electrochemistry, spectroscopy, and reactivity in M(II) complexes with electroactive environments" *Book of Abstracts* pg 42
2. *Poster.* C. Imbert, C. N. Verani "Radical stabilization in facial and meridional M(III) complexes with electroactive ligands" *Book of Abstracts* pg 41
3. *Poster.* M. Lanznaster, C. N. Verani "New five-coordinate systems based on M(III) ions and electroactive ligands" *Book of Abstracts* pg 47
4. *Poster.* J. Driscoll, C. N. Verani "On novel metal-containing liquid crystals and detergents" *Book of Abstracts* pg 66

2010 10th Ohio Inorganic Weekend, October 28-29, 2010, Columbus, OH
7 student presentations

2011 11th Ohio Inorganic Weekend, October 28-29, 2011, Cincinnati, OH
Student talk # 1: Frank Lesh, Claudio Verani "Exploring the Rich Electron Transfer Behavior of Mn, Fe, Co, and Ga Complexes with a Redox-Active Bis(phenolate) Phenylenediamine Ligand"
Student talk # 2: Rama Shanmugam, Claudio Verani "Synthesis, Redox Properties, and Langmuir Monolayer Formation of Selected 3d-Metalloamphiphiles"
Poster # 1: Rajendra Shakya, Claudio Verani "Study of Geometric and Spectroscopic Behavior of Manganese(III) Complexes with Redox-rich Pentadentate [N2O3] Ligands"
Poster # 2: Lanka Wickramasinghe, Claudio Verani "Synthesis and Characterization of Redox-Active Asymmetrical Iron(III) and Gallium(III) Metallosurfactants"
Poster # 3: Dajena Tomco, Claudio Verani "Metals in Anticancer Therapy: Towards Inhibition of the Proteasome"
Poster # 4: Dakshika Wanniarachchi, Claudio Verani "Mono-*terpy* Ruthenium Complexes with Electroactive Ligands as Catalysts for Water Splitting"
Poster # 5: Debashis Basu, Claudio Verani "Cobalt Acceptors and Ruthenium-Cobalt Acceptor-Antennae Conjugates for Catalytic and Energy Related Applications"

Poster # 6: Fernando Xavier, Claudio Verani "Bioinspired $Fe^{III}Hg^{II}$ and $Fe^{III}Cd^{II}$ Complexes: Synthesis, Characterization and Promiscuous Catalytic Evaluation"

2012 12th Ohio Inorganic Weekend, November 14-15, 2012, Detroit, MI

Student talk: Debashis Basu, Cláudio Verani "Modulating the Redox and Electronic Properties of a Series of Octahedral Cobalt(III) Complexes in Phenol Rich Ligands"
Poster # 1: Lanka Wickramasinghe, Claudio Verani "Effect of Substituent Groups on Redox and Amphiphilic Properties of Iron(III) Metallosurfactants"
Poster # 2: Ryan Thomas, Claudio Verani, John Endicott: "Photophysics of a Series of Ruthenium-Sulfur Macrocycles Towards Water Oxidation"
Poster # 3: Dakshika Wanniarachchi, Claudio Verani "Synthesis, Redox and Amphiphilic Properties of Water Oxidation Procatalyst [Ru(terpyridine)(phenanthroline)Cl]PF6"
Poster # 4: Dajena Tomco, Claudio Verani "Probing Ligand Dissociation in Cobalt Complexes as a New Route for Proteasome Inhibition"
Poster # 5: Sunalee Gonawala, Claudio Verani "Synthesis and Characterization of a New Series of Salen-Type Ligands and Their Copper(II) Complexes"
Poster # 6: Matt Aharonov, Claudio Verani "Characterization of Mya Blue and Binding Modes of Indigo Species with Palygorskite"
Poster # 6: Graceann Hardin, Claudio Verani "Synthesis and Characterization of Cobalt(III) Complexes of Pyridine Rich Ligands"

2014 14th Ohio Inorganic Weekend, November 14-15, 2014, Ann Arbor, OH
Poster 1: Debashis Basu, Claudio Verani "Water Reduction Catalysis by Cobalt Complexes"
Poster 2: Habib Baydoun, Claudio Verani "Proton and Water Reduction Electrocatalysis by Cobalt(III) Complexes based on Amido-pyridine Framework"
Poster 3: Sunalee Gonawala, Claudio Verani "Attempts to Modulate Frontier Molecular Orbitals in Asymmetric Iron(III) Complexes for Current Rectification"
Poster 4: Kenneth Kpogo, Claudio Verani "Redox and Electronic Properties of [RuII-MIII] and [MnIII(bpb)X] Complexes as Platforms for Water Oxidation"
Poster 5: Brittany Venglarcik, Claudio Verani "Metal-Terpyridine Complex Characterization towards Rectification Capable Devices"

2015 15th Ohio Inorganic Weekend, November 14-15, 2014, Bowling Green, OH
*Poster # 1***:** Kenneth Kpogo, Claudio Verani "Efficient Water Splitting by a Robust Cobalt Catalyst based on a Pentadentate Quinolyl-bispyridine Ligand"
*Poster # 2***:** Sunalee Gonawala, Claudio Verani: "Efficient Water Oxidation Using Langmuir-Blodgett Functionalized Electrode with a Molecular Metallosurfactant"
*Poster # 3***:** Danushka Ekanayake, Claudio Verani "Development of a Molecular Copper Catalyst based on a Polypyridine Ligand Framework towards Electrochemical Water Reduction"
*Poster # 4***:** Nour El Harakeh, Claudio Verani "The Effect of Ligand Substituents on The Electrocatalytic Activity of Cobalt Oxime Complexes"
*Poster # 5***:** Pavithra Kankanamalage, Claudio Verani "A Nickel-based Polypyridine Electro-Catalyst towards the Generation of Dihydrogen from Water"
*Poster # 6***:** Habib Baydoun, Claudio Verani "Electrocatalytic Water splitting Using Amido pyridine Frameworks"

2016 37th Michigan Catalytic Society Annual Spring Symposium, May 5, Saginaw, MI
Talk: (Baudoun) The development of homogenous and solid state water splitting catalysts

2016 16th Ohio Inorganic Weekend, November 14-15, 2014, Bowling Green, OH

Talk # 1. H. Baydoun, C. N. Verani "Towards improved Catalyst Design: probing the Deactivation of a Cobalt Catalyst for Water Reduction"
Poster # 1. R. Batista, C. N.Verani "A Cobalt Mercaptopurine Complex as Prototype for Bioreductive Prodrugs"
Poster # 2. D. Ekanayake, C. N. Verani "A Copper-based Polypyridine Electrocatalyst for Water Reduction"
Poster # 3. P. Kankanamlage, C. N. Verani "Evaluation of a Pyridine-rich Nickel Complex Towards Electro/Photocatalytic Reduction of Water"
Poster # 4. K. Kpogo, C. N. Verani "Water Splitting Pathways by Nitrogen-rich Cobalt and Dicobalt Catalysts"
Poster # 5. K. Kulesa, C. N. Verani "Water Splitting using a promiscuous Cobalt-based Molecular Catalyst"
6. Isuri Weerarthne, Claudio Verani "Asymmetric Oxovanadium(IV) and Chromium(III) Complexes for Nanoscale Devices based on Langmuir-Blodgett Monolayers"

2017 48th Central Regional Meeting of the ACS, June 6-10, Dearborn, MI

Talk. H. Baydoun, S. Mazumder, H. Schlegel, C.N. Verani "Towards improved catalyst designs: probing the deactivation of a cobalt catalyst for water reduction"
Poster # 1. K.M. Kulesa, D. Padilha, M. Scarpellini, C.N. Verani "Bifunctional electrocatalytic water splitting under neutral conditions by a mononuclear cobalt(II) molecular catalyst"
Poster # 2. H. Baydoun, S. Mazumder, J. Burdick, H. Schlegel, C.N. Verani "Water splitting using cobalt-based amidopyridine ligands"
Poster # 3. P. H. A. Kankanamalage, S. Mazumder, K.K. Kpogo, H. Schlegel, C.N. Verani "A nickel-based polypyridine catalyst"
Poster # 4. K.K. Kpogo, S. Mazumder, D. Wang, H. Schlegel, A. Fiedler, C.N. Verani "Investigation of mechanistic pathways by versatile nitrogen-rich cobalt and dicobalt catalysts for water splitting"
Poster # 5. N. El Harakeh, D. Basu, C.N. Verani "Optimization of the catalytic activity in cobalt-oxime complexes by modulating ligand substituents towards water reduction"
Poster # 6. D.M. Ekanayake, K.M. Kulesa, S. Mazumdar, K.K. Kpogo, H. Schlegel, C.N. Verani "Development of molecular copper catalyst based on a polypyridine ligand framework towards electrochemical water reduction"
Poster # 7. A. Weeraratne, C.N. Verani "Towards molecular rectification: nanoscale devices based on Langmuir-Blodgett monolayers of asymmetric oxovanadium(iv) and chromium(iii) complexes"

2018 Inorganic Seminar Series 2018, Department of Chemistry, Wayne State University
Talk # 1: P. Kankanamalage "Pyridine Platforms for Catalytic Water Reduction Based on Nickel and Iron Complexes"
Talk # 2: D. Ekanayake "Overcoming the challenges of developing molecular copper electrocatalysts for water reduction"

2018 *Graduate and Postdoc Research Symposium*, March 06, 2018, Wayne State University, Detroit, MI.
Poster # 1: D. Ekanayake, C.N.Verani "An efficient copper-based polypyridine electrocatalyst for water reduction with a pH-dependent molecular mechanisms"

2018 45th Annual NOBCChE Meeting, September 17 – 20, 2018, Orlando, FL.
Talk # 1: F.Morgan, C.N.Verani "A new bimetallic cobalt catalyst towards electrocatalytic water splitting"

Poster # 1: D. Ekanayake, C.N.Verani "A novel copper-based electrocatalyst for water reduction with pH-dependent molecular mechanisms"

2018 20th Annual Chemistry Graduate Research Symposium, Wayne State University, MI.
Talk # 1: N. El Harakeh, C.N.Verani "Activation of the dz2 orbital in cobalt oxime complexes towards proton reduction"
Poster # 1: I. Weeraratne, C.N. Verani "Development of Nanoscale Semiconductor Devices using Langmuir-Blodgett films of Early Transition Metal Complexes"
Poster # 2: F.Morgan, C.N.Verani "A new bimetallic cobalt catalyst for electrocatalytic water reduction"
Poster # 3: S. Amunugama, C.N. Verani "Terpyridine Based Iron(II), Cobalt(II) and Ruthenium(II) Complexes for Molecular Rectification"

2018 Ohio Inorganic Weekend, November 10, 2018, Ohio University, Athens, OH
Talk # 1: N. El Harakeh, C.N.Verani "Activation of the dz2 orbital in cobalt oxime complexes towards proton reduction"
Poster # 1: I. Weeraratne, C.N. Verani "Early Transition Metal Bisphenolate and Trisphenolate Complexes for Molecular Rectification"
Poster # 2: F.Morgan, C.N.Verani. "A new bimetallic cobalt catalyst for electrocatalytic water reduction"
Poster # 3: S. Amunugama, C.N. Verani "Terpyridine Based Iron(II), Cobalt(II) and Ruthenium(II) Complexes for Molecular Rectifiers Based on Langmuir Blodgett Monolayers"

2019 *9th* Annual Graduate and Postdoctoral Research Symposium, March 5, 2019, Wayne State University, Detroit, MI.
Poster # 1: N. El Harakeh, C.N.Verani "The influence of leaving groups on the water/proton reduction activity of Co(III)[N4]-complexes"
Poster # 2: I. Weeraratne, C.N. Verani "Early Transition Metal Complexes as Molecular Rectifiers"
Poster # 3: F.Morgan, C.N.Verani "Electrocatalytic water reduction with a new bimetallic cobalt catalyst"
Poster # 4: S. Amunugama, C.N. Verani "Development of terpyridine based Iron(II), Cobalt(II) and Ruthenium(II) metallosurfactants"

2019 Inorganic Seminar Series 2019, Department of Chemistry, Wayne State University
Talk # 1: N. El Harakeh, C.N.Verani "The influence of leaving groups on the water/proton reduction activity of Co(III)[N4]-complexes"

2019 40th Annual Michigan Catalysis Society Spring Symposium, May 7, 2019, Henry Ford Museum, Dearborn, MI.
Talk # 1: N. El Harakeh, C.N. Verani "Structural optimization of cobalt(III) oxime complexes towards efficient hydrogen generation"
Poster # 1: F.Morgan, C.N.Verani "A new bimetallic cobalt catalyst for electrocatalytic water reduction"

2019 21st Annual Chemistry Graduate Research Symposium, Wayne State University, MI.
Poster # 1: I. Weeraratne, C.N. Verani "Langmuir-Blodgett Monolayers of a Bimetallic Iron(III) Hydrophobe [$Fe_2(L^{N4O6})$] for Current Rectification"
Poster # 2: F. Morgan, C. N.Verani "A new bimetallic cobalt catalyst for electrocatalytic water reduction"

Poster # 3: S. Amunugama, C. N. Verani "Langmuir-Blodgett Films of Polypyridine based Iron(II), Cobalt(II), and Ruthenium(II) Metallosurfactants for Studies in Electron Transport"
Poster # 4: A.Cousino, C. N. Verani "On Demand" Asymmetric Molecular Rectification Synthesis via Counterion Exchange"

2019 Ohio Inorganic Weekend, November 1st, 2019, University of Toledo, Toledo, OH.
Talk # 1 : I. Weeraratne, C.N. Verani "Nanoscale Rectifying Devices Based on Langmuir-Blodgett Monolayers of a Bimetallic Iron(III) Complex"
Poster # 1: F. Morgan, C.N. Verani "Bimetallic cobalt and nickel catalyst for electrocatalytic water reduction"
Poster # 2: S. Amunugama, C.N. Verani "Polypyridine based Iron(II), Cobalt(II), and Ruthenium(II) Metallosurfactants for Studies in Electron Transport"
Poster # 3: A. Cousino, C.N. Verani "Method Development for the Synthesis of "On Demand" Asymmetric Molecular Rectifiers"

2019 46th Annual NOBCChE conference, Nov 18-24th, 2019, St. Louis, MO.
Talk # 1: I. Weeraratne, C.N. Verani "Development of Molecular Rectifiers Using Langmuir-Blodgett Films of Phenolate-rich Metal-containing Surfactants"
Poster # 1: F. Morgan, C.N. Verani "Bimetallic cobalt and nickel catalysts for electrocatalytic water reduction"
Poster # 2: S. Amunugama, C.N. Verani "Development of Polypyridine based Iron(II), Cobalt(II), and Ruthenium(II) Metallosurfactants for Molecular Rectification Based on Langmuir-Blodgett Monolayers"
Poster # 3: A. Cousino, C.N. Verani "Asymmetric Molecular Rectifiers via Counterion Exchange"

2019 Detroit Science and Networking Symposium, MI.
Poster # 1: I. Weeraratne, C.N. Verani "Films of Redox-innocent Metallosurfactants as Surface Pretreatment Coatings for Corrosion Mitigation"

2019 Michigan Inorganic Chemistry Symposium, December 7, 2019, Michigan State University, MI.
Poster # 1: I. Weeraratne, C.N. Verani "Rectifying Devices Based on Monolayers of a Bimetallic Iron(III) Complex"
Poster # 2: F. Morgan, C.N. Verani "Mechanistic and cooperativity studies of homobimetallic cobalt, nickel, and copper catalysts for water reduction"
Poster # 3: S. Amunugama, C.N. Verani "Electron Transport Studies of Polypyridine based Iron(II), Cobalt(II), and Ruthenium(II) Metallosurfactants"
Poster # 4: A. Cousino, C.N. Verani "Method development of "on demand" surfactants via counterion exchange for unidirectional electron transport"

2019 10th Annual Graduate and Postdoctoral Research Symposium, March 2020, Wayne State University, Detroit MI.
Poster # 1: I. Weeraratne, C.N. Verani "Corrosion Mitigation Using Films of Redox-innocent Metallosurfactants"

2019 Inorganic Seminar Series 2020, Department of Chemistry, Wayne State University
Talk # 1: I. Weeraratne "Nanoscale Rectifying Devices and Corrosion Mitigation Coatings Based on Langmuir-Blodgett Films of Metallosurfactants"
Talk # 2: F. Morgan "Mechanistic cooperativity for water reduction with bimetallic cobalt, nickel, and copper catalysts"

Talk # 3: S. Amunugama "Push/Pull Effects in Octahedral Metallosurfactants for the Modulation of LUMO/Fermi Rectification"

Abstracts Published in Academic Journals

1. A. Neves, **C. N. Verani**, I. Vencato "Copper protein analogues: Synthesis, structure and properties of the complex $[Cu_2(bbpmp)(OAc)(H_2O)]OAc.4H_2O$" *Journal of Inorganic Biochemistry* **1995**, *59*, 675

2. **C. N. Verani**, E. Rentschler, E. Bill, T. Weyhermüller, P. Chaudhuri "Asymmetric heteropolynuclear complexes of potential bioinorganic relevance" *Journal of Inorganic Biochemistry* **1999**, *74*, 327

3. S. M. Drechsel, R. C. Kaminski, **C. N. Verani "**A new binuclear complex as model for iron non-heme metalloproteins" *Journal of Inorganic Biochemistry* **2001**, *86*, 206
4. E. Bothe, **C. N. Verani**, T. Weyhermuller, P. Chaudhuri, K. Wieghardt "The redox chemistry of bis(o-iminobenzosemiquinonato)metal complexes (Cu, Ni, Pt) investigated by electrochemical methods" *Journal of Inorganic Biochemistry* **2001**, *86*, 154

5. C. N. Verani "Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes, Electronic and Amphiphilic Properties" ENATBio proceedings *Nanomedicine: Nanotechnology, Biology, and Medicine* **2008**

6. C. N. Verani "Efforts toward mono and multimetallic redox-active amphiphiles" *Polymer Preprints* (ACS - Division of Polymer Chemistry) **2009**, *50*, 271

Instructional Materials Formally Published:

1. C. N. Verani, D. R. Gonçalves and M. G. Nascimento "Soaps and Detergents as an Organizing Theme to Teach High-School Chemistry" ***Química Nova na Escola***, 2000, *12*, 15-20

Invited Seminars *(Independent work only)*

1. **October 14, 2003 - University of Detroit Mercy, Detroit, MI**
"Synthesis, Magnetic and Spectroscopic Properties of Heteromultimetallic Complexes Based on 3*d*-Metals, Lanthanides, and Electroactive Ligands"

2. **October 29, 2003 - Oakland University, Rochester, MI**
"Chemistry of Heteropolymetallic Complexes"

3. **April 6, 2004 - Wayne State University, Detroit, MI**
Physics & Astronomy Department "Heterospin Complexes Based on Metals and Electroactive Ligands"

4. **December 14, 2005 - Federal University of Parana, Curitiba, Brazil**
"Bioinspired Complexes of Asymmetric Phenol-containing Ligands: From Drugs to Surfactants and Liquid Crystals to Ground-state Switches"

5. **December 16, 2005 - Federal University of Santa Catarina, Florianopolis, Brazil**

"Bioinspired Complexes of Asymmetric Phenol-containing Ligands: From Drugs to Surfactants and Liquid Crystals to Ground-state Switches"

6. **December 19, 2005 - Southern Santa Catarina University, Criciuma, Brazil**
"Bioinspired Complexes of Asymmetric Phenol-containing Ligands: From Drugs to Surfactants and Liquid Crystals to Ground-state Switches"

7. **January 29, 2006 - Bowling Green State University, Bowling Green, OH**
"Bioinspired Complexes of Phenol-containing Ligands: From Surfactants and Liquid Crystals to Ground-state Switches"

8. **March 21, 2006 - Wayne State University, Detroit, MI**
"Nano@Wayne Seminar Series: Bioinspired Complexes of Phenol-containing Ligands: From Surfactants and Liquid Crystals to Ground-state Switches"

9. **March 24, 2006 - University of Windsor, Windsor, Ontario, Canada**
"Bioinspired Complexes of Phenol-containing Ligands: From Surfactants and Liquid Crystals to Ground-state Switches"

10. **October 30, 2006 - Michigan State University, Lansing, MI**
"Bioinspired Strategies toward Metal-containing Soft Materials"

11. **October 25, 2006 - John Carroll University, Cleveland, OH**
"Bioinspired Strategies toward Metal-containing Soft Materials"

12. **October 26, 2006 - Case Western University, Cleveland, OH**
"Bioinspired Strategies toward Metal-containing Soft Materials"

13. **November 10, 2006 - Virginia Tech, Blacksburg, VA**
"Bioinspired Strategies toward Metal-containing Soft Materials: Asymmetry, Clusters & Metal-Radical Interplay"

14. **November 13, 2006 - University of North Carolina, Charlotte, NC**
"New Synthetic Strategies for Metal-containing Soft Materials"

15. **February 1, 2007 - Miami University, Oxford, OH**
"Asymmetry, Clusters, and Metal-Radical Interplay: New Synthetic Strategies for Metal-containing Soft Materials**"**

16. **February 2, 2007 - University of Cincinnati, Cincinnati, OH**
"Asymmetry and Metal-Radical Interplay: New Strategies for Metal-containing Soft Materials"

17. **February 19, 2007 - Kalamazoo College, Kalamazoo, MI**
"New Synthetic Strategies for Metal-containing Soft Materials"

18. **March 19, 2007 - University of Florida, Gainesville, FL**
"Asymmetry and Metal-Radical Interplay: New Strategies for Metal-containing Soft Materials"

19. **April 9, 2007 - University of Georgia, GA**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes and Electronic Properties"

20. **April 10, 2007 - Emory University, Atlanta, GA**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes and Electronic Properties"

21. **April 26, 2007 - University of California, Davis, CA**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes and Electronic Properties"

22. **April 27, 2007 - University of Nevada, Reno, NV**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes and Electronic Properties"

23. **May 18, 2007 - University of Michigan, Ann Arbor, MI**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Coordination Modes and Electronic Properties"

24. **September 17, 2007 - Wayne State University, Detroit, MI**
Frontiers talk "Asymmetric Metal Complexes as Precursors for Responsive Films: Geometric, Electronic, and Amphiphilic Properties"

25. **September 20, 2007 - Wayne State University, Detroit, MI**
Chemical Engineering Department "Asymmetric Metal Complexes as Precursors for Responsive Films: Geometric, Electronic, and Amphiphilic Properties"

26. **September 25, 2007 - Johns Hopkins University, Baltimore, MD**
"Asymmetric Metal Complexes as Precursors for Responsive Films: Geometric, Electronic, and Amphiphilic Properties"

27. **November 07, 2008 - University of Louisville, Lousville, KY**
"Redox-active Amphiphiles as Thin-film Precursors for Molecular Electronics"

28. **March 04, 2009 - University of Wisconsin, Madison, WI**
"Redox-active Amphiphiles as Thin-film Precursors for Molecular Electronics"

29. **March 06, 2009 - Marquette University, Milwaukee, WI**
"Efforts Toward Modular Redox-active Amphiphiles"

30. **September 23, 2009 - Karmanos Cancer Institute, Detroit, MI**
"Complexes of Asymmetric NN'O Ligands: From Responsive Amphiphiles to Inhibitors of the 26S Proteasome"

31. **(Outreach) April 15, 2010 - Wayne State University, Detroit, MI**
Seminar Series on the Environment organized by the Working Group for Science and Society sponsored by the Humanities Center "Renewable Energy and the Future of Earth"

32. **August 26, 2010 - Universidade Federal de Santa Catarina, Florianopolis, Brazil**
"Probing Metal Complexes for Inhibition of the 26S Proteasome in Tumorous Prostate Cells"

33. **December 7, 2010 - Wayne State University, Detroit, MI**

Department of Biochemistry and Molecular Biology **"**Probing Metal Complexes for Inhibition of the 26S Proteasome in Tumorous Prostate Cells"

34. **(Outreach) February 18, 2011 - Wayne State University, Detroit, MI**
Physics & Astronomy 'Science under the Dome' Seminar Series "Lorax's Unless: Renewable Energy and the Future of Earth"

35. **April 4, 2011 - Wayne State University, Detroit, MI**
*Frontiers talk "*Bioinspired Metal Complexes - From Electronics to Proteasome Inhibition"

36. **September 2011 - Wayne State University, Detroit, MI**
Department of Pharmacology "Metal Complexes for Inhibition of the 26S Proteasome in Tumor Cells"

37. **November 18, 2011 - Ohio State University, Columbus, OH**
"Merging Redox and Amphiphilic Properties in Transition Metal Complexes"

38. **(Outreach) January 12, 2012 - Wayne State University, Detroit, MI**
Water@Wayne Seminar Series "Lorax's Unless: Renewable Energy and the Future of Earth"

39. **(Graduate Recruiting) January 17, 2012 - Saginaw Valley State University, Saginaw, MI**
"Interactions between the 26S proteasome and metal complexes"

40. **(Graduate Recruiting) February 13, 2012 - Kenyon College, Gambier, OH**
"Interactions between the 26S proteasome and metal complexes"

41. **April 20, 2012 - Indiana University, Bloomington, IN**
"Merging Redox and Amphiphilic Properties in Transition Metal Complexes"

42. **(Graduate Recruiting) September 28, 2012 - Indiana-Purdue Fort Wayne, Fort Wayne, IN**
"Interactions between the 26S proteasome and metal complexes"

43. **October 30, 2012 - Argonne National Labs, Lemont, IL**
"Merging Redox and Amphiphilic Properties in Transition Metal Complexes"

44. **(Graduate Recruiting) October 31, 2012 - University of Wisconsin, Platteville, WI**
"Interactions between the 26S proteasome and metal complexes"

45. **(Graduate Recruiting) November 1, 2012 - University of Wisconsin, La Crosse, WI**
"Interactions between the 26S proteasome and metal complexes"

46. **(Graduate Recruiting) November 2, 2012 - University of Wisconsin, Eau Claire, WI**
"Interactions between the 26S proteasome and metal complexes"

47. **July 4, 2013 - Argonne National Labs, Lemont, IL**
"Proton Reduction with Cobalt(III) and Ruthenium(II)/Cobalt(III) Catalysts.

48. **January 16, 2014 – Bowling Green University, Bowling Green, OH**
"New Redox-active Metallosurfactants for Molecular Electronics"

49. **October 14, 2014 – University of Alabama, Huntsville, AL**

"Concerted Efforts toward New Cobalt-based Catalysts for Proton and Water Reduction"

50. **October 16, 2014 – University of Alabama, Tuscaloosa, AL**
"Understanding Current Rectification in LB Monolayers of Metallosurfactants"

51. **December 16, 2014 – Fluminense Federal University, Niterói, Brazil**
"Overview of Current Research in the Verani Labs at Wayne State University" on the occasion of the "Special Guest Researcher" appointment for 2014

52. **June 29, 2015 – Fluminense Federal University, Niterói, Brazil**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts" on the occasion of the "Special Guest Researcher" appointment for 2015

53. **August 17, 2015 – UNIST, Ulsan, Korea**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

54. **October 18, 2015 – University of Memphis, Memphis, TN**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

55. **October 22, 2015 – University of Arizona, Tucson, AZ**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

56. **November, 2015 – North Carolina State University, NC**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

57. **February 23, 2016 – University of Houston, Houston, TX**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

58. **February 24, 2016 – University of Texas, Austin, TX**
"New Co-based Electrocatalysts for Proton/Water Reduction as Precursors for Heterobimetallic [RuCo] Photocatalysts"

59. **July 7, 2016 – Fluminense Federal University, Niterói, Brazil**
"An Overview of Research in Metallodrugs, Metallosurfactants, and Catalysts" on the occasion of the "Special Guest Researcher" appointment for 2016

60. **November 7, 2016 – University of Toledo, Toledo, OH**
"Molecular Diodes, Corrosion Inhibitors, and Water-splitting Catalysts Inspired by the 5-coordinate Iron of Tyrosine Hydroxylase"

61. **April 7, 2017 Imperial College, London, UK**
"Toward an Understanding of the Interactions between the 26S Proteasome and Metal-containing Inhibitors"

62. **April 26, 2017 – University of Toronto, Toronto, Canada**

"Molecular Diodes, Corrosion Inhibitors, and Water-splitting Catalysts Inspired by the 5-coordinate Iron of Tyrosine Hydroxylase"

63. **November 15, 2017 – Beijing Computational Sciences Research Center, China**
"Bioinspired Molecular Electronics, Corrosion, and Water Splitting at Wayne State University"

64. **October 22, 2018 – Tulane University, New Orleans, LA**
"Towards an Understanding of Proton/Water Reduction Mechanisms with Cobalt-based Molecular Catalysts"

65. **October 23, 2018 – Louisiana State University, Baton Rouge, LA**
"Towards an Understanding of Proton/Water Reduction Mechanisms with Cobalt-based Molecular Catalysts"

66. **(Outreach) September 11, 2018 – Wayne State University, Detroit, MI**
Brown Bag Colloquium Series of the Humanities Center "Science, Society, and Sustainability"

67. **(Outreach) February 27, 2019 – Wayne State University, Detroit, MI**
Honor's College-organized "A discussion with Med-Direct Students on Values that go beyond Chemistry"

68. **(Outreach) September 6, 2019 – Wayne State University, Detroit, MI**
Student-organized Chemistry & Food Fridays Seminar Series "Values beyond Chemistry: Circumstances, opportunities, and achieving your goals"

69. **(Outreach) October 4, 2019 – University of Michigan, Dearborn, MI**
"Science, Society, and Sustainability"

70. **(Outreach) November 20, 2019 – Wayne State University, Detroit, MI**
Inaugural Lecture for the Levy – Naik Sciences & Humanities under the Dome Annual Seminar
"Science, Society, and Sustainability"

71. **(Outreach) February 21, 2020 – Macomb Math, Science and Technology Center, Warren, MI** *Special lecture and flip class exercise with MMSTC high-school students (top 5% from Warren Consolidated Schools System)* "Science Society and Sustainability"

72. **June 23, 2018 – Louisiana State University, Baton Rouge, LA**
"Towards an Understanding of Proton/Water Reduction Mechanisms with Cobalt-based Molecular Catalysts"

73. **June 15 – 19, 2020 – visit to Carl von Ossietzky Universität, Oldenburg, Germany**
Weeklong visit including scientific discussions with collaborators, international student exchange with dean of science, and an invited GDCh Kolloquium sponsored by the German Chemical Society. Cancelled due to the Corona Virus world outbreak

73. **June 22 – 23, 2020 – visit to BASF, Münster, Germany**
Visit including scientific discussions for collaboration and an invited talk on corrosion protection. Cancelled due to the Corona Virus world outbreak

74. **(Remote) October 15, 2021 – Sta. Catarina State University, Joinville, Brazil**
"Directional electron transport in electrode|metallosurfactant junctions"

75. **(Remote) November 11, 2021 – University of Peradeniya, Peradenyia, Sri Lanka**
"INSPIRE talk - Directional electron transport in electrode|metallosurfactant junctions - A story built at WSU with the help of Sri Lankan students"

I. SERVICE:

A. Committee Assignments:

1. University Committee Membership:

- President-selected Evaluator for Tenure Dismissal Proceedings at School of Medicine, 2017
- Member of the Faculty Hearing Panel in the Academic Senate, 2017-2019
- Member of the Outstanding Graduate Mentor Award Committee, 2016
- Member of the 2015 Seed Grants for Project Development program by the OVPR
- Provost appointed Member of the Cancer Biology Academic Program Review, with Timothy Stemmler and Thomas Kocarek, 2015
- Member of the Career Development Chair Award Committee, 2012
- Member of the OVPR-Center & Institute Advisory Committee-II, 2011-2014 (CIAC-II is responsible for reviewing "type II" or research centers and institutes)
- Member of the School of Medicine ACS-IRG Committee (American Cancer Society – Institutional Research Grants)
- Member of the organizing committee for the OVPR-supported conference "Emerging Nanoscience Applications in Technology and Biomedicine - ENATBio" October 15-16, 2007, Detroit, MI
- Member of the committee for the Nano@Wayne Initiative, 2006-2012

2. College/Department Committee Membership:

- Associate Dean of Research – CLAS, 2017
- Member of the CHEM Graduate Studies Reform Committee, 2017
- Member of the CLAS Merit & Salary Committee, 2017
- Inorganic representative to CHEM Personnel & Budget Committee, 2016-2017
- Inorganic representative to CHEM Faculty Search Committee, 2016-2017
- Member of the CHEM Graduate Reform Committee, 2017-ongoing
- Member of the CHEM Teaching Assignment Committee, 2016 - ongoing
- Member of the CHEM Diversity Committee, 2016 - ongoing
- Secretary of the CLAS Faculty Council, 2015, reelected 2016-2017
- Member of the Chemistry Chair Search Committee, 2016
- Member of the CLAS Curriculum Committee, 2013 - 2015
- Member of the CLAS Technology Committee (OMNIBUS fund), 2012-2013
- Chair of the Graduate Recruiting and Admission Committee, 2011- 2012
- Member of the CLAS Faculty Council – 2011-12, 2013-15, reelected 2015-17
- Member of the CLAS-University Graduate Research Fellowship Committee, 2011
- Member of the Awards Committee, 2009-2016

- Member of the Safety Committee, 2007
- Member of the Faculty Search Committee, 2006; 2008-2010
- Member of the Chemistry Curriculum Committee, 2006-present
- Member of the Graduate Recruitment Committee, 2005-2006

B. External Service:

1. Research Grant reviewer:

- National Science Foundation panelist: 2021 MRI panel
  2020 MSN panel
  2016 Supramolecular panel
  2016 DMR Electronic & Photonic panel
  2015 MRI/EPR panel
  2011 Supramolecular panel
  2010 Catalysis panel
  2009 Joint CHM/DMR panel
  2008 Collaborative Research panel
- European Commission, 2021
- Fonds Wetenshappelijk Oderzoek (Fladers Research Foundation), 2015-present
- University of Missouri - UMSL Research Board External Review, 2014
- Department of Energy panelist: 2014, 2021
- Austrian Science Fund, 2019, 2020
- Israel Science Foundation, 2018
- Ohio University, Baker External Review, 2013
- Midwestern Association of Graduate Schools Competition, 2013
- Department of Energy, 2011-present (*ca.* 10 proposals)
- National Science Foundation *ad-hoc* reviewer, 2004-present (25+ proposals)
- ACS-Petroleum Research Foundation *ad-hoc* reviewer, 2003-present
- National Research Council *ad-hoc* reviewer, 2003

2. Manuscript reviewer:

- Angewandte Chemie International Edition – Wiley
- Applied Materials & Interfaces - ACS
- Australian Journal of Chemistry
- Bioorganic and Medicinal Chemistry Letters – Elsevier
- ChemCatChem – Wiley
- Chemical Communications – Royal Chemical Society
- Chemical Sciences – Royal Chemical Society
- Chemistry of Materials – American Chemical Society
- Chemistry-A European Journal – Wiley
- Comptes Rendu Chemie – Elsevier
- Coordination Chemical Reviews – Elsevier
- Current Topics in Inorganic Chemistry – Taylor & Francis
- Crystal Growth and Design – American Chemical Society
- Dalton Transactions– Royal Chemical Society

- European Journal of Inorganic Chemistry – Wiley
- European Journal of Medicinal Chemistry – Elsevier
- Inorganic Chemistry – American Chemical Society
- Journal of the American Chemical Society – ACS
- Journal of the Brazilian Chemical Society – BQS
- Journal of Coordination Chemistry – Elsevier
- Journal of Inorganic Biochemistry – Elsevier
- Langmuir – American Chemical Society
- Nature Communications – Nature Research
- Polyhedron – Elsevier
- Synthesis & Reactivity in Inorganic Chemistry – Taylor & Francis

3. Book reviewer:

- K. Sridharan "Spectral Methods in Metal Complexes" Elsevier, 2016
- W. L. Joly "Synthesis & characterization of inorganic compounds" Waveland , 2003

4. Chairing and Editing:

- Guest editor with Richard Layfield to special issue of RSC Dalton Transactions on "Molecular metal-containing soft materials", 2018
- Member of the Organizing Committee for the 18th International Congress on Bioinorganic Chemistry – ICBIC18, Florianopolis, Brazil, 2017
- Session chair for Bioinorganic II session, ISACS: Challenges in Inorganic Chemistry, Manchester, UK, 2017
- Member of the Scientific Committee for the 5th Latin American Symposium on Coordination and Organometallic Chemistry, Angra dos Reis, Brazil, 2015
- Co-editor (with Nicholas Farrell and Ademir Neves) of the 2014 special edition of the *Journal of Inorganic Biochemistry* on "Bioinorganic Chemistry in Latin America"
- Organizer (with M. H. Lim, U. Schatzschneider and D. Crans) ACS Symposium "Chemical Interactions of Metal-related Therapeutic Drugs" for the 243rd ACS Meeting in San Diego, CA, 2012
- Co-editor (with Nicholas Farrell and Ademir Neves) of the 2012 special edition of the *Journal of Inorganic Biochemistry* on "Bioinorganic Chemistry in Latin America"
- Organization committee *XVI Brazilian Meeting on Inorganic Chemistry* (BMIC), Florianopolis, Brazil, 2012
- Session chair, 240th ACS National Meeting, Denver, CO, 2011
- Scientific committee member and session chair *XV Brazilian Meeting on Inorganic Chemistry* (BMIC), Angra dos Reis, Brazil 16-18, 2010
- Session chair, 238th ACS National Meeting, Salt Lake City, UT, 2009
- Session chair, 237th ACS National Meeting, Philadelphia, PA, 2008
- Organizer and Session chair, ENATBio Detroit, MI, 2007
- Organizer (with David Benson), Endicott/Rorabacher Distinguished Lecture by Prof. Edward Solomon, Stanford University, February 20, 2006
- Organizer, Retirement Celebration for Prof. John Endicott, February 19, 2006
- Session chair, 230th ACS National Meeting, Washington, DC, 2005
- Session chair, 228th ACS National Meeting, Philadelphia, PA, 2004

5. Educational Service and Outreach:

- Moderator of STEM panel at the "*3rd Annual Academia del Pueblo*" Regional Undergraduate and Graduate Latino/a and Latin American Research Conference

- Featured in the WSU outreach video series "One Minute Scholar" for the episode "Spark" on the triboluminescence of methyl salycilate present in Lifesavers Wint-O-Green mints, 2011 (http://wayne.edu/oneminutescholar/video.php?id=21)
- Judge for the Junior Science and Humanities Symposium, 2011
- NSF-supported implementation of an educational module for second year elementary students based on critical thinking at Susick Elementary School in Sterling Heights, 2010 (first phase concluded, second and third phases ongoing)
- NSF-supported implementation of an educational module based on soaps and detergents for middle school students of the Detroit Public System, 2009
- Development of new approaches and multimedia for high-school chemistry, 2008
- ACS-SEED Mentor in summer programs 2004-2008, 2010-present

II. ADVISEES:

A. M.S. and M.A. Students

1. Camille Imbert	Graduated (M.S.) 2003-2005	(1st group graduate)
2. Sarmad Hindo	Graduated (M.S.) 2002-2005	(2nd masters to graduate)
3. Brittany Venglarcik	Graduated (M.A.) 2012-2015	(3rd masters to graduate)

B. PhD Students

1. Dr. Rajendra Shakya	Graduated (Ph.D.) 2002-2007	(1st PhD to graduate)
2. Dr. Marco Allard	Graduated (Ph.D.) 2003-2010	(4th PhD to graduate)
3. Dr. Jeffery Driscoll	Graduated (Ph.D.) 2004-2008	(2nd PhD to graduate)
4. Dr. Sarmad Hindo	Graduated (Ph.D.) 2005-2009	(3rd PhD to graduate)
5. Dr. Frank Lesh	Graduated (Ph.D.) 2005-2012	(5th PhD to graduate)
6. Dr. Rama Shanmugan	Graduated (Ph.D.) 2006-2011	(6th PhD to graduate)
7. Dr. Dakshika Wanniarachchi	Graduated (Ph.D.) 2008-2013	(7th PhD to graduate)
8. Dr. Lanka Wickramasinghe	Graduated (Ph.D.) 2008-2014	(8th PhD to graduate)
9. Dr. Dajena Tomco	Graduated (Ph.D.) 2008-2014	(9th PhD to graduate)
10. Dr. Debashis Basu	Graduated (Ph.D.) 2009-2015	(10th PhD to graduate)
11. Dr. Ryan Thomas	Graduated (Ph.D.) 2009-2015	(11th PhD to graduate)
12. Dr. Sunalee Gonawala	Graduated (Ph.D.) 2010-2016	(12th PhD to graduate)
13. Dr. Kenneth Kpogo	Graduated (Ph.D.) 2012-2017	(13th PhD to graduate)
14. Dr. Habib Beydoun	Graduated (Ph.D.) 2012-2017	(14th PhD to graduate)
15. Dr. Pavithra Kankanamalage	Graduated (Ph.D.) 2013-2017	(15th PhD to graduate)
16. Dr. Danushka Ekanayake	Graduated (Ph.D.) 2013-2019	(16th PhD to graduate)
17. Dr. Nour El-Harakeh	Graduated (Ph.D.) 2014-2020	(17th PhD to graduate)
18. Dr. Isuri Weeraratne	Graduated (Ph.D.) 2015-2021	(18th PhD to graduate)
19. Fredricka Morgan	Ph.D. student, 2016	
20. Samudra Amunugama	Ph.D. student, 2016	
21. Abgail Cousino	Ph.D. Student, 2017/18	
22. Gibson Kirui	Ph.D. student, 2019	
23. Eva Mwakazi	Ph.D. student, 2019	

C. PhD Students – co-advised

1. Renata Crispim Batista	Graduated (Ph.D.) 2018, Advisor: M. Lanzanaster

2. Ana Carolina Precioso	Graduated (Ph.D.) 2019, Advisor: M. Lanzanaster

D. Guest students

1. Ivana Marques Marzano	Ph.D visiting student from UFMG, Brazil (2012-2013)
2. Renata Crispin	Ph.D. visiting student from UFF, Brazil (2016-2017)

E. Postdoctoral

1. Dr. Mauricio Lanznaster	Postdoctoral associate, 2004-2005 Currently a Professor of Chemistry at the Universidade Federal Fluminense, Niteroi, Brazil
2. Dr. Rajendra Shakya	Postdoctoral associate, 2009-2012 Currently an Associate Professor at Broward College, Fort Lauderdale, FL
3. Dr. Fernando Xavier	Postdoctoral associate, 2011-2012 Currently an Assistant Professor at the Universidade Estadual de Santa Catarina, Joinville, Brazil.

F. Undergraduate Senior Research

1. Lena Vikdorchik	2003, Multimetallic complexes with copper and iron
2. Themina Chaudhuri	2003, Multimetallic complexes with copper and cobalt
3. Jashan Octain	2004, Multimetallic complexes with copper and lanthanides
4. Sarah House	2005, Coordination modes of Fe(III) in p-aminobenzoic acid
5. Azzam Moussawel	2005, Metallomesogens bearing a μ_4-oxo copper(II) cluster
6. Leslie Neidy	2006, Cobalt(III) complexes with N_2O_3-type ligands
7. Jessica Darland	2007, Fe(III) complexes of electroactive asymmetrical ligands
8. Dajena Tomco	2007, Mechanisms of proteasome inhibition by metallodrugs
9. Michael Pfiffer	2007, Mesophases of copper-containing liquid crystals
10. Christina Hoffman	2008, Films of cobalt and iron stearate complexes
11. Bethany Gross	2009, Synthesis of TERPY based complexes for self-assembly
12. Farah Jourjous	2009, Synthesis of ligands containing sulfonic groups
13. Huong Nguyen	2010, Effect of counterions on proteasome inhibition
14.Matthew Young	2010, Synthesis of ligands containing phenanthroline moieties
15. Matthew Laschuck	2010, Effect of aluminum on proteasome inhibition
16. Emil Lousanov	2010, Synthesis and characterization of ruthenium compounds
17. Kasem Faraj	2011, Iron-based redox-surfactants
18. Joseph Lengyel	2011, Cobalt-based electron acceptors
19. Emily Davis	2011, Toxic metals as proteasome inhibitors in healthy cells
20. Matthew Aharonov	2012, Interactions in the Maya Blue pigment
21. Grace Hardin	2012, Cobalt-based electron acceptors
22. Jordyn Burdick	2015, Ligand synthesis & Cobalt-based catalysts
23. Veronica Ribeiro	2015, Summer guest student from Brazil - Corrosion
24. Krista Kulesa	2015, Ligand synthesis & Copper-based catalysts
25. Garrett Figley	2016, Ligand synthesis & Nickel-based catalysts

G. Other Students (High School SEED summer students)

1. Eric Miller	2003, Grosse Point North High School, MI
2. Crystal Martin	2004, Cass Technical High School, Detroit, MI

3. Jerrard Adams	2005 - 2006, Detroit Central High School, Detroit, MI
4. Rashid Echols	2007 - 2008, Martin Luther King High School, Detroit, MI
5. Janice Green	2008, Martin Luther King High School, Detroit, MI
6. Ali Beydoun	2010 - 2011, Dearborn High School, Dearborn, MI
7. Mumta Kadir	2012, Dearborn High School, Dearborn, MI

H. High School Teachers

1. David Felder	Summer 2008, Detroit Public System
2. Linda Demske	Fall 2011, Winter 2012, Collaboration on NSF outreach, Susick Elementary School