## **Karin Ruhlandt (formerly Ruhlandt-Senge)**

Distinguished Professor of Chemistry, Dean emerita Syracuse University, Syracuse NY 13244

## Education: •

- Dr. rer. nat. (Chemistry, equivalent to PhD), Philipps-Universität-Marburg (12/1991). Advisor: Professor Ulrich Müller.
- Research leave at the University of California, Davis, (3/1990-10/1991) Joint advisorship: Professor Philip P. Power, Professor Ulrich Müller and Professor Håkon Hope
- Diplom (Chemistry, M. Phil equivalent), Philipps-Universität-Marburg, (4/1989). Advisor: Professor Ulrich Müller
- Vordiplom (Chemistry, B. S. equivalent), Philipps-Universität-Marburg (4/1986)

## Professional Experience:

- Dean, College of Arts and Sciences, Syracuse University, 1/2015-6/2022
- Interim Dean, College of Arts and Sciences, Syracuse University, 7/2014-12/2014
- Visiting Professor, Fulbright Scholar, Department of Chemistry, Technical University, Graz, Austria, 7/2013-1/2014
- Distinguished Professor of Chemistry, Syracuse University, 9/2009- present
- Chair, Department of Chemistry, Syracuse University, 7/2009-6/2014
- Visiting Professor of Chemistry, Department of Chemistry, Monash University, Melbourne, Australia (1/2003-7/2003)
- Visiting Professor of Chemistry, Department of Chemistry, University of Auckland, Auckland, New Zealand (1/2003-7/2003)
- Professor of Chemistry, Department of Chemistry, Syracuse University (8/2002-8/2009)
- Associate Professor of Chemistry, Department of Chemistry, Syracuse University (8/1999-7/2002)
- Assistant Professor of Chemistry, Department of Chemistry, Syracuse University (8/1993 7/1999)
- Postdoctoral fellow, University of California, Davis (2/1992-7/1993) Advisor: Professor Philip P. Power

#### Awards:

- Recognition for Teaching: Faculty Incentive Grant
- NSF Career Award (1997-2002)
- Karcher Lectureship, University of Oklahoma, Norman, 2004
- Elected to Editorial Board: Main Group Chemistry (2004-)
- Elected to Editorial Board: Journal of Coordination Chemistry (2006-2009)
- NSF Special Creativity Award Grant 2008
- Promotion to Distinguished Professor, 2009
- Editorial Board: Main Group Metal Chemistry, 2012-
- Chancellor's Citation for Excellence, 2012
- Fulbright Scholar, 2013

## Professional Activities:

Reviewer for Granting Agencies:

- National Science Foundation, Research Experience for Undergraduates, review panels
- National Science Foundation, Major research instrumentation panels
- National Science Foundation, Chemistry panels
- Science Foundation Ireland, review panels 2005 and 2008
- National Science Foundation (ad hoc): Chemistry, Instrumental and International Division
- American Chemical Society, Petroleum Research Fund (ad hoc)
- Civilian Research Defense Fund (ad hoc)
- Science Foundation Ireland (ad hoc)
- New York Academy of Science, Blavatnik Award Panel, 2010, 2011, 2013, 2014, 2015, 2016, 2017, 2018

#### Reviewer for Scientific Journals:

- Accounts of Chemical Research
- Angewandte Chemie
- Chemical Communications
- Chemistry, a European Journal
- Chemistry, an Asian Journal
- Coordination Chemistry
- Coordination Chemistry Reviews
- Dalton Transactions
- European Journal of Inorganic Chemistry
- Inorganic Chemistry
- Inorganic Chemistry Communications
- Inorganic Chimica Acta
- Journal of the American Chemical Society
- Journal of the Chemical Society Dalton Transactions
- Journal of Organometallic Chemistry

- Journal of Coordination chemistry
- Main Group Metal Chemistry
- Main Group Chemistry
- Materials Chemistry
- New Journal of Chemistry
- Organometallics
- Phosphorus, Sulfur and Silicon
- Polyhedron
- Synthesis and Reactivity in Inorganic and Metal Organic Chemistry
- Zeitschrift Anorganische und Allgemine Chemie

#### Organizer:

- Main group symposium, North Eastern Regional meeting of the American Chemical Society, Binghamton, NY, October 2006
- s-block metal symposium, Pacifichem, Honolulu, Hawaii, December 2015
- s-block metal symposium, Pacifichem, Honolulu, Hawaii, December 2021

## University Responsibilities (abbreviated list):

- Dean/Interim Dean College of Arts and Sciences, Syracuse University, 7/2014-6/2022
- Member, Syracuse University Leadership Team and Chancellors' Council, 7/2014-6/2022
- Spearheaded development and execution of Syracuse University liberal arts curriculum at East China Normal University for international students in 2020 and 2021
- Member, campus wide STEM facilities renewal task force (2019-2022)
- Developed with SVP of admission and Dean of admission the campus-wide undergraduate enrollment strategic plan, guiding campus-wide enrollment decisions
- Member, University student retention council, 2018-2020
- Member, Vice President for Research search committee, 2019
- Member, Dean of Engineering and Computer Science search committee, 2018
- Spearheaded curriculum reimagination for English as a New Language (ENL) for all Syracuse students, significantly increasing retention and decreasing time to degree for international students (2018-2019)
- Dean search committee member, Maxwell School for Citizenship and Public affairs, 2016
- Member Syracuse University Academic Strategic Plan Implementation Committee, 7/2015-2022
- University Strategic Plan Steering Committee member: "Strategically focused research and doctoral programs: Targeted investment to achieve excellence and impact in areas of great opportunity", 7/2014-6/2015
- Chair, Department of Chemistry (2009- 2014)

- Director, X-ray crystallography laboratory, Department of Chemistry. 1994-resent. Obtained competitive funding (NSF) for the purchase a) Bruker CCD single X-ray diffractometer (1996); b) a Bruker D8 Advance powder diffractometer (2004), and c) a Bruker APEX II single crystal diffractometer (2010).
- Director and PI, Syracuse NSF-REU site (2000- 2002, 2003-2005, 2006-2008, 2009- 2012 and 2013-2016. Participation in various NSF site director workshops. The NSF-REU program is providing continuous support for summer research for 21-23 undergraduate students/year. In 2013 this initiative resulted in a close, ongoing collaboration with Le Moyne College.
- Director and PI, NSF- iREU program (2005-2021) This program involves an international exchange of undergraduate students with the Technical University in Graz, Austria and the Karl-Franzens University, Graz. Eight to ten American undergraduate students visit Graz for 10 weeks, while the Austrian students come to Syracuse to conduct research in the Department of Chemistry. This program is one of few international chemistry programs nationwide, and the only reciprocal program.
- Co- PI and executive committee member, NSF Advance Institutional Transformation award, "Inclusive Connective Corridor", 08/2010-07/2017
- Co-director Syracuse University WiSE (Women in Science and Engineering), since 2007.
- Co-PI HHMI (\$1M) grant to introduce active learning strategies in the STEM disciplines
- Co-PI and executive committee member, NSF-IGERT "soft interfaces", 2011-2016. This is an interdisciplinary (A&S, Engineering) PhD program initiative in "Soft Matter", and Syracuse University's first NSF IGERT grant.
- Provost's task force on pedagogical initiatives and strategies, 2013.
- Chairperson, Inorganic Chemistry search committee, Department of Chemistry (2000)
- Faculty search committees (1994, 1995, 1999, 2000, 2001, 2002, 2004, 2005, 2006, 2007, 2009, 2010)
- Life Sciences Building planning committee 2000-2008 (College of Arts and Sciences, Syracuse University)

## Summary of administrative accomplishments as Dean/Interim Dean, College of Arts and Sciences, Syracuse University, 7/2014-6/2022

The College of Arts and Sciences (A&S), founded in 1871, is the oldest and largest academic unit at Syracuse University. A&S is home to more than one third of all students and faculty. The College enrolls about 5,500 undergraduates and 1200 graduate students in 50 majors, 58 minors and several interdisciplinary programs as well as a range of post graduate programs in 16 departments and multiple programs. We touch every student at Syracuse University, as we are, in collaboration with the Maxwell school proving the liberal arts curriculum across the University.

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Application and deposit numbers are strong and growing, A&S has exceeded for multiple years the enrollment target set by the admissions office. This trend is especially remarkable given the significant decrease in the number of offers made, as well as a strict campus-wide enrollment cap.

A&S is the home to the Renée Crown Honors program. The program houses about 1200 students across the University. Other program located in A&S that serve the campus include the Humanities center, the Mellon Humanities Corridor (in collaboration with the University of Rochester and Cornell University and the NY6), the Community Folk Arts center (CFAC), a gallery and performance space dedicated to indigenous art and culture, and LaCasita, a center dedicated to LatinX culture and art. Our dedication to community service is also expressed by the recent installment of a professorship in community engagement.

The College currently employs about 500 faculty members and instructors and 200 staff. Current budget numbers for the College are approximately \$340M, up from \$260M when I started as interim Dean, due to increased research activity, enrollment, instructional efforts, and advancement activities. Directly working with me was a team of about 15 people (Dean's cabinet: senior associate dean, associate deans, assistant deans, directors, and administrative assistants). Also, directly reporting to me were 16 department chairs as well as several program directors. During 2020-2021, I introduced two new cabinet positions, an associate dean for diversity, equity and inclusion and an associate dean for curriculum innovation and pedagogy. I also hired a director of operations, who is overseeing all of A&S' infrastructure (A&S is located in 24 buildings, occupying about 440.000 sqft, across the campus and the city), in addition to construction efforts, as well as oversight of the implementation of the A&S academic strategic plan.

FY 20 was an unprecedented year for hiring. While we typically hired about 12-15 tenure and tenure track faculty per year, we were excited to hire 27 new faculty members, due to a strong budget outlook. However, due to the COVID pandemic, only 20 of those positions were filled, as the searches were cut short in March, shortly before several of them could be completed. We were able to keep up a strong hiring trajectory, and for FY22, 21 tenured and tenure track faculty, in addition to 10 full time non-tenure track faculty members were hired. In fall 2022, 27 new faculty members joined the College.

A significant focus of my work was placed on justice, equity, diversity, and inclusion (JEDI) initiatives. I was actively involved in Syracuse's NSF ADVANCE initiative, which led to a significant increase in women faculty in the STEM disciplines. As Dean, I hired the first associate Dean in A&S for JEDI in fall 2018. We developed a strategic plan to realize our JEDI goals: all A&S and Maxwell undergraduate students are now required to enroll in two social justice classes to graduate. A&S and Maxwell offer about 80% of all social justice classes campuswide. A significant focus was placed on educational initiatives, such as active learning, peer-led team learning, and various mentoring programs, significant decreasing DFW grades in introductory classes. As the result of updated hiring policies, during last three years, about 50%

of faculty hired in A&S identify as underrepresented. Recognizing the extra service workload of underrepresented faculty, A&S is spearheading a service research leave.

#### Leadership:

- Built a strong, interdisciplinary, collaborative, innovative leadership team, with the recent introduction of three new cabinet positions
- Built a strong, sustainable 10-year budget, utilizing the RCM model
- Developed strategies to grow the undergraduate and graduate admissions application pool, while increasing quality and diversity
- Significantly drove acceptance yield for incoming students
- Introduction of new hiring strategies to enhance the faculty hiring process
- Emphasis on faculty hires: over the last two years about 50% of new tenure and tenure track hires were in an underrepresented category
- Developed strategies to decrease time to degree, while increasing retention
- Replaced Dean's advisory board leadership and membership, significantly increasing annual giving and meeting attendance
- Restructured A&S and Maxwell advising office, by seamlessly integrating academic and career advising. The office is now the advising flagship across all University advising offices
- Initiated career advising emphasis for liberal arts students, engaging dean's advisory board and other alumni. This is part of a strategy to combat the declining enrollment numbers in the Humanity disciplines
  - o "Career Conversations" lecture series by alumni
  - o 'SU Casa" on-on-one mentoring by alumni for students
  - Shepherding a series of new collaborative initiatives with SU Career Services
- Overseeing website redesign and launch of enhanced communication/branding strategy
- Enhanced community outreach and engagement
- Creating enhanced bridges between the College and the Maxwell School of Citizenship via communications and collaborative meeting agendas
- Reorganizing the Syracuse University Humanities Center to serve all of the humanities across the University in collaboration with Cornell University, the University of Rochester, and the NY6.
  - More focus on connecting humanities students to Humanities Center programing
  - o Focus on digital humanities housed on Humanities Center

#### Advancement:

• Reorganized A&S advancement office, resulting in an about a three to four-fold increase in giving, including multiple endowed professorships

#### Research:

- Research activity and output has significantly increased, with more than doubling of new grants in FY 22, including five NSF Career Awards
- Supported a new interdisciplinary "Water" research focus, including a \$3M NSF NRT grant
- New "Bioinspired" institute, in collaboration between the School of Engineering and A&S
- Multiple senior faculty hires in the last two years
- Enhanced research infrastructure to support research and scholarship
- Enhancement of research infrastructure with new equipment, *via* institutional funds and grant activity (NSF and NIH)
- Reorganized Syracuse University Humanities Center and Mellon Foundation Central NY Corridor to support Humanities scholarship

#### Instructional:

- Strong emphasis on experiential learning, by introduction of new EDGE program, including undergraduate research, internships, community service and study abroad opportunities. A&S undergraduates are encouraged to fulfill two of these four categories. These experiences are accompanied by built-in reflection components.
- Strong emphasis on inclusive teaching approaches, as supported by multiple grants from HHMI and NSF
- New initiative on introducing active learning strategies (HHMI)
- Expansion of peer led team learning (PTLE) in multiple large introductory science classes (NSF)
- Expanded Syracuse's online liberal arts associate degree
- Strongly supported undergraduate research activity by increasing funding available for all A&S disciplines
- Working on enhancing several interdisciplinary programs with multiple different colleges, including the College of Engineering and Computer Science, the Maxwell School of Citizenship and Public Affairs, and the School of Education
- Introduced two new interdisciplinary degree programs to strengthen Humanity enrollments: medical humanities and digital humanities, to significant student interest
- Introduced several highly successful interdisciplinary degree programs, including "science and business", "policy and sustainability", "biotechnology" and others

## Summary of administrative accomplishments as *Chemistry Department chair* (2009-2014)

The Department of chemistry houses ~24 faculty members, ~15 staff, postdoctoral associates and visiting professors, and about 85 graduate students. The overall teaching effort is very high (~12,600 credit hours). In A&S, only the Departments of Mathematics, Biology and Psychology exceed this teaching capacity.

#### Enrollment:

- Managed increase of undergraduate enrollment of about 60 percent
- Managed increase of graduate enrollment of about 40 percent

#### *Mentoring:*

- Hired several new faculty members, (one jointly with Biology) including one woman and one URM male
- Three junior faculty members received National Science Foundation Career awards
- Under my leadership, several junior faculty members were given early tenure and promotion to associate or professor
- Grant activity in the department significantly increased with \$2.89M of grants received in FY 14, a significant increase from prior years

#### *Infrastructure:*

- Enhanced major research equipment in the department, including purchase of a single crystal diffractometer (\$400K) and the nuclear magnetic resonance (NMR) instrument
- Under my guidance, we also executed a major upgrade of existing instrument (\$550K), as made possible by two National Science Foundation grants (in which I am PI) and matching funds
- The department is, for the first time, able to provide hands-on access to NMR instrumentation access for undergraduates, a requirement for the accreditation of degree through the American Chemical Society

#### Biochemistry Division:

- Using strategic faculty hires, the department has significantly increased strengths in the life sciences/biochemistry
- The newly hired faculty members are actively collaborating with several units on and off campus
- Funding comes from a variety of sources, including National Institutes of Health, National Science Foundation, industry, and several foundations

## Summary of administrative accomplishments as NSF REU and iREU Director

I have directed (with M. Sponsler as co-director) two NSF funded (PI) research experience for undergraduates (REU) programs: one domestic (since 2000) and one international (iREU, since 2005). These NSF-funded programs provide research experiences for chemistry undergraduates for 10 weeks during the summer to conduct research in the Chemistry Department at Syracuse University. In 15 years, about 450 students from all over the U.S. participated.

During the last two years, I developed a strong collaboration between Syracuse University and Le Moyne College. Accredited to the REU program, the Department of Chemistry is recruiting a significantly increased quality population of graduate students, allowing a healthy growth in the graduate population.

I remained the PI and director for the international program (iREU) until 2021, a mutual exchange program involving American chemistry students conducting research in Graz, Austria, and Austrian students conducting research at Syracuse University. Since 2005, about 80 American students travelled to Graz; about the same number conducted research in Syracuse. The grant was active until 2021.

At the end of the summer REU program, we organized an interdisciplinary poster session with chemistry students from Le Moyne College and SUNY ESF, biochemistry students from SUNY Upstate, and chemistry, biology, bio- and chemical engineering students from Syracuse University, resulting in about 80 posters. This is a major, interdisciplinary campus celebration (also involving Upstate, ESF, Le Moyne) of undergraduate research.

## Summary of administrative accomplishments as Co-PI and Executive Committee Member, NSF ADVANCE IT Program

I was co-author, coPI, and executive committee member of an NSF IT (institutional transformation) ADVANCE award (5 years, \$3.4M, Nancy Cantor PI (until 12/13), Kal Alston PI) that is aimed to increase the number of female faculty in the STEM disciplines. Through a number of strategic initiatives focused on recruitment and retention and building networks on campus and beyond, the number of women faculty in the STEM disciplines has significantly increased in the last three years.

## Summary of administrative accomplishments Co-PI and executive committee member, NSF IGERT program in soft matter

I was the co-author, coPI and executive committee member of the first NSF IGERT program on campus. This interdisciplinary NSF funded program involves the departments of Physics, Chemistry, Biology, Bio- and Chemical engineering and the Biomaterials Institute (BMI). The IGERT initiative seeks to develop novel approaches to PhD education through interdisciplinary research and teaching.

# Summary of administrative accomplishments Co-director of WiSE (Women in Science and Engineering)

I was a co-director of WiSE. We offer mentoring to women STEM undergraduates, graduates and postdoctoral fellows and junior faculty members. Currently, 42 female STEM graduate students are enrolled in our hallmark program, WiSE FPP (future Professionals program). Providing networking for women faculty in the STEM disciplines, the NSF ADVANCE program was borne out of the WiSE community, with WiSE core faculty (Bhatia, Ruhlandt) developing the framework, and authoring of the ADVANCE IT proposal. WiSE provides networking for women STEM faculty, providing a key element in faculty retention through climate enhancement.

### **Professional Activities**

#### Funding:

Current:

HHMI: active learning strategies for an inclusive classroom, co-PI, \$1M.

#### Past Funding:

NSF S-STEM: Sustain, strategies for retention and success for disadvantaged students, co-PI, \$1M.

National Science Foundation, REU Site: International REU in Chemistry in Austria. 5/2015-9/2021, PI.

National Science Foundation: REU Site in Chemistry, 5/2013-4/2017, \$275,000, PL

National Science Foundation, IGERT: Soft Interfaces - Bridging the Divide in Graduate education (iBriD), \$2.9M, Co-PI.

National Science Foundation, "Purchase of X-ray equipment at Syracuse University, \$270,000. PI.

National Science Foundation, "Purchase of NMR equipment at Syracuse University, \$329,500. PI.

National Science Foundation, "Advance Institutional Transformation award: The Inclusive Connective Corridor", \$3.4M, 08/2010-07/2015. Co-PI.

Sharp Corporation of North America, "Development of volatile calcium precursors" \$30,000, PI.

National Science Foundation: "REU site: A Mutual American-Austrian Student Exchange: International Research Experience for Chemistry Undergraduates (iREU), \$175,500, 04/01/08-03/31/11, PI.

National Science Foundation: Supplement for Special Creativity to "Novel reagents, polymerization initiators and superbases--Advances in the organometallic chemistry of the heavy alkaline earth metals" \$297,000, 07/01/08-06/30/11, PI.

National Science Foundation, "REU Site at Syracuse University: Undergraduate Research Experience in Chemistry" 04/01/2009- 03/31/2011, \$267,795. PI.

National Science Foundation, Research Experience for Undergraduates in Chemistry (REU site) at Syracuse University (\$247,650, 04/01/2006-03/31/2009). Matching funds add to a project volume of \$444,210, which will support 21 undergraduates and two High School teachers for 3 summers, PI Australian Research Council: "Advancing the Metal-Organic Chemistry of the Heavy Alkaline Earth Elements" P. Andrews, G. Deacon, M. Cole, CI's, K. Ruhlandt-Senge, PI. 2006-2008, A\$330000.

National Science Foundation: "Novel reagents, polymerization initiators and superbases--Advances in the organometallic chemistry of the heavy alkaline earth metals. 07/15/05-07/14/08, PI, \$360,000

National Science Foundation, "MRI: Acquisition of an Atomic Force Microscope and Surface Profilometer for surface analysis facility at Syracuse University", Co-PI, \$297.896, PI, 09/01/07-08/31/09

National Science Foundation: An American Austrian Student Exchange: International Research Experience for Chemistry Undergraduate students (iRES) 04/01/05-03/31/07, PI, \$105.000, plus contributions from Syracuse University and Technical University Graz.

Acquisition of powder diffraction equipment at Syracuse University. \$82,877, 01/01/2003-12/31/2006. Matching funds brought this to a total project volume of \$217,877, PI.

National Science Foundation, Research Experience for Undergraduates in Chemistry (REU site) at Syracuse University (\$189,150, 04/01/2003-03/31/2006). Matching funds add to a project volume of \$339,150, support for 21 undergraduates for 3 summers, PI.

National Science Foundation (CHE 01-08098), \$350,910 (8/2001-7/2005) "s-Bonded organocalcium, - strontium, and - barium compounds. Synthesis and applications". A supplement over \$15,400 funded a sabbatical leave to The University of New Zealand, Auckland and Monash University, Melbourne, Australia.

National Science Foundation, Instrumental Grant (CHE 95-27898), \$167,835 "Purchase of X ray Diffractometer", PI.

American Chemical Society, Petroleum Research Fund (28361-G3), \$20,000, (9/94 - 8/96), "The Synthesis, Structure and Reactivity of Alkaline-Earth and Organoalkaline-Earth Derivatives", PI.

National Science Foundation, Research Planning Grant (CHE 94-09446), \$18,000, (9/94 2/96), "Synthesis, Characterization and Reactivity of Alkaline-Earth Derivatives Containing Metal- Metal Bonds", PI.

Deutsche Forschungsgemeinschaft: Postdoctoral stipend for Dr. Ulrich Englich, 8/1997-7/1998, \$35,000. Faculty Incentive Grant, Syracuse University, "Development and improvement of CHE 139/522", \$1900, PI (with J. Spencer)

Dreyfus Foundation, Special Grants Program, (\$45,000) (1/1999-12/2001) "Collaborative Learning" for an updated laboratory class CHE 139/522 to be held parallel at Syracuse University (SU) and the University of New Hampshire (UNH), PI.

National Science Foundation, Career Award, (\$327,000) (2/1997-3/2002) Synthesis and characterization of s-bonded heavy organoalkaline earth derivatives, PI.

National Science Foundation, REU program (CHE 99-87838), \$132,000 (5/2000 - 12/2002). Matching funds from Syracuse add to an overall budget of \$ 312,000, PI.

#### Scientific Collaborations:

Professor Bruce Hudson, Syracuse University

"DFT calculations on organometallic calcium, strontium, and barium compounds"

Professor Frank Uhlig, Technical University, Graz

- "Alkaline earth metal derivatives of heavy group 14 ligands"
- "Structural chemistry of silicon, germanium and tin systems"

Professor Matthias Westerhausen, University of Jena Germany "Alkaline earth metal chemistry"

Professor Glen Deacon, Monash University, Clayton, Australia "Alkaline earth and lanthanide derivatives"

Professor Arnold Adam, Technical University, Clausthal, Germany "Alkoxides and aryloxides of the alkali and alkaline earth metals"

#### Postdoctoral fellows and visiting scientists:

Dr. Ulrich Englich Postdoctoral fellow, 8/1994 - 7/00. Supported by a highly

competitive postdoctoral fellowship from the Deutsche

Forschungsgemeinschaft 9/1996 - 8/1997. Research Associate at MacCHESS, Cornell University. Since 2012 Research assistant professor at the Forensics and National Security Institute at

Syracuse University.

Dr. Uwe Herrman Visiting scientist, Universität Dortmund, Germany, 3/2000 -

4/2000. Supported by the Deutsche Forschungsgemeinschaft.

Dr. Werner Kalisch Visiting scientist from the Freie Universität Berlin, Germany

3/1996 -8/1996. Supported by grants from the Deutsche Forschungsgemeinschaft and the Freie Universität Berlin.

Dr. Markus Schürmann Visiting Scientist, Universität Dortmund, 6/1999-7/1999

Dr. Antonio Sousa Pedrares Visiting scientist, Universidad Santiago de Compostela, Spain.

6/2000-9/2000 supported by the Universidad de Santiago de

Compostela.

Dr. Manfred Oßberger Visiting graduate student from the Technical University in Munich

8/2002-11/2002

Professor Frank Uhlig Senior visiting scientist from the Department of Inorganic

Chemistry, Universität Dortmund Germany: 3/1995 - 8/1995, 3/1997-8/1997, 6/1998, 5/1999, and 5/2001. Supported by the Deutsche Forschungsgemeinschaft. Dr. Uhlig is now the dean of

Chemistry, Technical University Graz, Austria.

Dr. Katharina Decker Visiting scholar, 8/2008-12/2006, Technical University, Graz,

Austria

Dr. Jesse Taylor Postdoctoral fellow 1999-2000. Now a senior scientist, at Crouse

Hinds, Syracuse.

Dr. Weijie Teng Postdoctoral fellow, 1/2005-1/2007.

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Dr. Daniel Weismann Visiting Scholar, 6/2008-11/08, TU Kaiserslautern, Germany

Dr. William Maudez Postdoctoral fellow, 7/2008-7/2010

Johann Pichler Visiting scholar, 1/2010-9/2010, Technical University, Graz

Dr. Anna Y. O'Brien Visiting Professor, Le Moyne College, 2022-

Dr. M. Gillett-Kunnath Research Assistant Professor, 2014-

Paul Hager Visiting researcher, 2022

Graduate students:

Dr. Jacob Alexander Research University, Jerusalem, Instructor Barnard College, now

at University of Nebraska, Lincoln

Dr. Louise Bodack Graduate student, spring 1995 - summer 1997

Dr. Scott Chadwick Graduate student, 1994-1997, Ph.D. December 5, 1997,

Postdoctoral fellow with Professor D. Collum, Cornell University,

now at Bristol Myers Squibb

Mitchell George Graduate student, 1995-1996, M. S. degree in spring 1996

Dr. Miriam Gillette-Kunnath Graduate student, March 2001 – 12/2007. Postdoctoral fellow,

Notre Dame University, research professor, Syracuse University.

Erica Gomez Graduate student, January 2001 – 2003. M.S. degree, High School

teacher Poughkeepsie, NY.

David Green Graduate student, spring 1996 - 1998, M.S. degree 12/98,

Currently at Advanced Medicine, San Francisco, CA.

Dr. Julia Hitzbleck Graduate student, January 2001 – 2004, Postdoctoral fellow,

RWTH Aachen (Jun Okuda), now at Bayer AG Köln, Germany.

David Jenkins Graduate student, spring 1998 - 2000. Currently at Albany

Molecular, Albany NY.

Dr. Weijie Teng Laboratory technician, August - December 1997, graduate student,

summer 1998 – 2004, postdoctoral fellow 2005- 2007.

Dr. Wilda Vargas Gregory Graduate student, summer 1998 –2004. University of Puerto Rico,

Humacao, instructor.

Dr. Courtney St. Prix (High School teacher) Summer internship 2006

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Dr. Anna Yosick O'Brien Graduate student, January 2001 – 2005, Postdoctoral fellow Colgate University, Professor an Chair, Le Moyne College Graduate student, January 2002-2007, Postdoctoral fellow, Mt Dr. Maria Felisa Zuniga Holyoke College, Senior lab instructor, Mt. Holyoke College. Dr. Marites Guino-o Graduate student, January 2002-2007, Postdoctoral fellow, Dartmouth College, visiting ss. Prof. Oberlin College, Ass. Prof. St. Thomas University. Dr. Ana Torvisco Graduate student, January 2003-2010. Postdoctoral Associate 01/11-2012, Faculty, Technical University, Graz, Austria. Graduate student, January 2003-2010, postdoctoral Associate, Dr. Abhilaha Verma University of Tennessee Graduate student, January 2007-2010, postdoctoral associate, Dr. William Buchanan Notre Dame University, IP specialist Purdue University Dr. Victoria Bampoh Graduate student, January 2007-2012, Faculty, University of Minnesota. Dr. Yuriko Takahashi Graduate student, June 2009-2014, PhD 8/2014, Graduate student, June 2009-2014, DoE graduate fellowship, Dr. Peter Rosado (declined GEM fellowship), professor Georgia College Graduate student, June 2009- graduation 4//2016. Postdoc UTEP, Dr. Alan Goos faculty member University of Moorhead Catherine Lavin Graduate student, June 2012-2019. IT specialist Dr. Valerie Lopez Graduate student, June 2012-2019 IGERT fellow (declined Marshall fellowship). Teaching professor, Le Moyne College **Andrew Schuchart** Graduate student, June 2012-2014. 8/2014 MS degree **Emily Carpenter** Graduate student, 2014-2015 Cody Webb Graduate student, January 2015- expected graduation 12/2022 Undergraduate students: Patrick Caruana REU summer student 2000 (Le Moyne College, Syracuse NY). PhD from the University of Rochester, Ass. Prof. SUNY Cortland Sona Dalal NSF REU student summer 1994, summer 1995, spring 1996 and

summer 1996 (Syracuse University)

Kelly Davis NSF REU student summer 1994, St. Bonaventure University.

Graduate Student at Carnegie Mellon University, now a postdoctoral fellow at the University of Colorado at Boulder

Zaira Kianes Undergraduate student, summer 1994 (Syracuse University)

Laura McJilton REU summer student 2001 (Millersville University, PA)

Rudy Moise Undergraduate student fall 1996 (Syracuse University)

Sapan Parikh Undergraduate student, spring 1995 (Syracuse University)

Christina Pfister Undergraduate student fall 1995 (Syracuse University)

Shaila Quazi Undergraduate student, spring and summer 1998 (Syracuse

University)

David Stone REU summer student 2000 (Augustana College, Sioux Falls, SD).

Graduate student at the Pennsylvania State University

Anthony Surace Undergraduate student, spring and summer 1994 (Syracuse

University)

Ana Torvisco REU summer student 2002 (Manhattanville College, Purchase

NY), Now a faculty member at the Technical University in Graz,

Austria

Bahjat Tayra Undergraduate student, fall 1994 (Syracuse University)

Nathan Fry Undergraduate student 2002-2004 (Honors thesis), Graduate

student, Northwestern University.

Eva Baker Undergraduate student 2002-2005 (Honors thesis). Pursued PhD in

Architecture, Penn State.

My Nguyen Undergraduate student 2003-2004

Eli Mekhlin Undergraduate student 2004-2007 (Honors thesis). Law degree,

George Washington University, Patent examiner

Blake Hargis Undergraduate student 2005-2006, graduate student, Rensselaer

Institute of Technology.

Johannes Kreuzer Undergraduate student 2005, IRES

Ashley Blincoe Undergraduate student 2005, Syracuse University

Michael Bagnall Undergraduate student 2006-5/2009

Sarina Clancy Undergraduate student 2006-5/2008, graduate student, University

of Rochester.

Johann C. Leye Undergraduate student, REU 2006, TU Clausthal, Germany

Simon Lux iRES undergraduate student, summer 2006, TU Graz, Austria

Johann C. Leye REU 2006, Technical University, Clausthal

Elizabeth Nagle Undergraduate student 2007-present, Graduate student, Columbia

University

Petra Wilfing iRES undergraduate student, summer 2007 TU Graz, Austria

Henrike Rempel REU undergraduate student, summer 2007, TU Clausthal,

Germany

Felicia Konopka REU undergraduate student, Barnard College, summer 2007,

graduate student, Michigan State University.

Andrew Powers Undergraduate student, 2007-5/2009, graduate student, University

of Florida.

Sukeerti Kesar Undergraduate student, 2008

Elisabeth Ziegler IREU undergraduate student, summer 2008. TU Graz, Austria

Peng Wu iREU undergraduate student, summer 2008, TU Clausthal,

Germany

Adam Brooks Undergraduate student, 2009-2012. Best capstone thesis in the

sciences, graduate student, LSU

Margaret Spinosa Undergraduate student, 2009, Syracuse University

Muhammed Zuiddin Undergraduate student, 2009, Syracuse University

Stephanie Eilers REU undergraduate student, summer 2009, TU Clausthal,

Germany

Peter Augustin iREU undergraduate student, summer 2009, TU Graz, Austria

Julia Stone 2009 and 2010. Undergraduate student, Barnard College

Maurice Grube REU student, summer 2010, Technical University Clausthal,

Germany

Johanna Flock iREU student, summer 2010, TU Graz

Judith Binder iREU student, summer 2011, TU Graz

Seungmo Suh Undergraduate student 2009-2011

Melanie Decker iREU, 2011, Technical University, Graz, Austria.

Cody Webb Undergraduate student 2013, 2014, REU summer 2013

Matthew Liewietzki Undergraduate student 2013, 2014

Danielle Berry Onondaga Community College, REU student 2012-2013, LSAMP

Cristina Weirer iREU 2012

Nicole Steinmann iREU 2014, Technical University, Graz, Austria

Brian Wilson Undergraduate research 2014, including REU summer 2014 Le

Moyne College

Rafael Rathner IREU '15, TU Graz

Mathias Hobisch IREU '15, TU Graz

Josh Woods Undergraduate research 2014, REU summer 2014, elected SU

scholar, Syracuse University's highest honor. Honors thesis, '16,

graduate school Cornell

Susanne Reischauer IREU '16, TU Graz

Brian Wilson in partnership with Le Moyne College, Honors Thesis '17

Shannon Vonn Dyke Undergraduate student, 2018, Syracuse University

Devon Haugh Undergraduate student '19, in Partnership with Le Moyne College

Ashley C. Clements Syracuse University, Honor's Thesis '19

Paul Hager IREU '19, TU Graz

Meghan Vonden Steinen Syracuse University, 2020

Kim La Syracuse University, 2020

Athena Basdekis Syracuse University, 2020

Audrey Ogurchak Syracuse University, 2020, Bristol Meyers Squibb

Ahlam Zokari Syracuse University, 2021

Donyell Logan Syracuse University, 2021 and 2022

Marwa Abedrabbah Syracuse University 2022, Honors thesis

### High school students

Kim La Syracuse City School, undergraduate at Syracuse University

The Ngo Syracuse City School, undergraduate student at Columbia

University, Engineering

Meghan Vonden Steinen Bishop Grimes School, undergraduate student Syracuse University,

graduate school Columbia

Marina Cousins Manlius Pebble Hill School, undergraduate student RPI

Engineering

Mazen Alsafi Syracuse City School, Columbia University, Syracuse University

Chanh Do Syracuse City School Accounting, Le Moyne College

Ahlam Zokari Syracuse City School, Syracuse University, Engineering

Zau N-hkum Syracuse City School, Syracuse University, Engineering

Claire Nicholson Bishop Grimes School, undergraduate at Syracuse University,

A&S

Koshalah Mathuranayagam Fayetteville Manlius School, RPI Engineering

19

Mohammed Zokari Syracuse City School Syracuse University, A&S

Hossein Soleimani HS junior

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## **Invited Lectures**

2022

Ruhlandt-Senge, Karin; Innovative ligand design to affect reactivity in s- and f-block metal complexes. *Abstracts of Papers, 263rd ACS National Meeting & Exposition, San Diego, CA, United States, Mar. 20-24, 2022 (2022) Invited Speaker.* 

2016

Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Renaissance in s-block alkaline earth metal chemistry: Importance of ligand system design and secondary non-covalent interactions. SUNY Potsdam Chemistry Department, November 8th, 2016.

2015

"Competition between ligation and solvation in heavy alkaline earth metal tetraarylborates"

Pacifichem, Honolulu, December 2015

"Examination of synthetic parameters for the metal- based synthesis of alkaline earth metal compounds"

Pacifichem, Honolulu, December 2015

2014

"s- block metal organic frameworks (MOF's) for gas storage and bone therapeutics"

Universität Bielefeld, Germany, January 17, 2014 (GDCH lecture)

2013

"s- block metal organic frameworks (MOF's) for gas storage and bone therapeutics"

Universität Leipzig, Germany, December 4, 2013.

"s- block metal organic frameworks (MOF's) for gas storage and bone therapeutics"

Universität Chemnitz, Germany, December 3, 2013.

"s- block metal organic frameworks (MOF's) for gas storage and bone therapeutics"

Technische Universität Clausthal, Germany, November 28 (GDCH lecture)

"s- block metal organic frameworks (MOF's) for gas storage and bone therapeutics"

Technische Universität Graz, Austria, October 14, 2013

"s-block metal MOF's for hydrogen storage and bone therapeutics applications" *St. John's University, March 25, 2013* 

2012

"Taming the heat, how to control the reactivity of highly reactive metals" *DePaul University, Chicago, April 4, 2012.* 

2011

"Taming the heat, how to control the reactivity of highly reactive metals" *Universität Jena, Germany, May 31, 2011* 

"Taming the heat, how to control the reactivity of highly reactive metals" *Universität Leipzig, Germany, May 30, 2011* 

"The inclusive, connective corridor: Social networks and the ADVANCEment of Female STEM faculty"

Syracuse University, May 18, 2011

"Taming the heat, how to control the reactivity of highly reactive metals" Departmental Seminar, Hamilton College, Clinton, New York, April 8, 2011

"Taming the heat, how to control the reactivity of highly reactive metals" Departmental Seminar, State University of New York, Binghamton, New York, February 11, 2011

2010

"Volatile alkaline earth metal CVD precursors" *Pacifichem, Honolulu, Hawaii, December 15.* 

"Taming the heat: How to control the chemistry of highly reactive metals" SWRM/SERMACS Regional ACS Meeting, New Orleans, December 4.

"From alkali and alkaline earth metal germanides to germanium hydrides syntheses and structural implications" *GTL-13, plenary lecture, Graz, Austria, July 14 2010* 

"Taming the heat: How to control the chemistry of highly reactive metals" North East Regional meeting of the American Chemical Society (NERM), plenary lecture, Potsdam NY June 3.

2009

"Alkaline earth metal based heterobimetallics as next generation CVD precursors"

Main group chemistry conference: Cancun, Mexico, February 14, 2009

"When VSEPR fails: new insights into the unusual geometry of heavy alkaline earth acetylides",

Annual meeting of the American Crystallographic Society, July 27, Toronto, Canada.

# 2008

"When VSEPR fails: new insight into the unusual geometry of alkaline earth metal organometallics"

Trinity College Dublin, Ireland, December 3.

"Alkaline earth metal based heterobimetallics as next generation CVD precursors"

November 14, South Eastern Regional Meeting of the American Chemical Society (SERMAS) Nashville, TN

"Alkaline earth metal benzyl, di and triphenylmethanides. Preparation, Ion association and properties"

November 13, South Eastern Regional Meeting of the American Chemical Society (SERMAS) Nashville, TN

"Heterobimetallic alkaline earth metal chemistry - new opportunities for solidstate chemistry?"

Technical University Graz, Austria, June 6, 2008

"Heterobimetallic alkaline earth metal chemistry - new opportunities for solidstate chemistry?"

Universität zu Köln, Germany, June 10, 2008

### 2007

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

University of Notre Dame, March 23, 2007

"When VSEPR fails: Continuing synthetic and computational investigations of the behavior of alkaline earth metal acetylides"

American Chemical Society, National meeting, Chicago, March 29, 2007

### 2006

"100 Jahre nach Grignard- neue Entwicklungen auf dem Gebiet der Organometallischen schweren Erdalkalimetallverbindungen" *Universität Stuttgart, December 11, 2006* 

"100 Jahre nach Grignard- neue Entwicklungen auf dem Gebiet der Organometallischen schweren Erdalkalimetallverbindungen" Universität Aachen, December 7, 2006

"100 Jahre nach Grignard- neue Entwicklungen auf dem Gebiet der Organometallischen schweren Erdalkalimetallverbindungen" Universität Münster, December 6, 2006

"From Polymerization initiators to high temperature superconductors, organometallic compounds of the heavy alkaline earth metals" *St John's University, October 26, 2006* 

"From Polymerization initiators to high temperature superconductors, organometallic compounds of the heavy alkaline earth metals" State University of New York, Cortland College, October 19, 2006

"Synthesis and bonding in heavy alkaline earth metal alkynes" North Eastern Regional meeting of the American Chemical Society (NERM), Binghamton, NY, October 6, 2006

"From Polymerization initiators to high temperature superconductors, organometallic compounds of the heavy alkaline earth metals" *Colgate University, September 26, 2006* 

"New routes to heavy alkaline earth metal precursor molecules" *IRIS 2006, July 2006, Oulu, Finland (Plenary lecture)* 

Session chair, IRIS 2006, July 2006, Oulu, Finland

#### 2005

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Plenary lectureship, Pacifichem Hawaii, December 2005

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Invited lecture, A. Cotton Awards symposium in Honor of Philip P. Power, ACS National meeting, San Diego, March 2005.

#### Session chair,

Symposium in Honor of P. P. Power, ACS national meeting, San Diego, March 2005

### 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Northeastern Regional meeting of the American Chemical Society (NERM), Rochester, NY, November 1, 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Karcher lectureship, Department of Chemistry, University of Oklahoma, October 21, 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, University of North Texas, Denton, October 20, 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, Southern Methodist University, October 19 2004

"Von Grignard Reagenzien zur Organometallchemie der schweren Erdalkalielemente"

Department of Chemistry, Ludwigs Maximilians Universität München, Germany, June 3, 2004

"Von Grignard Reagenzien zur Organometallchemie der schweren Erdalkalielemente"

Department of Chemistry, Technische Universität Graz, Austria, June 2, 2004

"Von Grignard Reagenzien zur Organometallchemie der schweren Erdalkali elemente"

Department of Chemistry, Technische Universität Clausthal, Germany, May 27, 2004

"Von Grignard Reagenzien zur Organometallchemie der schweren Erdalkalielemente"

Department of Chemistry, Philips Universität Marburg, Germany, May 17, 2004

"Von Grignard Reagenzien zur Organometallchemie der schweren Erdalkalielemente"

Department of Chemistry, Universität Kaiserslautern, Germany, May 13, 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, Potsdam University, Potsdam NY, April 27 2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, St. Lawrence University, Canton NY, April 27

2004

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, Ohio State University, April 7 2004

2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Invited speaker, IC03, Melbourne, Australia, 2/2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, Monash University, Clayton, Victoria, February 20, 2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, The University of Auckland, Auckland NZ, April 3, 2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, The University of Canterbury, Christchurch, NZ, May 5, 2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, Otago University, Dunedin, NZ, May 8, 2003

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

ALKCHEM-3, Würzburg, Germany, October 2, 2003.

2002

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, University of Lugo, Spain, October 14, 2002

"From Ambiguity to Actuality: The Organometallic Chemistry of the heavy alkaline earth metals"

Department of Chemistry, University of Santiago de Compostela, Spain, October 16, 2002

# 2001

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, State University of New York at Geneso, September 2.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Hunter College, New York, NY, March 23.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, State University of New York, Buffalo, NY, March 16.

#### 2000

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Skidmore College, Saratoga Spring NY, October 11.

"Alkaline earth Metal Derivatives Containing Group 4A ligands: A Synthetic and Structural Study".

Pacifichem 2000, Honolulu, Hawaii, December 18.

#### 1999

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Muhlenberg College, Allentown, PA, October 27.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Kings College, Wilkes-Barre, PA, October 28.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Clark University, Worchester MA, April 19.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, Alfred University, Alfred NY, February 16.

"On the Way to s-Bonded Organometallic Calcium, Strontium, and Barium Derivatives",

Department of Chemistry, State University of New York, Binghamton NY, January 29.

### 1998

- "Metallates, Contact and Separated Ion Pairs and Triples: The Unexpected Structural Diversity in Alkali and Alkaline-earth Metal Thiolates", Department of Chemistry, University of Kentucky at Lexington, October 23.
- "Metallates, Contact and Separated Ion Pairs and Triples: The Unexpected Structural Diversity in Alkali and Alkaline-earth Metal Thiolates", *Department of Chemistry, Universidad de Santiago de Compostela, Spain. October 9.*
- "Protonolysis of Hexamethyldisilazane by Thiols in Transamination Reactions: A Yield Reducing Side Reaction", Gordon Conference on Inorganic Chemistry, Salve Regina University, RI, July 19-24.
- "Metallates, Contact and Separated Ion Pairs and Triples: The Unexpected Structural Diversity in Alkali and Alkaline-earth Metal Thiolates" NSF Workshop on Inorganometallic Chemistry, Knoxville TN, June 11-14.
- "Monomers, Metallates and More: The Unexpected Structural Diversity in Alkali Thiolates", *The Fargo Conference on Main Group Chemistry, June 5.*
- "Metallate, Kontaktpaare und Solvensseparierte Ionenpaare. Die Koordinationschemie von Alkali- und Erdalkalimetallthiolaten und -selenolaten", Department of Chemistry, Universität Köln, Germany, May 12.
- "Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications", Department of Chemistry, University of Rochester, Rochester, NY, February 11.

### 1997

- "Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" Department of Chemistry, Northeastern University, Boston, MA, November 6.
- "Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" Department of Chemistry, University of New Hampshire, Durham, NH, November 4.
- "Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" Department of Chemistry, University of Massachusetts, Amherst, MA, November 3.

"Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" *Department of Chemistry, State University of New York Albany, April 7.* 

"Erdalkali Metall Chalkogenolate: Synthesen, Strukturen und Anwendungen" Dozententagung der ADUC, Freie Universität Berlin, March 18.

"Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" *Department of Chemistry, Hamilton College, Clinton NY, March 7.* 

"Alkaline-earth Chalcogenolates, Syntheses, Structures and Applications" *Department of Chemistry, Syracuse University, March 4.* 

## 1996

"Synthesen, Strukturen und Reaktivitäten von Alkali und Erdalkaliorganochalkogeniden" Fachbereich Chemie, Universität Dortmund, June 18.

"Structural Investigations of Alkali Thiolates and Selenolates - Control of Association and Aggregation by Careful Ligand and Donor Selection" *The Fargo Conference on Main Group Chemistry, Fargo ND, May 27-29.* 

"Synthesis and Structural Investigation of Alkali and Alkaline-earth Organochalcogenides with Defined Reactivity" *Brooklyn College, New York, NY, May 1*.

# 1995

"Structural Variations of Alkali Organochalcogenides-- from Monomers to Polymers"

Symposium on Structural Tools for Organometallic Chemistry, American Crystallographic Association, Annual meeting, Montreal, Canada, July 23-28.

"Frontiers in Science Program for local and prospective high school teachers: Update in current trends in inorganic chemistry", *Syracuse University*, *July 8*.

"New Trends in Main Group Chemistry"

Project Advance, Syracuse University, New York, NY, May 18.

"New Trends in Main Group Chemistry" Project Advance, Syracuse University, Syracuse NY, April 26.

# 1994

Frontiers in Science Program for local and prospective high school teachers: "Update in current trends in main group inorganic chemistry" *Syracuse University, July 12.* 

# 1993

"Synthesis and Characterization of Monomeric Main Group 3 Amides, Thiolates and Selenolates - Implications for p-p p Bonding - Future Directions". Local American Chemical Society Section meeting, Syracuse, N.Y., November 1993

"Synthesis and Characterization of Monomeric Main Group 3 Amides, Thiolates and Selenolates - Implications for p-p p Bonding".

Department of Chemistry, University of the Pacific, Stockton, CA., March 1993

"Synthesis and Characterization of Monomeric Main Group 3 Amides, Thiolates and Selenolates - Implications for p-p p Bonding".

Department of Chemistry, Syracuse University, Syracuse, N.Y., February 1993.

# Poster and Student Presentations

#### 2022

Dewey, J., Willingham-McLain, L., Diede, M., Wiles, J., Tillotson, J., Ruhlandt, K., and Langford, G. (July, 2022). Initiating and Sustaining Course Transformations in Biology and Chemistry. Poster presented at the *Society for the Advancement of Biology Education Research (SABER)* Minneapolis, MN, July 2022

### 2021

Webb, Cody C. Jr; Goos, Alan Guy; O'Brien, Anna Y.; Ruhlandt-Senge, Karin; Synthesis and characterization of heterobimetallic perfluorinated alkaline earth bismuth alkoxides. *Abstracts of Papers*, 262nd ACS National Meeting & Exposition, Atlanta, GA, United States, August 22-26, 2021 (2021)

Webb, Cody C. Jr; Kriechbaum, Manfred; Amenitsch, Heinz; Torvisco, Ana; Ruhlandt-Senge, Karin;

In-situ formation of the Cu-based MOF HKUST-1 studied by time resolved S/WAXS. Abstracts of Papers, 262nd ACS National Meeting & Exposition, Atlanta, GA, United States, August 22-26, 2021 (2021)

### 2019

Foster, Sue; Bonomo, Gary; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Exposing high school students to sustainability concepts: An engaging green chemistry think tank. *Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), CHED-0103.* 

Haugh, Devon; O'Brien, Anna Y.; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Towards Alkali and Alkaline-Earth metal complexes of 2,5-bis(3,5-dimethylpyrazolylmethyl)pyrrole. *Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), INOR-0730.* 

Burke, Janelle; Giufre, Rosario; O'Brien, Anna Y.; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin. N,N,N-pincer ligand system for potential alkali and alkaline-earth metal complexes. *Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), INOR-0733.* 

Nicholson, Claire; Cousins, Marina Stirling; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis and characterization of heteroleptic alkaline earth metal silyl amides. *Abstracts of Papers*, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), INOR-0307.

Clements, Ashley; Woods, Joshua J.; Lavin, Catherine Mary; Cousins, Marina Stirling; La, Kim; Allis, Damian G.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Closer look at the synthesis and characterization of alkaline earth metal heteroleptic tetraarylborate pyrazolates. *Abstracts of Papers*, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), INOR-0310.

Englich, Eva; Foster, Sue; Bonomo, Gary; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Green Avengers: An Environmental Club Promoting Local and Global Citizenship. *Abstracts of Papers*, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), ENVR-0422.

Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Importance of secondary interactions such as  $M^{-}\pi$  and  $M^{-}F$  in alkaline earth metal complexes. *Abstracts of* 

Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, **2019** (2019), INOR-1078.

Vonden Steinen, Meghan; Wilson, Brian; Takahashi, Yuriko; Ngo, The; Allis, Damian G.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis, characterization, and coordination studies of novel bismuth compounds. *Abstracts of Papers*, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), INOR-0309.

Bonomo, Gary; Kunnath, Bobby; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; **Chemistry and the college experience:** A partnership with Project SEED to enrich underserved communities. *Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4, 2019 (2019), CHED-1918.* 

Kunnath, Bobby; Bonomo, Gary; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Building student success through STEAM community collaboration. *Abstracts of Papers, 257th ACS National Meeting & Exposition, Orlando, FL, United States, Mar. 31-Apr. 4,* **2019** (2019), CHED-1847.

### 2018

Zokari, Ahlam; Wilson, Brian; Takahashi, Yuriko; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis and characterization of novel alkaline earth/rare-earth metal and bismuth heterobimetallic compounds. *Abstracts of Papers*, 256th ACS National Meeting & Exposition, Boston, M, United States, Aug. 19-23, 2018 (2018), Project SEED Poster.

N-hkum, Zau; Wilson, Brian; Takahashi, Yuriko, Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Structural studies of novel group I and bismuth heterobimetallic fluoroalkoxides. *Abstracts of Papers, 256th ACS National Meeting & Exposition, Boston, M, United States, Aug. 19-23, 2018 (2018), Project SEED Poster.* 

Takahashi, Yuriko; O'Brien, Anna; Deacon, Glen; Andrews, Philip; Wolf, Melanie; Torvisco, Ana; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Facile access to organometallic heavy alkaline earth metal species using environmentally friendly redox transmetallation protolysis (RTP). Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), INOR-1254.

Takahashi, Yuriko; Wilson, Brian; O'Brien, Anna; Allis, Damian; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Structure function analysis: The role of metal-fluorine interactions in controlling coordination chemistry in alkaline earth metal compounds. *Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), INOR-319.* 

Kunnath, Bobby; Bonomo, Gary; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Roadmap to success: Connecting urban high school students with Syracuse University research experience. *Abstracts of Papers*, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), CHED-193.

Kunnath, Bobby; Bonomo, Gary; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Math and chemistry research as tools to encourage and foster urban high school students in STEM fields. *Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), CHED-1968.* 

Bonomo, Gary; Kunnath, Bobby; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Syracuse University's summer chemistry enrichment experience - development of an outreach pilot program. Bonomo, Gary; Kunnath, Bobby; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; *Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22,* **2018** (2018), CHED-21012101.

Goos, Alan; Weissmann, Daniel; Pichler, Johann; Binder, Judith; Allis, Damian; Vonn Dyke, Shannon; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Structural studies of alkaline earth and rare metal trans-azobenzene complexes. Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), INOR-313.

Haugh, Devon; Wilson, Brian; O'Brien, Anna; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin; Synthesis of alkali and alkaline earth metal-NNN pincer complexes. *Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018 (2018), INOR-230230.* 

Cousins, Marina; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Progress towards heteroleptic alkaline earth metal silyl amides. *Abstracts of Papers, 255th ACS National Meeting & Exposition, New Orleans, LA, United States, March 18-22, 2018* (2018), INOR-264.

### 2016

La, Kim; Woods, Joshua J.; Lavin, Catherine M.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis of alkaline earth metal tetraarylborate pyrazolate compounds. *Abstracts, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-469.* 

Lopez, Valerie; Reischauer, Susanne; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Next frontier in MOCVD precursors: Synthesis of novel bismuth coordination compounds. *Abstracts, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-309.* 

Vonden Steinen, Meghan E.; Ngo, The B.; Takahashi, Yuriko; Wilson, Brian; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis, characterization, and coordination studies of novel bismuth compounds. *Abstracts, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-231.* 

Ngo, The B.; Vonden Steinen, Meghan E.; Takahashi, Yuriko; Wilson, Brian; Torvisco, Ana; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Fluorinated trisalkoxide bismuth species as potential MOCVD precursors. *Abstracts*, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-230.

Lavin, Catherine M.; Woods, Joshua J.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Synthesis and structures of heteroleptic alkaline earth metal tetraarylborate pyrazolates. *Abstracts*, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-113.

Yuriko; Torvisco, Ana; O'Brien, Anna Y.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Coordination chemistry of magnesium and bismuth compounds. Wilson, Brian; Takahashi, Abstracts, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-112.

Webb, Cody C. Jr.; Kriechbaum, Manfred; Torvisco, Ana; Amenitsch, Heinz; Ruhlandt-Senge, Karin; Ngo, The B.; Vonden Steinen, Meghan E.; Takahashi, Yuriko; Wilson, Brian; Torvisco, Ana; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Abstracts, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-109.

Woods, Joshua J.; Goos, Alan G.; Lavin, Catherine M.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Structural variations involving s-block metal pyrazolates. *Abstracts*, 41st Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-8, 2016 (2016), NERM-27.

### 2015

Lopez, Valerie; Lijewski, Matthew D.; Bampoh, Victoria N.; Ruhlandt-Senge, Karin; Calcium arylphosphonates for bone therapy. Abstracts of Papers, 250th ACS National Meeting & Exposition, Boston, MA, United States, August 16-20, **2015** (2015), INOR-658.

Catherine M.; Goos, Alan G.; Allis, Damian G.; Ruhlandt-Senge, Karin; Competition between ligation and solvation in heavy alkaline earth metal tetraarylborates. Lavin, Abstracts of Papers, 250th ACS National Meeting & Exposition, Boston, MA, United States, August 16-20, **2015** (2015), INOR-657.

Lopez, Valerie; Lijewski, Matthew D.; Bampoh, Victoria N.; Ruhlandt-Senge, Karin; Calcium arylphosphonates for bone therapy. Abstracts, 40th Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, United States, June 10-13, **2015** (2015), NERM-264.

Lavin, Catherine M.; Goos, Alan G.; Allis, Damian G.; Ruhlandt-Senge, Karin; Competition between ligation and solvation in heavy alkaline earth metal tetraarylborates Abstracts, 40th Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, United States, June 10-13, **2015** (2015), NERM-190.

Woods, Joshua J.; Gillett-Kunnath, Miriam M.; Goos, Alan G.; Ruhlandt-Senge, Karin; Synthesis of solvent-free alkali pyrazolates. Abstracts, 40th Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, United States, June 10-13, **2015** (2015), NERM-139.

Wilson, Brian; Takahashi, Yuriko; O'Brien, Anna Y.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Solvation vs ligation: Examining the effects of secondary interactions between alkali/alkaline earth alkoxides. Abstracts, 40th Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, United States, June 10-13, **2015** (2015), NERM-135.

Carpenter, Emily M.; Takahashi, Yuriko; Buchanan, William D.; Ruhlandt-Senge, Karin; Exploring the role of non-covalent interactions in highly fluorinated alkaline earth metal and lanthanide species as precursors for MOCVD. Abstracts,

40th Northeast Regional Meeting of the American Chemical Society, Ithaca, NY, United States, June 10-13, **2015** (2015), NERM-51.

### 2014

Rosado, Peter J.; Ruhlandt, Karin

"Structural insights and characteristics of novel alkaline earth metal organic frameworks based on isonicotinic acid and isomers"

Abstracts of Papers, 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), INOR-755.

Webb, Cody C., Jr.; Goos, Alan; O'Brien, Anna; Ruhlandt, Karin "Co-ligand effects on the structural chemistry of bismuth perfluorinated-alkoxides"

Abstracts of Papers, 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), INOR-259.

Lijewski, Matthew D.; Lopez, Valerie; Ruhlandt, Karin

"Correlation of ligand substitution pattern and solid state topography: The design of novel arylcalciumphosphonates for bone therapeutic applications" *Abstracts of Papers, 247th ACS National Meeting & Exposition, Dallas, TX, United States, March 16-20, 2014 (2014), INOR-157.* 

## 2013

Webb, Cody C., Jr.; Goos, Alan; O'Brien, Anna; Ruhlandt, Karin "Towards heterobimetallic alkaline earth metal bismuthates as MOCVD precursors"

Abstracts, 39th Northeast Regional Meeting of the American Chemical Society, New Haven, CT, United States, October 23-26 (2013), NERM-398.

Takahashi, Yuriko; O'Brien, Anna; Ruhlandt-Senge, Karin

"Convenient, one pot, metal-based reactions towards molecular alkaline earth species"

From Abstracts, 38th Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, Sept. 30-Oct. 3 (2012), NERM-103.

Goos, Alan; Weissmann, Daniel; Pichler, Johann; Binder, Judith; Ruhlandt, Karin "Calcium, strontium, barium and europium trans-azobenzene complexes: A study of metal size, ligand substitution and co-ligand effects"

Abstracts, 38th Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, Sept. 30-Oct. 3 (2012), NERM-102.

Rosado, Peter J.; Ruhlandt, Karin

"s-block metal organic frameworks (MOFs) for gas storage applications"

Abstracts, 38th Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, Sept. 30-Oct. 3 (2012), NERM-101.

Lopez, Valerie; Bampoh, Victoria; Ruhlandt, Karin

"Calcium phosphonates as bioactive and biocompatible material"s *Abstracts, 38th Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, Sept. 30-Oct. 3 (2012), NERM-38.* 

Lavin, Catherine M.; Allis, Damian G.; Ruhlandt-Senge, Karin

"Role of weak interactions in the coordination chemistry of heavy alkaline earth MOCVD precursors: A theoretical study"

Abstracts, 38th Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, Sept. 30-Oct. 3 (2012), NERM-37.

### 2012

Buchanan, W. D., Ruhlandt-Senge, K.

Homometallic and hetrobimetalic alkaline earth and lanthanide perfluoro-tbutoxide complexes

Gordon Conference in Inorganic Chemistry, Biddeford, ME, June 2012

Takahashi, Y., Weismann, D., Gillett-Kunnath, M., O'Brien, A. Y., Sitzmann, H., Deacon, G. B., Ruhlandt-Senge. K.,

Investigations of redox transmetallation/ligand exchange reactions of alkaline earth metals with silylamides and cyclopentadienides and authours are: *Gordon Conference in Inorganic Chemistry, Biddeford, ME, June 2012* 

Rosado Flores, P., Ruhlandt-Senge, K.

Synthesis and Characterization of s-block Metal Organic Frameworks (MOFs) for Gas Storage Applications"

Gordon Conference in Inorganic Chemistry, Biddeford, ME, June 2012

## 2011

Sponsler, M. B., Hudson, B. S., Ruhlandt-Senge, K.

"Two way exchange of chemistry research students between the U.S and Austria."

241st ACS National meeting, Anaheim, CA, March 27-31, CHED 1402.

### 2010

Verma, Abhilasha; Ruhlandt-Senge, Karin; Hitzbleck, Julia; Deacon, Glen B. "Synthetic attempts towards heavy alkaline earth pentafluorophenyl complexes" *Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-58.* 

Torvisco, Ana; Ruhlandt-Senge, Karin.

"Structural studies of novel alkaline earth metal primary/secondary amides"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM- 216.

Maudez, William; Eilers, Stephanie W.; Ruhlandt-Senge, Karin.

"Novel amidinate and guanidinate ligands and their s-block metal complexes" *Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-215.* 

Pichler, Johann; Ruhlandt-Senge, Karin; Weismann, Daniel; Verma, Abhilasha. "Alkaline earth metal complexes of azobenzene derivatives" *Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-214.* 

Verma, Abhilasha; Sitzmann, Helmut; Weismann, Daniel; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin; Powers, Andrew R.

"Investigation of the RTLE route: effect of pKa and steric bulk on the rate of the reaction"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-213.

Ruhlandt-Senge, Karin; Alexander, Jacob S.; Englich, Ulrich B.; Guino-o, Marites.

"Ion association, non-covalent interactions, ligand and co-ligand characteristicswhat is affecting the structure and function of heavy alkaline earth organometallics?"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-210.

Buchanan, William D.; Ruhlandt-Senge, Karin; Zuniga, Maria F.

"Synthesis of Alkaline Earth 2-phenylphenolate species: Structural Consequences of M-Cp interactions"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-129.

Bampoh, Victoria N.; Takahashi, Yuriko; Ruhlandt-Senge, Karin.

"Preparation and characterization of calcium and magnesium phosphonates" Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-127.

Buchanan, William D.; Ruhlandt-Senge, Karin.

"Synthesis, Structure, and Thermogravimetric Analysis of Alkaline Earth and Lanthanide Perfluoro-t-butoxide Complexes"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-124.

Takahashi, Yuriko; Ruhlandt-Senge, Karin; Bampoh, Victoria.

"Three-dimensional Magnesium and Calcium Phosphonates and Carboxylatesnew avenues towards bioactive materials"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-61.

Goos, Alan G.; Torvisco, Ana; Ruhlandt-Senge, Karin.

"Design of novel amine ligands for the synthesis alkaline earth metal compounds" Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-60.

Rosado, Peter J.; Buchanan, William D.; Lappert, Michael F.; Ruhlandt-Senge, Karin; Frankland, Andrew; Brooks, Adam.

"Alkali-, alkaline earth- and lanthanide- tosylates as inexpensive salt metathesis source compounds"

Abstracts, 37th Northeast Regional Meeting of the American Chemical Society, Potsdam, NY, United States, June 2-5 (2010), NERM-57.

Torvisco, Ana; Decker, Katharina; Uhlig, Frank; Ruhlandt-Senge, Karin. "Heavy alkali metal amides: Role of secondary interactions in metal stabilization" *Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-963.* 

Buchanan, William D.; Ruhlandt-Senge, Karin.

"Synthesis and structure function relationships of alkali, alkaline earth, and lanthanide metal tribenzylcarbinol derivatives"

Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-954.

Verma, Abhilasha; Weismann, Daniel; Powers, Andrew R.; Gillett-Kunnath, Miriam M.; Sitzmann, Helmut; Ruhlandt-Senge, Karin.

"Investigation of the "green" route: Redox transmetallation/ligand exchange (RTLE) of alkaline earth substituted cyclopentadienides using BiPh3" *Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-776.* 

Buchanan, William D.; Ruhlandt-Senge, Karin.

"Synthesis, structure, and thermogravimetric analysis of alkaline earth and lanthanide perfluoro-t-butoxide complexes"

Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-721.

Torvisco, Ana; Ruhlandt-Senge, Karin.

"Structural studies of novel alkaline earth metal primary/secondary amides."

Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-656.

Buchanan, William D.; Ruhlandt-Senge, Karin.

"Homometallic and heterobimetallic alkaline earth and lanthanide complexes of perfluoro-t-butoxide"

Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-350.

Rosado, Peter J.; Buchanan, William D.; Brooks, Adam J.; Frankland, Andrew D.; Lappert, Michael F.; Ruhlandt-Senge, Karin.

"Alkaline earth tosylates as inexpensive salt metathesis source compounds." Abstracts of Papers, 239th ACS National Meeting, San Francisco, CA, United States, March 21-25, 2010 (2010), INOR-349.

#### 2009

# Karin Ruhlandt-Senge

"Expanding BiPh3 based Redox transmetallation Ligand Exchange—Facile Access to Molecular Alkaline earth metal derivatives"

Main Group Chemistry meeting, Cancun, Mexico, February 15, 2009

# Karin Ruhlandt-Senge

"Structural and Spectroscopic Studies of Novel Alkaline earth metal Primary/Secondary Amides"

Main Group Chemistry meeting, Cancun, Mexico, February 15, 2009

### 2008

Buchanan, William D.; Zuniga, Maria Felisa; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Alkaline Earth Metal Based Heterobimetallics as Next Generation CVD Precursors"

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-633.

Buchanan, William D.; Nagle, Elizabeth D.; Zuniga, Maria Felisa; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Rare Structural Motifs Based on Triangular Alkaline Earth Metal Cores" *Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-312.* 

Verma, Abhilasha; Hitzbleck, Julia; Maudez, William; Wilfling, Petra; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Towards the Synthesis of Heavy Alkaline Earth Pentafluorophenyl Complexes"

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-237.

Weismann, Daniel; Verma, Abhilasha; Gillett-Kunnath, Miriam; Deacon, Glen B.; Sitzmann, Helmut; Andrews, Phil; Ruhlandt-Senge, Karin.

"Substituted Cyclopentadienyl and Hexadienyl Ligands in BiPh3-Based RTLE Reactions"

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-236.

Ruhlandt-Senge, Karin; Guino-o, Marites; Maudez, William; Alexander, Jacob S.; Teng, Weijie.

"Alkaline Earth Metal Benzyl, Di and Triphenylmethanides. Preparation, Ion Association and Properties"

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-235.

Verma, Abhilasha; Hitzbleck, Julia; Guino-o, Marites A.; Gillett-Kunnath, Miriam; Teng, Weijie; Gonzalez-Outeirino, Jorge; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Effects of Solvation Vs. Ligation in Heavy Alkaline Earth Metal Tetraphenylborate Complexes."

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-307.

Torvisco, Ana; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin.

"Structural Studies of Novel Alkaline Earth Metal Primary/Secondary Amides" Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-259.

Torvisco, Ana; Decker, Katharina; Uhlig, Frank; Ruhlandt-Senge, Karin. "Evaluation of Structure Determining Factors in Heavy Alkali Metal Amides" *Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-321.* 

Buchanan, William D.; Guino-o, Marites; Ruhlandt-Senge, Karin. "Volatile Perfluoro-t-Butoxide Monometallic Alkaline Earth and Lanthanoid *Complexes*"

Abstracts, 60th Southeast Regional Meeting of the American Chemical Society, Nashville, TN, United States, November 12-15 (2008), SERM-313.

Andrews, Phil; Deacon, Glen B.; Forsyth, Craig M.; MacLellan, Jonathan G.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin.

"Triaryl Bismuth Mediated Syntheses of Alkali Metal and Alkaline Earth Metal Amides"

4th Australian Organometallic Conference (OZOM4), Canberra, ACT, Australia, January 6-9, 2008.

Konopka, Felicia; Torvisco, Ana; Ruhlandt-Senge, Karin.

"Heavy alkaline earth metal bis(phenyltrimethylsilyl) amides as MOCVD precursors."

Abstracts of Papers, 235th ACS National Meeting, New Orleans, LA, United States, April 6-10, 2008 (2008), CHED-1174.

#### 2007

Andrews, Phil; Deacon, Glen B.; MacLellan, Jonathan G.; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin.

"Triaryl Bismuth Mediated Syntheses of Heavy Alkaline Earth Metal Amides" 8th International Symposium on Carbanion Chemistry, Madison, WI, United States, June 6-10, 2007.

Leye, J., Guino-o, M. A., Gijkaj, M., Adam. A. Ruhlandt-Senge, K. *Jahrestagung der deutschen Gesellschaft fuer Kristallographie* 

Guino-o, M. A., Leye, J.-C., Ruhlandt-Senge, K. "Ionic liquids: Novel solvents in alkaline earth metal chemistry? " *Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-897.* 

Ruhlandt-Senge, K., Guino-o, Marites A.; Alexander, J. S.; Hope, H.; Englich, U. "Alkaline earth metal alkynes: Synthesis, structures and reactivity" *Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-1244.* 

Zuniga, Maria Felisa; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Heterobimetallic compounds of alkali and alkaline earth metals: Donor-free and heteroleptic species."

Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-1191.

Zuniga, Maria Felisa; Deacon, Glen B.; Ruhlandt-Senge, Karin. "Magnesiates: An examination of ligand-size and donor effects" *Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-899.* 

Torvisco, Ana; Decker, Katharina; Gillett-Kunnath, Miriam M.; Ruhlandt-Senge, Karin.

"Heavy alkaline earth metal amides as precursors for CVD: Effects of ligand size."

Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-896.

Hitzbleck, Julia; Guino-o, Marites A.; Verma, Abhilasha; Ruhlandt-Senge, Karin. "Heavy alkaline earth metal tetraphenylborate complexes: From solvated ion triples to p - bonded contact molecule"

Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-890.

Gillett-Kunnath, Miriam M.; MacLellan, Jonathan G.; Forsyth, Craig C.; Teng, Weijie; Ruhlandt-Senge, Karin; Andrews, Phil; Deacon, Glen B. "Novel inorganic synthetic route toward the M{N(2,4,6-Me3C6H2)(SiMe3)}2(thf)n (M = Ca, Sr, n = 2; M = Ba, n = 3) and the well known heavier alkaline earth bis(bistrimethylsilyl) amides" *Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-527.* 

Guino-o, Marites A.; Alexander, Jacob S.; Teng, Weijie; Ruhlandt-Senge, Karin. "A closer look at di- and triphenylmethanide alkaline earth metal chemistry" *Abstracts of Papers, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007 (2007), INOR-521.* 

2006

Zuniga, M. F., St. Prix, C., Deacon, G. B., Ruhlandt-Senge, K.

"Learning from rare earth metal chemistry: heterobimetallic group 1/alkaline earth/rare earth metal complexes"

Tage der seltenen Erden (Terra Rarae) 2006, November 29- December 2, Oldenburg, Germany.

Bagnall, Michael G.; Torvisco, Ana; Hitzbleck, Julia; O'Brien, Anna; Deacon, Glen B.; Ruhlandt-Senge, Karin.

"Synthesis of second generation heavy alkaline earth metal pyrazolates as potential MOCVD precursors."

Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-366 and NRM-134.

Guino-o, Marites; Ruhlandt-Senge, Karin; Leye, Johann-Christian. "Ionic Liquids--- New Opportunities in Heavy Alkaline Earth Metal Chemistry." *Abstracts, 35th Northeast Regional Meeting of the American Chemical Society,* 

Binghamton, NY, United States, October 5-7 (2006), NERM-327.

Mekhlin, Eli S.; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin. "Novel Synthetic Routes Towards Alkyl Substituted Alkaline-Earth Metal Silyl Amides".

Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-326 and NRM-138

Ruhlandt-Senge, Karin; Guino-o, Marites; Alexander, Jacob; Englich, Ulrich. "Alkaline Earth Metal Alkynes- Synthesis, Structures and Reactivity". *Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-289.* 

O'Brien, Anna Y.; Hitzbleck, Julia; Ruhlandt-Senge, Karin; Deacon, Glen B. "Heavy alkaline earth metal pyrazolate complexes". *Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-288.* 

Zuniga, Maria Felisa; Deacon, Glen B.; Ruhlandt-Senge, Karin. "New structural features in heavy alkaline earth metal chemistry- molecular bimetallic alkali/calcium, strontium, barium complexes". Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-283.

Guino-o, Marites A.; Alexander, Jacob; Teng, Weijie; Ruhlandt-Senge, Karin. "Recent Advances in Di- and Triphenylmethanide Alkaline Earth Metal Chemistry".

Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-235.

Teng, Weijie; Allis, Damian G.; Ruhlandt-Senge, Karin. "Syntheses and Structures of the First Heavy Alkali Metal Tris(trimethylsilyl)germanides and Heavy Alkali Metal Germyls - contact molecules and separated ions."

Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-233.

Verma, Abhilasha; Guino-o, Marites A.; Teng, Weijie; Gillett-Kunnath, Miriam; Ruhlandt- Senge, Karin.

"Synthesis of Calcium, Strontium and Barium Separated Ion Triples Using the Tetraphenylborate Anion".

Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-140.

Torvisco, Ana; Decker, Katharina; Gillett-Kunnath, Miriam; Ruhlandt-Senge, Karin.

"Heavy alkaline earth metal amides as precursors for CVD: effects of ligand size" *Abstracts, 35th Northeast Regional Meeting of the American Chemical Society, Binghamton, NY, United States, October 5-7 (2006), NERM-132.* 

Hitzbleck, J., Deacon. G. B., Ruhlandt-Senge, Karin

"Alkaline earth metal tetraphenylborates- solvent separated ion triples and a barium pseudo-metallocene contact ion pair"

OZOM3- Third Australian Organometallic conference, Monash University, Gippsland Campus, Australia, January 8th to 11th, 2006.

#### 2005

Ruhlandt-Senge, Karin; Sponsler, Michael B.

"Undergraduate research experience in chemistry at Syracuse University" Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17, 2005 (2005), CHED-237.

#### 2004

Hitzbleck, J.; O'Brien, A. Y.; Deacon, G. B.; Ruhlandt-Senge, K.

"Parallels in Structure and Reactivity of Alkaline Earth and Rare Earth Metal Pyrazolates"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-286.

Zuniga, M. Felisa; Gomez, E.; Guino-o, M.; Hitzbleck, J.; Newlon, A.; Taylor, J.; Teng, W.; Vargas, W.; Ruhlandt-Senge, K.

"Synthesis and Structures of Heavy Alkaline Earth Metal Alkoxides and Aryloxides."

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-266

Hitzbleck, J.; O'Brien, A. Y.; Torvisco, A.; Deacon, G. B.; Ruhlandt-Senge, K. "Novel Bonding Modes of Alkaline Earth Metal Pyrazolates" *Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-257* 

Ruhlandt-Senge, K.; Alexander, J.; Englich, U. "From Obscurity to Actuality: New Developments in the Organometallic Chemistry of the Heavy Alkaline Earth Metals"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-117.

Gillett-Kunnath, M.; Vargas, W.; Teng, W.; Englich, U.; Ruhlandt-Senge, K. "Investigations of Alkaline-earth Metal Amides"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-084.

O'Brien, A. Y.; Hitzbleck, J.; Ruhlandt-Senge, K.; Deacon, G. B. "Alkaline Earth Metal Pyrazolate Cluster Compounds With Metal-oxygen Cores"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-078.

Teng, W.; Englich, U.; Ruhlandt-Senge, K.

"The First Heavy Alkaline Earth Metal bis(tris(trimethylsilyl))silanides and Germanides"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-077.

Guino-o, M.; Alexander, J. S.; Ruhlandt-Senge, K.

"Calcium, Strontium, and Barium di- and triphenylmethanides: Synthesis and Structures"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-076.

Hitzbleck, J.; O'Brien, A. Y.; Ruhlandt-Senge, K.; Deacon, G. B. "Heavy Alkaline Earth Metal Pyrazolates by Multiple Synthetic Methods" *Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-074.* 

Baker, E. A.; Ruhlandt-Senge, K.; Alexander, J.; Hope, H.; Allis, D. G.; Braden, D.; Green, D.; Englich, U.; Hudson, B.

"Examinations Into Alkaline Earth Metal Acetylides"

Abstracts, 32nd Northeast Regional Meeting of the American Chemical Society, Rochester, NY, United States, October 31-November 3 (2004), GEN-073.

Hitzbleck, J.; O'Brien, A. Y.; Ruhlandt-Senge, K.; Deacon, G. B.

"Various synthetic routes toward heavy alkaline earth metal pyrazolates" Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-731.

Teng, W.; Englich, U.; Ruhlandt-Senge, K.

"The first heavy alkaline earth metal bis(tris(trimethylsilyl))silanides and germanides"

Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-729.

Hitzbleck, J.; Gomez, E.; Guino-o, M.; Newlon, A.; Taylor, J.; Teng, W.; Vargas, W.; Zuniga, M.; Ruhlandt-Senge, K.

"Synthesis and structures of heavy alkaline earth metal alkoxides and aryloxides" Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-726.

Fry, N. J.; Vargas, W.; Ruhlandt-Senge, K..

"Novel alkaline earth metal pyrrolates - Employment of intramolecular

coordinating ligands toward customized CVD precursors." *Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-721.* 

Baker, E.; Ruhlandt-Senge, K.; Alexander, J. S.; Hope, H.; Allis, D. G.; Braden, D.; Green, D.; Englich, U.; Hudson, B. S.

"Examinations into alkaline earth metal acetylides"

Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-718.

Hitzbleck, J.; O'Brien, A. Y.; Torvisco, A.; Deacon, G. B.; Ruhlandt-Senge, Karin.

"Dimeric and oligomeric alkaline earth metal pyrazolates" Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-717.

Ruhlandt-Senge, K.; Alexander, J. S.

"Calcium, strontium, and barium di- and triphenylmethanides: Synthesis and structures"

Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-714.

O'Brien, A. Y.; Hitzbleck, J.; Ruhlandt-Senge, K.; Deacon, G. B. "Alkaline earth metal pyrazolate oxygen-containing cluster compounds" *Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-712.* 

Ruhlandt-Senge, K.; Alexander, J. S.; Allis, D.; Hudson, B. S.

"Alkali metal diphenylmethanides: A synthetic, structural, and computational study"

Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), INOR-710.

Fry, N. J.; Vargas, W.; Ruhlandt-Senge, K..

"Novel alkaline earth metals pyyrolates: Employment of intramolecular coordinating ligands toward customized CVD precursors."

Abstracts of Papers, 227th ACS National Meeting, Anaheim, CA, United States, March 28-April 1, 2004 (2004), CHED-422.

### 2003

Fry, N.; Vargas, W.; Ruhlandt-Senge, K.

"Novel magnesium pyrrolates: Syntheses, structures and characterization." 31st Northeast Regional Meeting of the American Chemical Society, Saratoga Springs, NY, United States, June 15-18 (2003), 130.

### 2000

Vargas-Gregory, W., Englich, U., Ruhlandt-Senge, K.

"Alkaline-earth amides and imides: Synthesis and structures"

Meeting of the American Chemical Society, Washington, DC, August 20-24, INOR-407.

Jenkins, D. M., Ruhlandt-Senge, K., Englich, U.

"Alkali and alkaline earth metal silanes: A synthetic and structural study. Abstr. Pap."

Am. Meeting of the American Chemical Society, Washington, DC, August 20-24, INOR-406.

Teng, W., Englich, U., Ruhlandt-Senge, K.

"Hydrolysis of alkaline earth metal derivatives: From molecular precursors to solid state materials."

Meeting of the American Chemical Society, Washington, DC, August 20-24, INOR-343.

Alexander, J. S., Ruhlandt-Senge, K., Englich, U.

Synthetic routes toward s-bonded organometallic calcium, strontium and barium compounds.

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