### Eric V. Anslyn

## Welch Regents Chair

University Distinguished Teaching Professor

Home Address: Business Address:

8323 Young Lane The University of Texas at Austin

Austin, TX 78737 Department of Chemistry and Biochemistry

Norman Hackerman Building

100 E. 24<sup>th</sup> St. A1590 Austin, TX. 78712

#### Personal:

Born June 9th 1960, Santa Monica CA

U.S. Citizen

Married (Roxanna Balden), Two children, Tristan and Tasha

#### **Education:**

Postdoctoral Work: [12/87-9/89]

Columbia University, New York, New York Research Advisor: Professor Ronald Breslow

Research: Mechanistic studies of Ribonuclease A mimics. Detailed kinetics analyses of imidazole catalyzed 3'-5' UpU hydrolysis and isomerization. Synthesis and kinetics studies of bis-imidazole β-cyclodextrin catalyzed phosphodiester hydrolyses.

Ph.D., Chemistry: [11/87]

California Institute of Technology, Pasadena, California

Research Advisor: Professor Robert Grubbs

Research: Mechanistic and theoretical studies of olefin metathesis and ring opening metathesis polymerizations catalyzed by group IV and VI metals.

B.S., Chemistry: [5/82]

California State University, Northridge; GPA= 3.97/4.00

Research Advisor: Professor Edward Rosenberg

Research: Mechanistic studies of ligand fluxuations on clusters.

# Research Awards, Honors, and Honorary Positions:

ChemComm collection, "The Mechanics of Supramolecular Chemistry" for 60th Birthday, Edited by Tony James, Jonathan Sessler and Bruce Gibb

Centenary Prize, from the RSC, 2020

James Flack Norris Award in Physical Organic Chemistry, from ACS, Orlando ACS meeting April 2019 Howard Hughes Medical Institute Professor, 2018-2023

World Leading Researcher, School of Chemistry and Chemical Engineering, Queen's University Belfast, Northern Ireland, 2017-2020.

1st Czarnik Award Winner, International Molecular Sensors and Molecular Logic Gates, 2016 Saul Winstein Lecturer, UCLA, May 2014

Edward Leete Award, for Outstanding Contributions to Teaching and Research in Organic Chemistry, from The Organic Division of the ACS, Awarded on September 10<sup>th</sup>, 2013.

Izatt-Christensen Award in Macrocyclic and Supramolecular Chemistry, awarded at the 8<sup>th</sup> ISMSC in Washington DC, July 7<sup>th</sup> to 11<sup>th</sup> 2013.

Senior Visiting Fellow of the Institute for Advanced Study, Hong Kong University of Science and Technology, 2013-2014

Ta-shue Chou Award, For Outstanding Achievements in Physical Organic Chemistry, Feb. 21st 2012, Academia Sinica, Taiwan.

Gassman Lecturer, University Minnesota, Oct. 2011

Ramshorn Mark of Excellence, From Dean of the Cockrell School of Engineering, Oct. 29th 2009

Visiting Professor, Institute of Chemical and Engineering Sciences, Singapore, Dec. 15th-19th 2008

Faculty Service Award from the College of Natural Sciences, 2008

Visiting Professor, Hong Kong Baptist University, May 9th -11th 2007

Honorary Professor, East China University of Science and Technology, Induction May 2007

Adjunct Professor, Department of Biochemistry and Molecular Biology, The University of Texas Medical Branch, Galveston

American Association for the Advancement of Science, Election as a Fellow, 2006

Hamilton Textbook Award, from the University Coop. 2006 Cope Scholar Award. Granted from the ACS in Spring 2006.

Dreyfus Teacher-Scholar Award: 1994-1996 Alfred P. Sloan Research Fellow: 1994-1996

Proctor and Gamble University Research Initiative: 1993-1996

Searle Scholar: 1991-1994

Presidential Young Investigator: 1990-1995

Camille and Henry Dreyfus Young Faculty Award: 1989 National Science Foundation Post-Doctoral Fellowship: 1988 Union Carbide Fellow in Catalysis: Academic Year 86-87 Graduated with B.S. Summa Cum Laude: 1982

Analytical Chemistry Award, C.S.U., Northridge: 1980

### **Teaching Awards:**

2010 Regent's Teaching Awardee, Across the entire Univ. Texas System, Aug. 11<sup>th</sup> 2010

Graduate Teaching Award, UT Austin: 2003

Election to Academy of Distinguished Teachers, UT Austin: 2000 Outstanding Faculty Award, UT Continuing Education: 1999 Jean Holloway Award for Excellence in Teaching: 1999 College of Natural Sciences Teaching Excellence Award: 1995

### **Work Experience:**

Co-Founder, Erisyon Inc., 2018-present

Welch Regents Chair of Chemistry, 2014-present

Norman Hackerman Chair of Chemistry, 2002-2014

Consultant, Water-Lens, 2012-present

Chief Scientific Officer, Reveal Sciences, 2007-2012

Chief Scientific Officer, Beacon Sciences, 2006-2012

Norman Hackerman Professorship, University of Texas at Austin, 2000-2011

University Distinguished Teaching Professor, University of Texas at Austin, 2000-

present, teaching and independent research.

Professor, University of Texas at Austin, 1999-2000

Associate Professor, University of Texas at Austin, 1995-1999

Assistant Professor, University of Texas at Austin, 1989-1995

Head of Synthetic Organic NMR Facility: Cal. Instit. of Tech. 1984-1987

Responsible for all training, maintenance and special experiment design on a JEOL FX-90 and JEOL GX-400. Extensive experience with 2D NMR, polarization transfer, magnetization transfer and NMR of heavy metals.

Teaching Assistant, Cal. State Univ. Northridge, 1983

Introductory Chemistry Laboratory, both first and second semester.

### **University of Texas Departmental and University Service:**

Chair-Endowment Recruiting Committee, Chair, 2022-present

NSF MRSEC, Proto-IRG1, Co-Leader with Adrianne Rosales, Fuel-Driven Polymer and NanoCrystal Assemblies, 2021-present.

Mid-Career/Senior Faculty Recruiting Committee, Spring 2021-present

Panel Discussion Participant, Diversity, Culture and Disabilities Studies, Nov. 18th 2020

Departmental Senior Hiring Committee, 2020-2021 academic year

Executive Director, UT Wine Initiative, Fall 2019 - present

Chair, Assistant Professor Recruiting Committee, Fall 2019 to spring 2020

Chair, Departmental Strategic Planning Committee, Fall 2019

NSF MRSEC, IRG1 Co-Leader with Delia Milliron, Reconfigurable Materials, 2018-present

Associate Chairman, 2015-2018

Provost's Experential Teaching Committee, 2018-2019

Texas Ex's Meeting, "Wine Tasting with Professor Eric Anslyn", Home of the Hemsley's in Houston TX

Chair, Departmental Search Committee for External Chair, 2013-2016

Head of the Chemistry Department Graduate Studies Committee, 2013-present

College Natural Sciences, Medical School Planning Committee, 2012

Departmental Course and Curriculum Reform Committee, 2011-present

Member, Committee for 210C Laboratory Reevaluation, 2009-2011

Departmental Faculty Awards Committee, 2009-2014

Departmental Lecturer Oversight Committee, 2009-present

Member, Committee for Evaluation of Lecturer Position, 2009-2010

Design Committee, Laboratory Research Space for the NHB, 2007-2009

Reviewed Teachings Award Applications: Academy Selection, and Chancellor's Award, Dec. 2008

Chair, Strategic Planning Committee for The Department of Chemistry and Biochemistry, 2007-2008

Committee For Evaluation of Dean Rankin, Spring 2007

AdHoc Tenure and Promotion Committee, Department of Astronomy, Spring 2007

Departmental Tenure and Promotions Committee, 2004-2008

Odyssey Lecture to the Public, April 4, 2007

Hamilton Book Award Committee, 2006

Dean's Committee for Analysis the Space for ESB, 2006

Member Departmental Tenure and Promotions Committee, 2004-2008

Upon invitation, Voltaire's Coffee Discussion Group, "The Mists of Avalon" 2006

Participant, Academy of Distinguished Teachers Reading Roundup Discussion,

"The Mists of Avalon", 2003 - present

Academy of Distinguished Teachers Sub-Committee on "Special Courses", 2005

Departmental Awards Committee, 2004-present.

Instructor, Texas Teachers as Scholars, Course on Enzymes, Receptors, and Sensing, Spring 2005.

College of Natural Sciences Tenure and Promotion Committee, 2004-2006

SPAC Committee Member, 2003-2006

Organic Division Coordinator, 2003-2015.

Assistant Graduate Student Advisor 1995-present.

Chairman, Graduate Student Recruiting Committee for the Chemistry and Biochemistry Department, 1995-1999.

Chairman, Department of Chemistry Safety Committee, 1993-1999.

College of Natural Sciences Safety Committee, 1995-1999.

Undergraduate Chemistry Student Advising, 1990-1995.

Chairman: Organic Chemistry Seminar Series from 1992-1995.

Lecture to the ACS Student Affiliates, Spring 1999.

Lecture to the ACS Student Affiliates, Fall 1998.

Lecture to the ACS Student Affiliates, Fall 1996.

Lecture to the 1994 Honors Colloquium.

Lecture to The Young Chemists Society, 1993.

Departmental Fellowship Committee, 1992-1995.

Graduate Student Recruitment Committee, 1991.

### **Professional and Community Service:**

Co-Organizer, CASE (Catalysis and Sensing for our Environment) June 8<sup>th</sup> to 11<sup>th</sup> 2020, Isle of Skye, Scotland

Scientific Advisor Board Member, the SSPC of Ireland, 2019

Co-Organizer, ISMSC, July 11th to 18th 2018, Quebec City, Canada

Member, External Review Visiting Committee, School of Chemistry, Trinity College Dublin, Nov. 15<sup>th</sup> to 19<sup>th</sup>, 2015

Member, External Review Visiting Committee, Department of Chemistry at the University of Minnesota, April 7th-8th, 2014

Guest Speaker, Westminster Retirement Home, Feb. 4th 2013.

Member, Cope Scholar Awards Selection Committee, 2012-2013.

Member, NIH SBCA Study Section, Fall 2012-2016.

DTRA Review, Catalytic Signal Enhancement Work Shop, Arlington VA June 19th, 2012.

ACS National Selection Committee – Arthur C. Cope Scholar Awards 2012

Pioneer Award Study Section, NIH, Spring 2011

Organizer, Symposium Honoring Dr. Phillip Magnus, Southwest Regional ACS Meeting, Austin, Nov. 9th-11th 2011.

New Innovator Award Study Section, NIH, Spring 2010.

International Advisory Board, Chinese Journal of Chemistry, 2009-present.

Organizer, International Symposium on Macrocyclic and Supramolecular Chemistry, Las Vegas, July 2008.

Pacific Chem. Symposium Co-Organizer, Dec. 2005.

Pacific Chem. Symposium Co-Organizer, Dec. 2000.

J. Am. Chem. Soc., Manuscript Associate Editor, Oct. 1st 1999 - 2019.

NIH Medicinal Chemistry A, Study Section Member, 1999-2003.

Supramolecular Chemistry, Editorial Advisory Board, 1999-2004.

J. Supramolecular Chemistry, Editorial Advisory Board, 1999-present.

J. Am. Chem. Soc. Book and Software Associate Editor, 1998-Oct. 1st 1999.

Symposium Co-Organizer: Southwest Regional ACS Meeting 1993.

23rd Macrocycle Conference Co-Organizer: Oahu Hawaii 1998.

1999 NSF Workshop on Physical Organic Chemistry, Co-organizer.

1998 NSF Workshop on Physical Organic Chemistry, Co-organizer.

1997 NSF Workshop on Physical Organic Chemistry, Co-organizer.

Reviewer of Batelle National Laboratory project on Anion Recognition.

Ad Hoc Member, Bioorganic and Natural Products Study Section, NIH, 1996.

Ad Hoc Member, Medicinal Chemistry A, Study Section, NIH, 1997.

#### **Short Courses:**

Techniques of Sensing, Victoria Canada, July 2006.

Physical Organic Chemistry, Trinity University Dublin, Ireland, June 20<sup>th</sup> to 22<sup>nd</sup>, 2007.

Physical Organic Chemistry at University of Kyushu, Fukuoka, May 2008.

Solvation, Chirality, and Bonding Theories, Gassman Lecturer Series,

University of Minnesota, Oct. 3<sup>rd</sup> – 7<sup>th</sup> 2011.

Substitution versus Elimination, Toho University, Japan, June 26<sup>th</sup> 2013.

Binding Forces, Supramolecular Interactions, and Acid/Base Analogies, Dow Chemical Company in Springhouse, PE, April 17<sup>th</sup>, 2014.

More O'Farrell/Jencks Plots and LFERs, Univ. of Oregon May 16<sup>th</sup> to 20<sup>th</sup> 2014.

From VBT to MOT and Combining the Two, Shanghai University May 18th, 2015

Bonding, Thermodynamics, Kinetics, and Reaction Coordinates, University of Birmingham, June 27<sup>th</sup>-29<sup>th</sup>, 2017

Molecular Oribital Theory, and Kinetics/Thermodynamics, and Reaction Coordinates, Queen's University Belfast, March 2020

Classic Bond Theory, and Quanlitative Molecular Orbital Theory, Indiana University, May 16th, 2022

Multi-Dimensional Reaction Coordinates and More O'Farrell/Jencks Plots, Indiana University, May 18<sup>th</sup>, 2022.

### **Consulting Services**

Methamphetamine Sentencing Trial (testifying) 1994

Pharmacopeia 1999

AstraZeneca 1999

Labnetics 1999-2001

Rothwell, Figg, Ernst, and Manbeck (expert report) 2001

Affimetrics 2003

Merck Pharmaceuticals 2004 and 2005

Beacon Sciences, Chief Scientific Officer, 2006-2013

Reveal Sciences, Chief Scientific Officer, 2007-2013

Mimetic Solutions, 2008-present

- Sterne, Kessler, Goldstein, and Fox (patent reviews) 2006
- Biggers and Ohanian (patent reviews) 2006
- Williams and Connolly (expert reports, deposition, testimony) 2006-2008, Boehringer Ingelheim vs. Barr Pharmaceuticals, No. 05-0700 (D. Del.)
- Skadden, Arps, Slate, Meagher and Flom, (expert reports) 2009-2010, Johnson Matthey vs. Noven and Shire Pharmaceuticals, Civil Action No. 2-07-cv-260-CFE.
- Jones Day, (Declarations) June 17th, 2010, Merial Limited and BASH Agra vs. Virbac S.A. and Virbac Corp., Civil Case No. 4:10-cv-181-Y
- McDermott, Will, and Emery, (Declarations) July 9<sup>th</sup> 2010, Sandoz vs. Boehringer Ingelheim Int. GMBH, Preliminary Injunction Hearing, 3:10-cv-00437-UATC-MCR
- McDermott, Will, and Emery (Expert report, deposition) 2011, LEO Pharma vs. TOLMAR, D. Del. Case # 10-cv-0269 and 10-cv-0715
- Kirkland and Ellis, LLP (Expert report, deposition) Pfizer vs Sandoz Inc., C.A. No: 12-1252-GMS/MPT Williams and Connolly, (Expert report, initial and rebuttal) Pfizer vs Fresenius Kabi, C.A. No: 13-1893 (SLR)
- Williams and Connolly, (Expert report in preparation) Cephalon, Inc. v. Slayback Pharman Limited Liability Co. C.A. No. 17-1154-CFC
- Williams and Connolly, (Declaration, deposition) Pharmacyclics LLC v. Acerta Pharma B.V., et al, No. 17-1582 (RGA) (D. Del.) Acerta Pharma B.V. et al v. Pharmacyclics LLC, et al, 18-cv-00581-RGA (D. Del.)
- Williams and Connolly, (Expert reports, deposition, testifying) Bendeka Patent Litigation, Cephalon, Inc. vs Slayback Pharma Limited Liability Co., C.A. No. 17-1154-CFC (D. Del.)
- Norton Rose Fulbright Canada LLP, (Expert reports, testifying) Bernard Charles Sherman and Apotex Inc., vs. Pfizer Canada Inc., Pfizer Inc.
- Williams and Conolly, (Declaration, deposition), Novartis Pharmaceuticals Corp., vs Urobindo Pharma and Micro Labs, Civil Actions No's 20-1426 (LPS) and 21-969 (LPS)

#### **Patents**

- 1. "Solid-Phase N-Terminal Peptide Capture and Release", Serial No. 62/741,833
- 2. "Single Molecule Sequencing Peptides Bound To The Major Histocompatibility Complex", Serial No. 62/718,566
- 3. "Single Molecule Sequencing Identification Of Post-Translational Modifications On Proteins", Serial No. 62/702,318
- 4. "Molecular Neighborhood Detection By Oligonucleotides", Serial No. 62/697,179
- 5. "Degradable Polyethylene Glycol Derivatives For Drug Delivery", Serial No. 62/583,334
- 6. "Improved Single Molecule Peptide Sequencing", Serial No. 15854171.4, Publication No. EP3194980, Publication Date: January 26, 2018
- 7. "Single Molecule Peptide Sequencing", Serial No. 15/510,962, Publication No. US-2017-0276686-A1, Publication Date: September 28, 2017
- 8. "Improved Peptide Sequencing", Serial No. 62/050,462
- 9. "Fluorescent Nitric Oxide Probes and Associated Methods", Serial No. 13/909,345, Publication No. US 2014/0120574 A1, Publication Date: May 01, 2014
- 10. "Identifying Peptides at the Single Molecule Level", Serial No. 15/461,034, Publication No. US-2017-0242024-A1, Publication Date: August 24, 2017
- 11. "Flourescent Nitric Oxide Probes and Associated Methods", Serial No. 14/135,918, Publication No. US 2014/0179014 A1, Publication Date: June 26, 2014
- 12. "Methods of Determining the Presence and/or Concentration of an Analyte in a Sample", Serial No. 10794686.5, Patent No. 2449129, Publication Date: May 09, 2012
- 13. "Monitoring of Citrate and CA (II) Levels", Serial No. 61/222,285, Publication No. WO 2011/002850, Publication Date: January 06, 2011
- 14. "Compositions And Method For Detection Of Small Molecules Using Dyes Derivatized with Analyte Responsive Receptors in a Chemiluminescent Assay", Serial No. PCT/US09/35700, Publication No. WO 2009/148651, Publication Date: December 10, 2009
- 15. "Differential Receptors Create Patterns Diagnostic for Proteins", Serial No. 11/994,353, Publication No. US 2009-0215646 A1, Publication Date: August 27, 2009

- "System and Method of Analyte Detection Using Differential Receptors", Serial No. PCT/US2006/025696,
   Publication No. WO 2007/005666 A2, Publication Date: January 11, 2007
- 17. "Compositions and Methods for the Detection of Chemical Warfare Agents", Serial No. 11/609,202, Publication No. US-2012-0122228-A1, Patent No. 8,377,712, Publication Date: May 17, 2012
- 18. "Chromogenic Detection of Chemical Agents", Serial No. 60/748,912
- "System and Method for Integrating Fluids and Reagents in Self-Contained Cartridges Containing Sensor Elements and Reagent Delivery Systems", Serial No. PCT/US05/006350, Publication No. WO 2005/085855-A2, Publication Date: September 15, 2005
- 20. "Integration of Fluids and Reagents into Self-Contained Cartridges Containing Microchip Sensor Elements", Serial No. 11/022,176, Publication No. US 2006-0257993 A1, Patent No. 8,105,849, Publication Date: November 16, 2006
- 21. "Synthetic Receptors for the Detection of Analytes", Serial No. 11/172,276, Publication No. US 2006-0024834, Patent No. 7,514,266, Publication Date: February 02, 2006
- 22. "Synthetic Fluorescent Receptor for the Detection of Heparin in Serum", Serial No. 60/584,615
- 23. "Portable Instrument for Microarray Analysis", Serial No. 60/548,613
- 24. "Customized Testing Ensembles for Complex Fluid Analysis Using Portable Integrated Microfluidics/Detecting Units" Serial No. 60/548,190
- 25. "On-Chip Combination of Chemical and Cellular Panels for Analysis of Fluid Samples", Serial No. 60/548,601
- 26. "Method and System for the Analysis of Saliva Using a Sensor Array", Serial No. 11/010,816, Publication No. US 2005-0214863 A1, Patent No. 7,651,868, Publication Date: September 29, 2005
- 27. "Determining Enantiomeric Excess Using Indicator-Displacement Assays", Serial No. 11/839,085, Publication No. US 2007-0292968 A1, Patent No. 7,670,847, Publication Date: December 20, 2007
- 28. "Multi-Shell Microspheres with Integrated Chromatographic and Detection Layers for Use in Array Sensors", Serial No. 10/544,954, Publication No. US 2006-0228256 A1, Publication Date: Octoer 12, 2006
- 29. "Methods for Detecting Microbes", Serial No. 60/398,148
- 30. "Methods for Selecting Analyte Reactive Particles", Serial No. 60/398,235
- 31. "Capture and Detection of Microbes by Macroporous Bead Methods", Serial No. 60/398,314
- 32. "Capture and Detection of Microbes by Membrane Methods", Serial No. 08168266.8, Publication. No. EP 2 107 120 A1, Publication Date: July 10, 2009
- 33. "A Novel Microchip-Based Multi-Analyte Assay System for the Assessment of Cardiac Risk", Serial No. 2003228711, Publication No. AU2003228711, Patent No. 2003228711, Publication Date: November 24, 2003
- 34. "Method and System for the Detection of Cardiac Risk Factors", Serial No. 10/427,744, Publication No. US 2004-0029259 A1, Patent No. 8,257,967, Publication Date: February 12, 2004
- 35. "System and Method for the Analysis of Bodily Fluids", Serial No. 12/940,898, Publication No. US-2011-0251075-A1, Publication Date: October 13, 2011
- 36. "Method of Preparing a Sensor Array", Serial No. 09/775,353, Patent No. 6,649,403
- 37. "Portable Sensor Array System", Serial No. 08161330.9, Publication No. 2230314, Publication Date: September 22, 2010
- 38. "Method and Apparatus for the Confinement of Materials in a Micromachined Chemical Sensor Array", Serial No. 02713535.9, Publication No. EP1373874, Publication Date: January 02, 2004
- 39. "Multimodal Miniature Microscope", Serial No. 11/108,616, Publication No. US 2006-0058611 A1, Patent No. 7,492,535, Publication Date: March 16, 2006
- 40. "Magnetic-Based Placement and Retention of Sensor Elements in a Sensor Array", Serial No. PCT/US02/03277, Publication No. WO 02/103371, Publication Date: December 27, 2002
- 41. "System for Transferring Fluid Samples Through a Sensor Array", Serial No. PCT/US01/03316, Publication No. WO 01/55704, Publication Date: Aguust 02, 2001
- 42. "System and Method for Identifying Nucleic Acids in a Fluid Sample", Serial No. 60/179,294
- 43. "Method and System for Remotely Collecting and Evaluating Chemical/Biochemical Information", Serial No. PCT/US2000/012409, Publicaiton No. WO 00/68670, Publicaiton Date: November 16, 2000
- 44. "Sensor Arrays for the Measurement and Identification of Multiple Analytes in Solutions", Serial No. 09/354,882, Patent No. 6,680,206
- 45. "Method and Apparatus for the Delivery of Samples to a Chemical Sensor Array", Serial No. 00975164.5, Publication No. EP1204859, Patent No. 1204859, Publication Date: May 15, 2002

- 46. "Method and System for Collecting and Transmitting Chemical Information", Serial No. 09/775,340, Publication No. US 2002-0064422 A1, Publication Date: April 03, 2003
- 47. "General Signaling Protocols for Chemical Receptors in Immobilized Matrices", Serial No. PCT/US00/19351, Publication No. WO 01/06244, Publication Date: February 25, 2001
- 48. "Detection System Based on an Analyte Reactive Particle", Serial No. 09/616,355, Patent No. 6,602,702
- 49. "A Sensor for Tartrate in Wine", Serial No. 60/179,452
- 50. "Fluid Based Analysis of Multiple Analytes by a Sensor Array", Serial No. 12/372,414, Publication No. US 2009-0258791 A1, Publication Date: October 15, 2009
- 51. "Electric Tongue", Serial No. 75/634,570, Patent No. 2,832,211, Publication Date: April 13, 2004
- 52. "Fluid Based Analysis of Multiple Analytes by a Sensor Array: Toward the Development of an Electronic Tongue", Serial No. 60/093,111
- 53. "A Receptor and Method for Citrate Determination", Serial No. 08/950,712, Patent No. 6,048,732

### **Research Publications**

- 370) "Molecular Encryption and Steganography Using Mixtures of Simultaneously Sequenced, Sequence-Defined Oligourethanes" Dahlauser, S.D.; Wight, C.D.; Moor, S.R.; Scanga, R.A.; Ngo, P.; Vera, J.T.; Vera, M.S.; Blake, K.J.; Riddington, I.M.; Reuther, J.F.; Anslyn, E.V. ACS Cent. Sci., 2022, 8, 1125-1133.
- 369) "Evaluation the Effect of Dye-Dye Interactions of Xanthene-Based Fluorophores in the Fluorosequencing of Peptides" Bachman, J.L.; Wight, C.D.; Bardo, A.M.; Johnson, A.M.; Pavlich, C.I.; Boley, A.J.; Wagner, H.R.; Swaminathan, J.; Iverson, B.L.; Marcotte, E.M.; Anslyn, E.V. *Biocong. Chem.* **2022**, 0000.
- 368) "Chemical Insights into Flexyzme-Mediate tRNA Acylation" Coronado, J.; Ngo, P. Anslyn, E.V. Ellington, A.D. *Cell. Chem. Biol.* **2022**, 0000.
- 367) "Colorimetric Quantification of Linking in Thermoreversible Nanocrystal Gel Assemblies" Kang, J.; Valenzuela, S.A.; Lin, E.Y.; Dominguez, M.N.; Sherman, Z.M.; Truskett, T.M.; Anslyn, E.V.; Milliron, D.J. *Sci. Adv.* **2022**, 8, eabm7364.
- 366) "Effect of pH on the Properties of Hydrogels Cross-Linked via Dynamic Thia-Michael Addition Bonds" FitzSimmons, T.M.; Anslyn, E.V.; Rosales, A. ACS Polymer Au, 2022, 2, 129-136.
- 365) "Assembling Inorganic Nanocrystal Gels" Allison M. Green, Charles K. Ofosu, Jiho Kang, Eric V. Anslyn\*, Thomas M. Truskett\*, and Delia J. Milliron\* *Nano Lett.* **2022**, 22, 4, 1457–1466.
- 364) "Multiplexing the Quantitation of MAP Kinase Activities Using Differential Sensing" Lingyu Zeng, Tamer S. Kaoud, Diana Zamora-Olivares, Amanda L. Bohanon, Yiru Li, Jacey R. Pridgen, Yakndara E. Ekpo, Deborah L. Zhuang, Jessica R. Nye, Mitchell Telles, Michelle Winkler, Sebastian Rivera, Federico Marini\*, Kevin N. Dalby\*, and Eric V. Anslyn\* J. Am. Chem. Soc. 2022, 144, 9, 4017–4025.
- 363) "Studies of Surface Preparation for the Fluorosequencing of Peptides" Caroline M. Hinson, Angela M. Bardo, Cassie E. Shannon, Sebastian Rivera, Jagannath Swaminathan, Edward M. Marcotte\*, and Eric V. Anslyn\* *Langmuir* **2021**, 37, *51*, 14856–14865.
- 362) "A self-degradable hydrogel sensor for a nerve agent tabun surrogate through a self-propagating cascade" Doo-HeeLee, Stephanie A.Valenzuela, Manuel N. Dominguez, Mai Otsuka, Delia J. Milliron, Eric V. Anslyn l., *Cell Reports Physical Science* 2, 100552.
- 361) "Effect of pH on the Properties of Hydrogels Cross-Linked via Dynamic Thia-Michael Addition Bonds" Thomas M. FitzSimons, Eric V. Anslyn, and Adrianne M. Rosales *ACS Polymers* https://doi.org/10.1021/acspolymersau.1c00049.
- 360) "Electrostatic and Covalent Assemblies of Anion Hydrogel-Coated Gold Nanoshells for Detection of Dry Eye Biomarkers in Human Tears" Wechsler, M.E.; Jocelyn, D.H.; Simmonds, S.P.; Bahrami, K.; Wyse, J.M.; Dahlhauser, S.D.; Reuther, J.F.; VandeWalle, A.N.; Anslyn, E.V.; Peppas, N.A. *Nano Lett*, **2021**, *21*, 8734-874

- 359) "The Evolution of Data-Driven Modeling in Organic Chemistry" William, M.L.; Zeng, L. Tobias, G.; Sigman, M.S.; Doyle, A.G.; Anslyn, E.V. *ACS Cent. Sci.* **2021**, *7*, 1622-1637.
- 358) "A Data-Driven Approach to the Development and Understanding of Chiroptical Sensors for Alcohols with Remote g-Stereocenters" Dotson, J.J.; Anslyn, E.V.; Sigman, M.S. J. Am. Chem. Soc. 2021, 143, 45, 19187–19198.
- 357) "Photoredox-Catalyzed Decarboxylative C-Terminal Differentiation for Bulk- and Single-Molecule Proteomics" Zhang, L.; Floyd, B.M.l; Chilamari, M.; Mapges, J.; Swaminathan, J.; Bloom, S.; Marcotte, E.M.; Anslyn, E.V. *ACS Chem. Biol.* **2021**, 16, *11*, 2595–2603.
- 356) "Ribosome-mediated incorporation of fluorescent amino acids into peptides in vitro" Lee, J.; Schwarz, K.J.; Hao, K.A.; Anslyn, E.V.; Ellington, A.D.; Moore, J.S.; Jewett, M.C. Chem. Comm. 2021, 57, 2661-2664.
- 355) "Effects of linker flexibility on phase behavior and structure of linked colloidal gels" Howard, M.P.; Sherman, Z.M.; Sreenivasan, A.N.; Valenzuela, S.A.; Anslyn, E.V.; Milliron, D.J.; Truskett, T.M. *J. Chem. Phys.* **2021**, *154*, 074901.
- 354) "Combination of two analytical techniques improves wine classification by Vineyard, Region, and Climate" Crook, A.A.; Zamora-Oliveres, D.; Bhinderwala, F.; Woods, J.; Winkler, M.; Rivera, S.; Shannon, C.F.; Wagner, H.R.; Zhuang, D.; Lynch, J.E.; Berryhill, N.R.; Runnebaum, R.C.; Anslyn, E.V.; Powers, R. *Food Chemistry*, **2021**, *354*, 129531.
- 353) ""Benchtop" Biaryl Coupling Using Pd/Cu Cocatalysis: Application to the Synthesis of Conjugated Polymers" Minus, M.; Moor, S.R.; Pary, F.; Nirmani, L.P.T.; Chwatko, M.; Okeke, B.; Singleton, J.E.; Nelson, T.L.; Lynd, N.; Anslyn, E.V. *Org. Lett.*, **2021**, *23*, 2873-2877.
- 352) "The emerging landscape of single-molecule protein sequencing technologies" Antonio, A.J.; Bohlander, P.; Dai, M.; Filius, M.; Howard, C.J.; et. al. Aksimentiev, A.; Anslyn, E.V.;...Joo, C. *Nature Methods*, **2021**, *18*, 604-617.
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- 1) "Kinetic Deuterium Isotope Effects on m-Hydride and Carbonyl Ligand Migrations," E. Rosenberg, E.V. Anslyn, C. Barner-Thorsen, S. Aime, D. Osella, R. Gobetto, L. Milone, *Organometallics*, **1984**, *3*, 1790.

#### **Invited Lectures/Seminars**

- 405) "Synthesis and Sequencing of Sequence-Defined Polymers" Univ. British Columbia, Vancouver, Cananda, August 8<sup>th</sup> 2022.
- 404) "Supramolecular Methods for Rapid ee and dr Reaction Screening", MSMLG, Dublin IR, July 15th, 2022.
- 403) "Synthesis and Sequencing of Sequence-Defined Polymers" Notre Dame, South Bend In, May 25th, 2022.
- 402) "Synthesis and Sequencing of Sequence-Defined Polymers" Purdue University, West Lafayette In, May 19th, 2022.
- 401) "Synthesis and Sequencing of Sequence-Defined Polymers" The Frank Mather's Lecture, Indiana University, Bloomington In, May 17th, 2022.
- 400) "Synthesis and Sequencing of Sequence-Defined Polymers" Univ. Ill. Champagne Urbana, Feb. 10th, 2022.
- 399) "Sequencing Sequence-Defined Polymers" Univ. Nebraska, Nov. 4th, 2021.
- 398) "Sequencing Sequence-Defined Polymers" Southwest Regional ACS Meeting, Austin TX, Nov. 2<sup>nd</sup>, 2021.
- 397) "Exploring Agnostic Approaches to Chemistry on Other Planets" Caltech, April 5th, 2021.
- 396) "Studies of Nerve Agents: Transition State Analogs, New Threats, Antidotes, and Sensing Routines" DTRA Command, March 10<sup>th</sup> 2021
- 395) "Getting Into Medical School", Warrior Scholar Project, Yale University, March 10th, 2021
- 394) "The Chemistry of Peptide Fluorosequeng, and Oligourethane Sequencing Methods" Mercer College, July 9<sup>th</sup> 2020
- 393) "Differential Sensing. Theory and Applications in the Wine Industry" Rossi Lecture, UC Davis Enology and Viticulture Depart. March 9<sup>th</sup> 2020
- 392) "Two Tales of Supramolecular Analytical Chemistry", UC Davis Miller Symposium, Keynote Speaker, March 6th 2020
- 391) "Mimicking the Senses of Taste and Smell" Austin Community College, Austin TX Feb. 27th 2020
- 390) "Three Tales of Supramolecular Analytical Chemistry" Northwestern Univ. Feb. 19th 2020, Evanston IL.
- 389) "The Super-Seed Life Project", MRSEC Director's Meeting, Arlington VA., Oct. 3rd 2019
- 388) "The Chemistry of Peptide Fluorosequencing, and Oligourethane Sequencing Methods" 2<sup>nd</sup> International Symposium on Single Molecular Peptide Sequencing, Tel Aviv, Israel. Sept. 25<sup>th</sup> 2019
- 387) "Molecular Complexity, Chemometrics, and Other Life Codes', AbSciCon Seattle WA, June 24th 2019
- 386) "Supramolecular Methods for the Rapid Determination of EE and DE", ISMSC 2019, Leece Italy, June 4th 2019
- 385) "Reversible Covalent Bonding: Assembly, Cascades, and Sequencing" Irish Chemical Conference, Maynooth University, Dublin IR, May 20th, 2019
- 384) "Fun Facts about the Wizard of Oz, and the Life of Judy Garland", Sustainability and Well-Being Lecture, Queen's Univ. Belfast, May 16th, 2019

- 383) "Three Tales of Supramolecular Analyical Chemistry", Bowling Green State Univ. Bowling Green KN, April 17th, 2019
- 382) "Physical Organic Chemistry in the Analytical Science", James Flack Norris Award Lecture, ACS meeting Orlando Fl, March 31st, 2019
- 381) "Sequentiable Sequence Defined Polymers" University of Glasgow, Glasgow Scotland, Feb. 19th, 2019
- 380) "Sequentiable Sequence Defined Polymers" St. Andrews University, St. Andrews Scotland, Feb. 19th, 2019
- 379) "Three Tales of Supramolecular Analytical Chemistry" Univ. of Aberdeen, Aberdeen Scotland, Feb. 18th, 2019
- 378) "Sequentiable Sequence Defined Polymers" Scottish Symposium, Univ. Chicago, Chicago IL, Jan. 25th, 2019
- 377) "Three Tales of Supramolecular Analytical Chemistry" Duke University, Raleigh-Duham, N.C. Jan. 14th, 2019
- 376) "Chemometrics, Theory and Applications" Queen's University Belfast, Belfast Ireland, Oct. 7th, 2018
- 375) "Thermodyamic Analytical Methods" Queen's University Belfast, Belfast Ireland, Oct. 6th, 2018
- 374) "Publishing, Being an Educator, Academia vs Industry" Queen's University Belfast, Belfast Ireland, Oct. 5<sup>th</sup>, 2018
- 373) "Three Tales of Supramolecular Analytical Chemistry" SUNY Albany, Albany NY. Oct. 2nd 2018
- 372) "Three Tales of Supramolecular Analytical Chemistry" University of South Florida, Tampa Fl. September 6<sup>th</sup> 2018
- 371) "Physical Organic Chemistry in the Analytical Sciences" Queen's University Belfast, Belfast Ireland, June 21st, 2018
- 370) "Differential Sensing, Methods and Application" Queen's University Belfast, Belfast Ireland, June 20th, 2018
- 369) "Rapid Optical Methods for Enantiomeric Excess Determination", Chirality Conference, Princeton NY, June 12th 2018
- 368) "Three Tales of Supramolecular Analytical Chemistry" Univ. Oregon, Eugene OR, April. 19th 2018
- 367) "Three Tales of Supramolecular Analytical Chemistry" Oregon State University, Corvalis OR, April. 18th 2018
- 366) The James and Jeanette Neckers Lectureship in Chemistry, "Supramolecular Methods for the Rapid Determination of Enantiomeric Excess" Hope College, April 6<sup>th</sup> 2018
- 365) The James and Jeanette Neckers Lectureship in Chemistry, "Mimicking the Senses of Taste and Smell" Hope College, April 5<sup>th</sup> 2018
- 364) "Three Tales of Supramolecular Analytical Chemistry" NYU New York NY, April. 4th 2018
- 363) "Three Tales of Supramolecular Analytical Chemistry" Temple University, Philadelphia PN, Feb. 22<sup>nd</sup> 2018
- 362) "Single Molecule Sequencing of Unnatural Peptides and Oligomers", 1<sup>st</sup> Single Molecule Peptide Sequencing Conference, Deflt Holland, December 11<sup>th</sup> 2017
- 361) Haines Lectureship, "Three Tales of Supramolecular Analytical Chemistry" University of South Dakota, Nov. 6<sup>th</sup> 2017, Vermillion SD
- 360) "Three Tales of Supramolecular Analytical Chemistry" Texas A&M University, College Station TX, Oct. 27th 2017
- 359) "Supramolecular Methods for the Rapid Determination of Enantiomeric Excess" Canterbury University, Christchurch New Zealand, September 11<sup>th</sup>, 2017
- 358) "Supramolecular Methods for the Rapid Determination of Enantiomeric Excess" University of New South Wales, Sydney Australia, September 8<sup>th</sup>, 2017
- 357) "Undergraduate Education at the University of Texas at Austin, What's Special About Us?" The Mellor Lecture in Chemical Education, University of New South Wales, Sydney Australia, September 7<sup>th</sup>, 2017
- 356) "Dynamic Covalent Bonding: Peptide Quaternary Structures, Click and Declick, and Auto-Induction", ACS Meeting, Washington DC, August 20th, 2017.
- 355) "Three Tales of Supramolecular Analytical Chemistry" Cambridge University, Cambridge England. June 20th
- 354) "Three Tales of Supramolecular Analytical Chemistry" Oxford University, Oxford England. June 30th
- 353) "Three Tales of Supramolecular Analytical Chemistry" University of Parma, Parma Italy. June 26th 2017
- 352) "Life as an Academic" Gargnano Italian School, Gargnano Italy, June 19th, 2017.
- 351) "Rapid Supramolecular Methods for Reaction Discovery" Gargnano Italian School, Gargnano Italy, June 18th, 2017.
- 350) "Three Tales of Supramolecular Analytical Chemistry" University of Padova, Padova Italy. June 15th 2017
- 349) "Dynamic Covalent Bonding: Peptide Quaternary Structures, Click and Declick, and Auto-Induction" May 17<sup>th</sup> 2017, CASE Conference, Shanghai Polytechnic University, China.
- 348) "Three Tales of Supramolecular Analytical Chemistry" East China Normal University, May 15<sup>th</sup> 2017, Shanghai China
- 347) "Three Tales of Supramolecular Analytical Chemistry" UIUC, Urbana-Champagne, Ill, April 13th 2017

- 346) "Mimicking the Senses of Taste and Smell" Kilpatrick Lecture, Illinois Institute of Technology, Chicago Ill, April  $10^{th}$  2017
- 345) "Two Tales of Supramolecular Analytical Chemistry" University of Arizona, Tuscon AZ, March 31st 2017.
- 344) "Two Tales of Supramolecular Analytical Chemistry" Santa Clara University, Feb. 3<sup>rd</sup> 2017.
- 343) "Rapid Supramolecular Methods for Reaction Discovery" Tianjin University, Feb. 25th 2017, Tianjin China
- 342) "Mechanistic Studies of Boronic Acid Chemistry", Northwestern University Burn's Celebration, Jan. 23rd, 2017
- 341) "Two Tales of Supramolecular Analytical Chemistry" Univ. Nebraska, Jan. 13th 2017
- 340) "DARPA Progess Update", Scripps La Jolla, Dec. 19th, 2016
- 339) "Supramolecular Methods for the Analysis of Enantiomeric Excess", NYU Abu Dhabi, November 8th, 2016
- 338) "Mimicking the Senses of Taste and Smell", NYU Abu Dhabi, Nov. 7th 2016
- 337) "Two Tales of Supramolecular Analytical Chemistry" University of Basel, October 14th 2016, Basel, Switzerland
- 336) "Two Tales of Supramolecular Analytical Chemistry" EPFL, October 13th 2016, Lausanne, Switzerland
- 335) "Two Tales of Supramolecular Analytical Chemistry" University of Fribourg, October 12th 2016, Fribourg, Switzerland
- 334) "Two Tales of Supramolecular Analytical Chemistry" University of Bern, October 11th 2016, Bern, Switzerland
- 333) "Two Tales of Supramolecular Analytical Chemistry" ETH, October 10<sup>th</sup> 2016, Zurich, Switzerland
- 332) "Next-Gen Sequencing for Bio-Hints" NASA-Biosignature Workshop, September 8th, Washington DC
- 331) "Short Vignettes of Supramolecular Analytical Chemistry" MSMLG, July 25th, 2016, Bath, UK
- 330) "Optical Methods for Reaction Discovery, From Conception to Practice" ISMSC Conference, July 11th, 2016, Seoul, Korea
- 329) "Supramolecular Chemistry Methods for the Rapid Determination of Enantiomeric Excess Values" ISBBN Conference, May 27th, 2016, Changsha, China
- 328) "Supramolecular Analytical Chemistry" Oklahoma State University, April 7th, 2016, StillWater, Ok
- 327) "Mimicking the Senses of Taste and Smell" Cal State University, February 17th, 2016, Long Beach, CA
- 326) "Supramolecular Methods for the Rapid Determination of Enantiomeric Excess" Cal State University, February 17<sup>th</sup>, 2016, Long Beach, CA
- 325) "Supramolecular Analytical Chemistry" Israel Chemical Soceity, February 9th, 2016, Tel-Aviv, Israel
- 324) "Differential Sensing: Concepts and Applications" Pacific Chem, Dec. 14th, 2015, Honolulu, HI
- 323) "Rapid Supramolecular Methods for Ee Determination" Pacific Chem, Dec. 14th, 2015, Honolulu, HI
- 322) "Three Tales of Supramolecular Analytical Chemistry", Dartmouth College, Oct. 28th, 2015. Hanover CT
- 321) "Rapid Supramolecular Methods for Ee Determination" Merck Pharmaceuticals, Rahway NJ, September 25<sup>th</sup>, 2015.
- 320) "Rapid Supramolecular Methods for Ee Determination" Boehringer Ingelheim, Ridgefield CT, September 10<sup>th</sup>, 2015.
- 319) "Differential Sensing: Concepts and Applications" IUPAC-Busan, Korea, August 10, 2015
- 318) "Differential Sensing: Concepts and Applications", University of Birmingham, Birmingham, England, July 20, 2015
- 317) "Rapid Supramolecular Methods for Ee Determination" University of Birmingham, Birmingham, England, July 17, 2015
- 316) "Graduate Student, Post-Doc, Assistant Professor, Getting Tenure, and Beyond: The Life of an Academic Scientist" University of Birmingham, Birmingham, England, July 16, 2015
- 315) "Rapid Supramolecular Method for Ee Determination", CASE Conference, Dublin, Ireland, July 9, 2015
- 314) "Rapid Supramolecular Methods for Ee Determination", Physical Organic Conference, June 23, 2015
- 313) "Methods of Thermodynamic Analysis in Supramolecular Chemistry", NSF Workshop, June 2, 2015
- 312) "Graduate Student, Post-Doc, Assistant Professor, Getting Tenure, and Beyond: The Life of an Academic Scientist" Shanghai University, May 20th, 2015
- 311) "Differential Sensing: Concepts and Applications" Shanghai University, May 19th, 2015
- 310) "Supramolecular Approaches for the Rapid Analysis of Enantiomeric Excess" Zhejiang University, Hangzhou China, May 18<sup>th</sup> 2015
- 309) "Supramolecular Sensing, a Short Course" Fujian Institute for Research on Structure and Matter, Fuzhou China, May 15<sup>th</sup> 2015
- 308) "Differential Sensing: Concepts and Applications" Fujian Institute for Research on Structure and Matter, Fuzhou China, May 15th 2015
- 307) "Differential Sensing, An Introduction" 2<sup>nd</sup> Symposium on Aggregation Induced Emission, Guangzhou China, May 16<sup>th</sup> 2015
- 306) "Differential Sensing: Concepts and Applications" Wuhan University, Wuhan China, May 14th 2015

- 305) "Differential Sensing: Concepts and Applications" Wuhan University of Science and Technology, Wuhan China, May 13th 2015
- 304) "Differential Sensing: Concepts and Applications" Institute of Biotechnology and NanoScience, Singapore, May 12<sup>th</sup> 2015
- 303) "Rapid Supramolecular Method for Ee Determination", Massachusetts Institute of Technology, Cambridge, Massachusetts, April 10<sup>th</sup>, 2015.
- 302) "Differential Sensing, Concepts & Methods", Massachusetts Institute of Technology, Cambridge, Massachusetts, April 9<sup>th</sup>, 2015.
- 301) "Differential Sensing, Concepts & Methods" Xavier University, New Orleans, Louisiana, Jan. 26th, 2015.
- 300) "Three Tales of Supramolecular Analytical Chemistry", Univ. Melbourne, Melbourne Australia, Dec. 16th 2014.
- 299) "Three Tales of Supramolecular Analytical Chemistry", Univ. New South Wales, Sydney Australia, Dec. 15th
- 298) "Differential Sensing, Concepts and Applications" RACI Meeting, Adelaide Australia, Dec. 10<sup>th</sup> 2014.
- 297) "Differential Sensing, Biological Applications", MSMLG, Shanghai China, Nov. 11th, 2014.
- 296) "Three Tales of Supramolecular Analytical Chemistry", Univ. Utah, Oct. 2<sup>nd</sup>, 2014.
- 295) "Three Tales of Supramolecular Analytical Chemistry", Michigan State Univ., Sept. 3rd, 2014.
- 294) "Rapid Optical Methods for the Determination of Ee Values", Stereochemistry GRC, RI, July 29th, 2014.
- 293) "Differential Sensing for Wine Classification" ASEV Conference, Austin TX, May 24th, 2014.
- 292) "Three Tales of Supramolecular Analytical Chemistry" University of Rome, Italy, May 18th, 2014.
- 291) "Three Tales of Supramolecular Analytical Chemistry" University Florence, Italy, May 16th 2014.
- 290) "Three Tales of Supramolecular Analytical Chemistry" Parma University, Italy, May 13th 2014.
- 289) "Supramolecular Analytical Chemistry", ISMC 2014, Pavia Italy, Plenary Lecture, May 10th 2014.
- 288) "Three Tales of Supramolecular Analytical Chemistry", Saul Winstein Lecturer, UCLA, May 22<sup>nd</sup> 2014.
- 287) "Differential Sensing Methods: Mimicking the Senses of Taste and Smell with Supramolecular Chemistry", Boekelheide Lecturer, Univ. of Oregon, May 9th, 2014.
- 286) "Supramolecular Chemistry Approaches for the Rapid Determination of Ee Values", Univ. of Oregon, May 13th,
- 285) "Biological Applications of Supramolecular Analytical Chemistry" Mardi Gras Symposium, Tulane University, Jan. 27<sup>th</sup>, 2014.
- 284) "Three Tales of Supramolecular Analytical Chemistry", Tulane University, Jan. 17th 2014
- 283) "Supramolecular Analytical Chemistry" University of Geneva, Chemistry Day, Jan. 27th 2014
- 282) "Supramolecular Analytical Chemistry", Chinese Chemical Biology Symposium, East China University of Science and Technology, Shanghai China, Sept. 17<sup>th</sup> 2013
- 281) "Three Tales of Supramolecular Analytical Chemistry", University of California, Riverside, Sept. 25th 2013
- 280) Izatt Christensen Award Lecture, 8th ISMSC, "Three Tales of Supramolecular Analytical Chemistry" Arlington VA, July 10<sup>th</sup>, 2013.
- 279) "Supramolecular Analytical Chemistry" Toho University, Toho Japan, June 25th, 2013.
- 278) "Supramolecular Analytical Chemstry" Tsukuba Institute for Material Science, Tsukuba Japan, June 24th 2013.
- 277) "Supramolecular Approaches to Rapid Ee Determination" ISACS 10 Conference, Kyoto Japan, June 20th, 2013.
- 276) "Supramolecular Analytical Chemistry" Penn. State Univ., State College PA, May 28<sup>th</sup> 2013 275) "Supramolecular Analytical Chemistry", Carleton College, Northfield MN, April 19<sup>th</sup> 2013 274) "Supramolecular Analytical Chemistry", U.C. Davis, March 13<sup>th</sup> 2013

- 273) "Supramolecular Analytical Chemistry", California Institute of Technology, March 11th 2013
- 272) "Supramolecular Analytical Chemistry", Plenary Lecture at the HKUST Symposium on Advances in Biomedical Engineering, Hong Kong, Jan. 12th, 2013.
- 271) "Supramolecular Analytical Chemistry" Chinese University of Hong Kong, Jan. 10th, 2013.
- 270) "Supramolecular Analytical Chemistry" University of Hong Kong, Jan. 9<sup>th</sup>, 2013.
- 269) "Supramolecular Methods for the Rapid Determination of Enantiomeric Excess" South China University of Technology, Guangzhou China, Jan. 7th, 2013.
- 268) "Supramolecular Analytical Chemistry" International Kyoto Conference on Organic Chemistry (IKCOC-12), Kyoto Japan, Nov. 13<sup>th</sup>, 2012.
- 267) "Supramolecular Analytical Chemistry" Texas Tech., Lubbock TX, Oct. 3<sup>rd</sup> 2012.
- 266) "Supramolecular Analytical Chemistry" Univ. of Alabama, Tuscaloosa AL, Sept. 13th, 2012.
- 265) "Supramolecular Analytical Chemistry" University of Arlington, Arlington TX, July 30<sup>th</sup> 2012.
- 264) "Supramolecular Analytical Chemistry" EWHA University, Seoul Korea, July 13th, 2012.
- 263) "Supramolecular Approach to High-Throughput Ee Analysis" Seoul National University, June 12th, 2012.

- 262) "Supramolecular Analytical Chemistry" MSMLG, Seoul Korea, July 11th, 2012.
- 261) "Supramolecular Approach to High-Throughput Ee Analysis" Chirality Conference, Fort Worth TX, June 11th,
- 260) "Supramolecular Analytical Chemistry", University Distinguished Lecturer, Hong Kong University of Science and Technology, Hong Kong, April 16th, 2012.
- 259) "Supramolecular Analytical Chemistry", Columbia University, NYC, April 5<sup>th</sup>, 2012. 258) "Supramolecular Analytical Chemstry", ISEOFM2012, Shanghai China, March 11<sup>th</sup>, 2012.
- 257) "Supramolecular Approaches to High-Throughput Screening of Enantiomeric Excess". Merck Pharmaceutical Rahway NJ, March 21st 2012.
- 256) "Supramolecular Approaches to High-Throughput Screening of Enantiomeric Excess". National Dong Hwa University, Taiwan, Feb. 24th, 2012.
- 255) "Supramolecular Approaches to High-Throughput Screening of Enantiomeric Excess", National Chao Tung University, Taiwan, Feb. 23rd, 2012.
- 254) "Supramolecular Approaches to High-Throughput Screening of Enantiomeric Excess", National Taiwan University, Feb. 22<sup>nd</sup>, 2012.
- 253) "Supramolecular Analytical Chemistry" Ta-shue Chou Memorial Lectures, Feb. 12st, 2012, Academia Sinica. Taiwan.
- 252) "Supramolecular Rapid EE Analysis" New York University, Jan. 27<sup>th</sup>, 2012.
- 251) "Supramolecular Analytical Chemistry" Montana State University, Dec. 1st, 2011.
- 250) "Supramolecular Rapid EE Analysis" Southwest Regional ACS Meeting, Austin TX, Nov. 9th 2011.
- 249) "Supramolecular Analytical Chemistry", Pennsylvania State University, Oct. 24th, 2011.
- 248) "Supramolecular Analytical Chemistry" Macalester College, Saint Paul, MN, Oct. 5th, 2011.
- 247) "Supramolecular Rapid EE Analysis" Gassman Lecturer Series, University of Minnesota, Oct. 6th, 2011.
- 246) "Supramolecular Analytical Chemistry" Gassman Lecturer Series, University of Minnesota, Oct. 4th 2011.
- 245) "Triggered Reactions for Creating Optical Responses" Methods and Applications of Fluorescence, Strasbourg France, September 13th, 2011.
- 244) "Supramolecular Chirality and Enantiomeric Excess Determination" University of Birmingham, England, July 11<sup>th</sup>, 2011
- 243) "Supramolecular Chirality and Enantiomeric Excess Determination" University of Bath, England, July 8th, 2011
- 242) "Supramolecular Chirality and Enantiomeric Excess Determination" 6th ISMSC, Brighton England, July 5th, 2011
- 241) "Patterning Chirality and Enantiomeric Excess" National University Singapore, June 9th, 2011.
- 240) "Pattern Recognition and Supramolecular Chemistry" National University Singapore, June 8th, 2011.
- 239) "Supramolecular Analytical Chemistry" Nan Qiang Lecture, Xiamen University, Xiamen, China, June 6th 2011.
- 238) "Supramolecular Analytical Chemistry" Fujian Institute of Structure and Matter, Fuzhou, China, June 4th 2011.
- 237) "Supramolecular Analytical Chemistry" Zhejiang University, Hangzhou, China, June 1st 2011.
- 236) "Supramolecular Analytical Chemistry" Hong Kong University, Hong Kong, China, May 30th 2011.
- 235) "Supramolecular Analytical Chemistry" Scripps Florida, Jupiter Florida, April 28th 2011.
- 234) "Supramolecular Analytical Chemistry" ETH, Zurich, Switzerland, April 4<sup>th</sup>, 2011.
- 233) "Biomimetic Sensing" Breslow 80th Birthday Symposium, Anaheim ACS meeting, March 27th, 2011.
- 232) "Supramolecular Analytical Chemistry" University of Toronto, Mississauga, Feb. 29<sup>th</sup> 2011. 231) "Supramolecular Analytical Chemistry" University of Toronto, St. George, Feb. 28<sup>th</sup> 2011.
- 230) "Supramolecular Analytical Chemistry" 2010-2011 Organic Synthesis Lecturer, U.C. Berkeley, Feb. 7th 2011.
- 229) "Supramolecular Analytical Chemistry" University of Maryland Distinguished Departmental Lecture, Jan. 28th 2011.
- 228) "Mechanistic Studies and Analytical Uses of Boronic Acids" Pacifichem, Honolulu HI, Dec. 20th, 2010.
- 227) "Supramolecular Analytical Chemistry" Pacifichem, Honolulu HI, Dec. 15th 2010.
- 226) "Supramolecular Analytical Chemistry" 2<sup>nd</sup> MSMLG, Ankara Turkey, October 21<sup>st</sup> 2010.
- 225) "Supramolecular Analytical Chemistry" EuChemMS Chemistry Conference, Nurnberg, Germany, August 31,
- 224) "Supramolecular Analytical Chemistry" Sanofi Aventis, Frankfurt, Germany, September 2, 2010.
- 223) "Supramolecular Analytical Chemistry" Aegean Conference, 1st International Conference on Molecular Recognition, Crete, Greece, June 7<sup>th</sup> 2010.
- 222) "Supramolecular Analytical Chemistry" 33ª Reunao Anual Sociedade Brasiliera de Quimica, Aqua di Lindoia, Brazil, May 31st 2010.
- 221) "Supramolecular Analytical Chemistry" University of Sao Paulo, Sao Paulo Brazil, May 28th, 2010.
- 220) "Supramolecular Analytical Chemistry" Burkenstock Conference, Brunnen, Switzerland, May3rd, 2010

- 219) "Supramolecular Analytical Chemistry" North Carolina St. Univ., Raleigh-Durham, April 23<sup>rd</sup> 2010 218) "Supramolecular Analytical Chemistry" Duke University, Raleigh-Durham, April 22<sup>nd</sup> 2010
- 217) "Supramolecular Analytical Chemistry" Univ. North Carolina, Chapel Hill NC, April 21st 2010
- 216) "Supramolecular Analytical Chemistry" Southern Methodist University, Dallas TX, Feb. 26<sup>th</sup> 2010
- 215) "Supramolecular Analytical Chemistry" University of Colorado, Boulder CO, Jan. 25th 2010
- 214) "Problems in the Anslyn Group" NSF Physical Organic Workshop, Austin TX, Jan. 9th 2010
- 213) "Supramolecular Analytical Chemistry" Dains Lecture, Univ. Kansas, Lawrence KS, Dec. 11th 2009
- 212) "Supramolecular Analytical Chemistry" RISE Lecturer, Univ. Puerto Rico, San Juan, Nov. 13th 2009
- 211) "Supramolecular Analytical Chemistry" Univ. Ill. Urbana-Champagne, Oct. 12th 2009
- 210) "Supramolecular Analytical Chemistry" Univ. South Carolina, Columbia S.C. Sept. 11th 2009.
- 209) "Differential Arrays from Peptides, Metals, and Indicators" 10th International Conference on Calixarene Chemistry, Seoul South Korea, July 15th 2009.
- 208) "Supramolecular Analytical Chemistry", University of Warsaw, Warsaw Poland, June 15th 2009.
- 207) "Supramolecular Analytical Chemistry", Bruno-Werelmann-Lecture, University of Essen, Essen Germany, June 15<sup>th</sup>, 2009.
- 206) "Supramolecular Analytical Chemistry", University of Kiel, Otto Diels Institute of Organic Chemistry, Kiel Germany, June 11th, 2009
- 205) "Supramolecular Analytical Chemistry" Munchener Chemische Gesellshaft Lecture, Ludwig-Maximilians Universitat Munchen, Germany, June 9th, 2009
- 204) "Supramolecular Analytical Chemistry" Taft Memorial Lecture, Univ. California Irvine, April 29th, 2009
- 203) "Supramolecular Analytical Chemistry" New York University, NYC, Feb. 20th 2009
- 202) "Supramolecular Analytical Chemistry" Cambridge University, Cambridge, England, Jan. 15th 2009
- 201) "Supramolecular Analytical Chemistry" University of East Anglia, Norwich, England, Jan. 14<sup>th</sup> 2009 200) "Supramolecular Analytical Chemistry" University of Sheffield, Sheffield England, Jan. 13<sup>th</sup>, 2009
- 199) "Supramolecular Analytical Chemistry" National Singapore University, Dec. 19th, 2008.
- 198) "Supramolecular Analytical Chemistry" Institute of Chemical and Engineering Sciences, Singapore, Dec. 16th, 2008.
- 197) "Supramolecular Analytical Chemistry" Yale University, Princeton NY, Nov. 5<sup>th</sup>, 2008.
- 196) "Supramolecular Analytical Chemistry" Sanofi-Aventis, Tucson AR, Oct. 8<sup>th</sup>, 2008. 195) "Supramolecular Analytical Chemistry" University Michigan, Ann Arbor, MI, Sept. 16<sup>th</sup> 2008
- 194) "Supramolecular Analytical Chemistry" Scripps Institute, San Diego CA., August 13th, 2008.
- 193) "Supramolecular Chemistry and Pattern Recognition" Tohoku University Department of Chemical Engineering, Sendai Japan, June 9<sup>th</sup> 2008
- 192) "Supramolecular Analytical Chemistry" Tohoku University Department of Chemistry, Sendai Japan, June 9th 2008
- 191) "Supramolecular Analytical Chemistry" University of Kyoto, Kyoto Japan, June 6th 2008
- 190) "Supramolecular Analytical Chemistry" University of Osaka, Osaka, Japan June 5th 2008
- 189) "Supramolecular Analytical Chemistry" University of Kyushu, Fukuoka, Japan, June 3rd 2008
- 188) "Supramolecular Analytical Chemistry" University of Nebraska, Lincoln, May 2<sup>nd</sup> 2008
- 187) "Supramolecular Analytical Chemistry" Trinity University, San Antonio TX, March 27th 2008
- 186) "Supramolecular Chemistry and Pattern Recognition" New York Academy of Sciences, Symposium on Chemical Neurobiology, Feb. 22<sup>nd</sup>, 2008.
- 185) "Supramolecular Analytical Chemistry" Indiana University, Dec. 7th, 2007.
- 84) "Supramolecular Analytical Chemistry" Purdue University, Bachmann-Pearce named lecture, Dec. 6<sup>th</sup>, 2007
- 183) "Supramolecular Analytical Chemistry" University of New Orleans, Oct. 19th, 2007.
- 182) "Supramolecular Analytical Chemistry" Xiamen University, China, Sept. 26<sup>th</sup>, 2007.
- 181) "Contrasting Selective vs. Differential Sensors" XXXV CSI, Xiamen China, Sept. 24th 2007.
- 180) "Colorimetric Methods for Enantiomeric Excess Determination" Organic Reactions and Process Gordon Conference, July 17th, 2007.
- 179) "Inorganic and Organic Receptors for Analytical Purposes" International Symposium on Photochemical and Photophysical Phenomenon, Dublin Ireland, June 27<sup>th</sup>, 2007.
- 178) "A Marriage of Supramolecular Chemistry with Pattern Recognition" University of Edinburgh, Scotland, June 19<sup>th</sup>, 2007.
- 177) "A Marriage of Supramolecular Chemistry with Pattern Recognition" Durham University, England, June 15th, 2007.

- 176) "A Marriage of Supramolecular Chemistry with Pattern Recognition" University of Bath, England, June 13th,
- 175) "A Marriage of Supramolecular Chemistry with Pattern Recognition" University of Southampton, England, June 11<sup>th</sup> 2007.
- 174) "Opportunities in the United States for Asians" Hong Kong Baptist University, May 10th, 2007.
- 173) "Supramolecular Analytical Chemistry" Hong Kong Baptist University, May 9<sup>th</sup> 2007.
  172) "Supramolecular Analytical Chemistry" International Symposium on Molecular Machines and Sensing", May 7<sup>th</sup>, Shanghai, China
- 171) "Supramolecular Analytical Chemistry" Bowling Green State University, April 28th, 2007
- 170) "Supramolecular Analytical Chemistry" University of Florida, Gainesville, March 22<sup>nd</sup>, 2007.
- 169) "Supramolecular Analytical Chemistry" University of Illinois, Carbondale, Feb. 23<sup>rd</sup>, 2007.
- 168) "Supramolecular Chemistry and Pattern Recognition, A Complementary Match" Frye Lectureship, Univ. Arkansas, Favetteville, Feb. 12th 2007
- 167) "Supramolecular Chemistry and Pattern Recognition, A Complementary Match" Northwestern University, Jan. 18<sup>th</sup>, 2007
- 166) "Supramolecular Chemistry and Pattern Recognition, A Complementary Match" Tufts University, Dec. 4th 2006
- 165) "The Power of Differential Receptors Rather Than Selective Receptors" University of Basel, Oct. 30th 2006
- 164) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match" University of Berne, Oct. 31st,
- 163) "Supramolecular Analytical Chemistry" University of Neuchatel, Nov. 1st, 2006.
- 162) "Combining Supramolecular Chemistry with Chemometrics" University of Fribourg, Nov. 2<sup>nd</sup> 2006.
- 161) "Teaching Supramolecular Chemistry New Tricks" University of Lausanne, EPFL, Nov. 3rd 2006
- 160) "A Marriage of Supramolecular Chemistry with Pattern Recognition" ACS Meeting, Fall 2006, San Francisco, Cope Scholar Award Presentation
- 159) "Practical Sensing Applications" Merck Pharmaceuticals, August 17th, 2006. Rahway NJ
- 158) "A Marriage of Supramolecular Chemistry with Pattern Recognition" June 26th, 2nd ISMSC, Victoria Canada.
- 157) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", June 16th. 2006, Oviedo Universitad. Oviedo, Spain.
- 156) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", June 14th, 2006 Autonomica Ouimica, Madrid, Spain.
- 155) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", June 12th, 2006, Institute Catala d'Investigacio Quimica, Tarragona, Spain.
- 154) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match" June 9th, 2006, Valencia Universitad, Valencia Spain.
- 153) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", June 7th, 2006, Universitad de Illes Balears, Mallorca Spain.
- 152) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Apr. 13th 2006, Northeastern Univ. Boston, MA.
- 151) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Mar. 10th 2006, Iowa State Univ., Ames, IO.
- 150) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Feb. 9th 2006, Univ. Arizona, Tucson, AZ.
- 149) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Jan. 12th 2006, Univ. Tennessee, Knoxville TN.
- 148) "A Marriage of Supramolecular Chemistry and Pattern Recognition", Jan. 9th 2006, Structural and Functional Organic Chemistry GRC, Santa Ynez CA.
- 147) "Physical Organic Chemistry of Molecular Recognition Processes", Dec. 18th, Pacific Chem., Honolulu, HI.
- 146) "A Marriage of Supramolecular Chemistry and Pattern Recognition", Dec. 17th, Pacific Chem., Honolulu, HI.
- 145) "Structural and Functional Assays for Boronic Acids", Dec. 15th, Pacific Chem., Honolulu, HI.
- 144) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match, Nov. 14th, Univ. of Toledo, Toledo Ohio.
- 142) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Oct. 10th, Wuhan University, Wuhan, China.
- 141) "Supramolecular Chemistry and Pattern Recognition: A Complementary Match", Sept. 15th, Washington University, St. Louis MO.
- 140) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" June 16<sup>th</sup>, University of Turku, Finland.

- 139) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" June 13th, Symposium on Synthetic Receptors, Lund Sweden.
- 138) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" May 28th, Merck Pharmaceuticals, Rahway NJ.
- 137) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" April 15h, University of Zurich.
- 136) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" April 14th, University of Geneva.
- 135) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" April 12th, Swiss School on Supramolecular Chemistry.
- 134) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" March 9th, Univ. Mass. Amherst.
- 133) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" March 88th 2005, Brown University.
- 132) "Organic Chemistry Approaches to Single and Multi Analyte Sensing" Nov. 17th, Cal. State Univ. Northridge.
- 131) "A Marriage of Supramolecular Chemistry and Pattern Recognition" Nov. 4th, Brauman-Bell Lecture, Baylor College of Dentistry, Dallas TX.
- 130) "A Marriage of Supramolecular Chemistry and Pattern Recognition" Oct. 8th, Marquette University.
- 129) "A Marriage of Supramolecular Chemistry and Pattern Recognition" Sept. 8th 2004, SCT meeting, Prague, Czech
- 128) "A Marriage of Supramolecular Chemistry and Pattern Recognition" July 27th, XII ISSC, Notre Dame University.
- 127) "Organic and Organometallic Approaches to Molecular Sensing" July 12th, University of Bristol, England.
- 126) "Organic and Organometallic Approaches to Molecular Sensing" July. 8th, Bioanalytical Gordon Conference, Queen's College Oxford England.
- 125) "Organic and Organometallic Approaches to Molecular Sensing" July. 5th, Organic Mechanisms Conference, University College Dublin Ireland.
- 124) "Organic and Organometallic Approaches to Molecular Sensing" July. 2<sup>nd</sup>, Trinity College Dublin Ireland.
- 123) "Organic and Organometallic Approaches to Molecular Sensing" July. 1st, Queen's College Belfast Ireland.
- 122) "Organic and Organometallic Approaches to Molecular Sensing" June. 14th, Bioorganic Gordon Conference, Protor Academy.
- 121) "Organic and Organometallic Approaches to Molecular Sensing" June. 1st, London Ontario Canada, Canadian Chemical Society Meeting.
- 120) "Organic and Organometallic Approaches to Molecular Sensing" Mar. 31st, Simon Fraser Univ.
- 119) "Organic and Organometallic Approaches to Molecular Sensing" Mar. 30th, Univ. British Columbia.
- 118) "Organic and Organometallic Approaches to Molecular Sensing" Mar. 29th, Univ. of Victoria.
- 117) "Organic and Organometallic Approaches to Molecular Sensing" Mar. 28th, Anaheim ACS meeting.
- 116) "Organic and Organometallic Approaches to Molecular Sensing" Mar. 19th, University of Houston.
- 115) "Organic and Organometallic Approaches to Molecular Sensing" Jan. 27th, Laval University.
- 114) "RNA Hydrolysis and Catalysis of Cleavage" Jan. 26th, Laval University.
- 113) "Uses of Indicator-Displacement Assays", Jan. 15th, 2004, Sundial Beach Resort, NSF Young Supramolecular Chemist Conference.
- 112) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Dec. 8th, U.C.S.D.
- 113) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Nov. 3rd, Halliburton Corporation.
- 112) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" University of Montana, Oct. 20<sup>th</sup> 111) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Oct. 17<sup>th</sup>, Montana State University
- 110) "Organic Chemistry Approaches to Molecular Sensing", Sept. 18th, Georgia Tech.
- 109) "Organic Chemistry Approaches to Molecular Sensing" Sept. 8th, NYC ACS Meeting Symposium on Supramolecular Chemistry.
- 108) "Organic Chemistry Approaches to Molecular Sensing" April 28th, Astra Zeneca.
- 107) "Organic Chemistry Approaches to Molecular Sensing" April 28th, U. Alberta.
- 106) "The Power of Supramolecular Chemistry in Sensing" Jan. 30th, New Mexico State Univ.
- 105) "Organic Structures for Chemical Sensing" Dec. 4th, Texas Tech University
- 104) "Artificial Phosphodiesterases", Dec. 3rd, Texas Tech University
- 103) "Organic Structures for Chemical Sensing" Sept. 23<sup>rd</sup>, University of Pennsylvania.
- 102) "Organic Structures for Chemical Sensing" Sept. 6th UT Arlington 2002 Boston ACS Meeting.
- 101) "Organic Structures for Chemical Sensing" Aug. 18th 2002 Boston ACS Meeting.
- 100) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" May 23rd, 2002 North Dakota State
- 99) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" April 11th, 2002 Notre Dame University.

- 98) "The Impact of Array Sensors on Supramolecular Chemistry" Symposium Honoring Roger Tsien, ACS Meeting, April 9th, 2002. Orlando Fl.
- 97) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Jan. 24th, 2002 Clemson University.
- 96) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Dec. 7th, 2001 University of Reno.
- 95) "Organic Chemistry Approaches to Single and Multi-Analyte Sensing" Nov. 8th, 2001 University of Utah.
- 94) "Organic Approaches to Sensor Development" NATO Conference on Sensing, Prague, Czech Rep. Sept 1st 2001.
- 93) "Anion Receptors", Chicago ACS meeting, Anion recognition symposium, Aug. 27th 2001.
- 92) "Organic Chemistry Approaches to Single and Multi Analyte Sensing", LSU, May 4th, 2001.
- 91) "Organic Chemistry Approaches to Single and Multi Analyte Sensing", Pharmacopeia, Mar. 22<sup>nd</sup>, 2001.
- 90) "Sensing in the Anslyn Group", Breslow Birthday Symposium, Mar. 23<sup>rd</sup>, New York.
- 89) "Application of Nano Technology to Diagnostics", AADR Conference, Chicago, Mar. 9th 2001.
- 88) "Organic Chemistry Approaches to Single and Multi Analyte Sensing", Colorado St. Univ., Jan. 23<sup>rd</sup>, 2001.
- 87) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Pacific Chem., Honolulu Hawaii, Dec, 12th 2000
- 86) "Differential vs. Selective Sensing, a Fertile Ground for Combinatorial Chemistry", Conference on Combinatorial Chemistry in Molecular Recognition, Saarbrucken Germany, Dec. 9<sup>th</sup> 2000.
- 85) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Rochester University, Sept. 30th 2000
- 84) "Single and Multi Analyte Sensing", ISSC 2000, Aug. 2<sup>nd</sup>, Fukuoka Japan
- 83) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Rochester University, Sept. 29th 2000.
- 82) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", UT Southwestern Medical School
- 81) "Designed and Combinatorial Receptors", University of Pavia, Italy, April 18th, 2000.
- 80) "Designed and Combinatorial Receptors", University of Parma, Italy, April 17th, 2000.
- 79) "The Mammalian Sense of Taste, and Mimics Thereof" Germany Agricultural Society Conference, April 13th, 2000, Cologne.
- 78) "Designed and Combinatorial Receptors", University of Bonn, Germany, April 10th, 2000.
- 77) "Designed and Combinatorial Receptors", University of Munich, Germany, April 14th, 2000.
- 76) "Mimicking the Mammalian Sense of Taste", Spring ACS Meeting, San Francisco, ACS Symposium on Taste and Smell.
- 75) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Penn. State University, Mar. 13th, 2000.
- 74) "Designed and Combinatorial Receptors", Gordon Research Conference on Sensors, Jan. 25th 2000, Ventura Ca.
- 73) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", University of North Carolina, Chapel Hill, Dec. 2nd 1999
- 72) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", North Carolina State University, Dec. 1st 1999
- 71) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Arizona State University, Feb. 3rd 2000.
- 70) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", University Miss. St. Louis, Nov. 8th 1999.
- 69) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Washington University, Nov. 8th 1999.
- 68) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Texas A&M University, Sept. 10th 1999.
- 67) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", University of Texas at Austin, Oct. 14th 1999.
- 66) "Organic Chemistry Approaches to Single Analyte and Multianalyte Sensing", Carnegie Mellon University, Apr. 19th, 1999.
- 65) "Organic Approaches to Single Analyte and Multianalyte Sensing", University of Missouri, Kansas City, Feb. 24th, 1999
- 64) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors put to a Practical Use," ISPE Conference, Jan. 26th 1999
- 63) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors Put to a Practical Use", Virginia Commonwealth University, Nov. 10th, 1998

- 62) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors put to a Practical Use," University of Delaware, Oct. 27th, 1998
- 61) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors put to a Practical Use," Montana State University, Oct. 19th, 1998
- 60) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors put to a Practical Use", University of Montana, Oct. 16th, 1998
- 59) "From Single Analyte to Multi-Analyte Sensing Methodologies, Synthetic Receptors put to a Practical Use", NSF Workshop on Physical Organic Chemistry, June 1998
- 58) "The Site of Cleavage of Pyranosides, and New Sensing Methodologies" Wichita State University. Feb. 4th 1997.
- 57) "Supramolecular Catalysis: Reaction Mechanisms," Fifth Chemical Congress of North America, Cancun Mexico, Nov. 1997.
- 56) "Physical Organic Chemistry of Catalysis and Sensing", Scripps Institute for Chemical Sciences, La Jolla, CA, Oct. 24th 1997
- 55) "Sensor Based upon Synthetic Receptors", NSF Workshop on Physical Organic Chemistry, June 1997, Gold Lake Colorado
- 54) "Artificial Receptors as Catalysis and Sensors", Procter and Gamble Corp. May 1997
- 53) "Catalysts, Sensors, Mechanistic Probes: Molecular Recognition in Action." University of Oita, Oita Japan, Jan. 1997
- 52) "Catalysts, Sensors, Mechanistic Probes: Molecular Recognition in Action," University of Kyushu, Kyushu Japan, 1997
- 51) "Catalysts, Sensors, Mechanistic Probes: Molecular Recognition in Action." Kurume Research Center, Kurume Japan, Jan. 1997
- 50) "Catalysts, Sensors, Mechanistic Probes: Molecular Recognition in Action," University of Hiroshima, Hiroshima Japan, Jan. 1997
- 49) "Catalysts, Sensors, Mechanistic Probes: Molecular Recognition in Action." Ministry of Science and Education, Tsukuba Japan, Jan. 1997
- 48) "Enzymatic and Solution Acetal Hydrolysis Mechanisms," NSF Workshop, Squam Lake, NH. July 1996.
- 47) "Supramolecular Catalysis of Phosphoryl and Glycosyl Transfers", University of Arkansas, Fayetteville, Ark. Jan. 15th 1996
- 46) "Guanidinium Catalyzed Phosphoryl Transfers", Pacific Chemistry Conference, Dec. Honolulu, HA. 18th 1995.
- 45) "Methods in Combinatorial Libraries of RNA and Oligomeric Guanidiniums", Southwest Regional ACS Meeting Memphis Nov. 1995.
- 44) "Methods in Combinatorial Libraries of RNA and Oligomeric Guanidiniums", Proctor and Gamble Corp. Cincinnati OH Sept. 25th 1995.
- 43) "Endocyclic vs. Exocyclic Cleavage of Pyranosides", NATO Conference on Bioorganic Chemistry, Johnstown, PA. May 18th 1995.
- 42) "Catalysis of Glycosyl and Phosphoryl Transfers", Purdue University, May 1st 1995.
- 41) "A Phosphorane pK<sub>a</sub> Determined via Pulse Radiolysis", ACS Meeting, Anaheim CA, April 1995.
- 40) "Mechanistic Aspects of Supramolecular Catalysis", Syracuse University, Syracuse, NY, Jan. 24th 1995.
- 39) "Mechanistic Aspects of Supramolecular Catalysis", Clinical Diagnostic Systems Incorporated, Rochester N.Y. Jan. 26th 1995.
- 38) "Mechanistic Aspects of Supramolecular Catalysis", Rochester University, Rochester, NY, Jan. 27th 1995.
- 37) "Mechanistic Aspects of Supramolecular Catalysis", McGill University, Montreal, Quebec, Canada, Oct. 4th 1994.
- 36) "Mechanistic Aspects of Supramolecular Catalysis", University of Montreal, Montreal, Quebec, Canada, Oct. 5th 1994.
- 35) "Mechanistic Aspects of Supramolecular Catalysis", Sherbrooke University, Sherbrooke, Quebec, Canada, Oct. 3rd 1994.
- 34) "Mechanistic Aspects of Supramolecular Catalysis", Eli Lilly Corp. Indianapolis, IN, June 30th 1994.
- 33) "Mechanistic Aspects of Supramolecular Catalysis", University of Wisconsin, Madison, May 19th 1994.
- 32) "Artificial Restriction Endonucleases", Searle Scholars Conference, Chicago, May 16th 1994.
- 31) "Mechanistic Aspects of Supramolecular Catalysis", Massachusetts Institute of Technology, Boston MA. May 9th 1994.
- 30) "Mechanistic Aspects of Supramolecular Catalysis", Polaroid Corporation, Boston MA. May 6th 1994.
- 29) "Mechanistic Aspects of Supramolecular Catalysis", University of Illinois, Urbana-Champagne, IL. May 4th 1994.

- 28) "Mechanistic Aspects of Supramolecular Catalysis", University of Pennsylvania, Philadelphia Penn. May 2nd 1994.
- 27) "Mechanistic Aspects of Supramolecular Catalysis" Smith-Kline, Beecham, Philadelphia Penn. April 29th 1994.
- 26) "Mechanistic Aspects of Supramolecular Catalysis Stanford University", Palo Alto, CA. April 20th 1994.
- 25) MARION MERRILL DOW LECTURE "Mechanistic Aspects of Supramolecular Catalysis", University of California, Berkeley CA. April 19th 1994.
- 24) "Mechanistic Aspects of Supramolecular Catalysis", University of California, Los Angeles CA. April 14th 1994.
- 23) "Mechanistic Aspects of Supramolecular Catalysis", California Institute of Technology, Pasadena CA. April 13th 1994.
- 22) "Mechanistic Aspects of Supramolecular Catalysis", Texas A & M University, Dec. 9th 1993.
- 21) "Mechanistic Aspects of Supramolecular Catalysis", Alcon Corp. Dec. 8th, 1993.
- 20) "Organic Catalysts for RNA Hydrolysis", Genta Incorporation, San Diego, CA August 10th 1993.
- 19) "Catalysis of Phosphodiester Hydrolysis by Bis-Guanidinium Receptors", XVIII International Symposium on Macrocyclic Chemistry, University of Twente, Netherlands, July 1993.
- 18) "Polyazaclefts for Molecular Recognition and Catalysis", Strasbourg University, France, July 1993.
- 17) "Polyazaclefts for Molecular Recognition and Catalysis", University of Munich, July 1993.
- 16) "Phosphodiester Hydrolysis Catalysts", 76th Canadian Chemical Conference, Sherbrooke, Quebec, June 1993.
- 15) "Physical Organic Studies of Biological Relevance", NSF Reactive Intermediates Conference, Lake Tahoe, June 1993.
- 14) "Polyaza Clefts for Molecular Recognition and Catalysis", New York University, March 5th 1993.
- 13) "Phosphodiester Hydrolysis Catalysts", ICI Pharmaceuticals, March 8th 1993.
- 12) "Polyaza Clefts for Molecular Recognition and Catalysis", SUNY Stoney Brook, March 4th 1993.
- 11) "Polyaza Clefts for Molecular Recognition and Catalysis", Columbia University, March 3rd 1993.
- 10) "Molecular Recognition of Carbohydrates, Enolates, and Phosphodiesters", U.T. Arlington, Nov. 1992.
- 9) "Molecular Recognition of Carbohydrates, Enolates, and Phosphodiesters", Carnegie Mellon University, Nov. 1992.
- 8) "Complexation of Reactive Intermediates", XVII International Symposium Macrocyclic Chemistry, Provo, UT August 1992.
- 7) "Molecular Recognition of Carbohydrates, Enolates, and Phosphodiester", Hiroshima University, July 1992.
- 6) "Molecular Recognition of Carbohydrates, Enolates, and Phosphodiesters", Tokyo Institute of Technology, July 1992.
- 5) "General Acid Catalysts for Phosphodiester Cleavage", XIII International Symposium of Molecular Recognition and Inclusion, July 26th 1992, Kyoto Japan.
- 4) "Phosphodiester Receptors for a Variety of Solvents", Short Talk, Bioorganic Gordon Conference, Plymouth State College, June 1992.
- 3) "Polyaza Clefts for Molecular Recognition Purposes", University of Houston, April 3rd 1992.
- 2) "Synthesis of Polyazaclefts for Bioorganic Studies", Princeton University, April 26th 1991.
- 1) "Ribonuclease A Mimics", The University of Texas at Dallas, Nov. 31st 1990.

### **Research Support:**

# PAST SUPPORT

- 1. National Science Foundation, High Risk Research Program, "Mixed Valent Molecular Ferromagnets," 1990-1991, \$50,000
- 2. National Science Foundation, Post-Doctoral Research Supplement, "Carbohydrate Complexing Agents", 1989-1990, \$32,000.
- 3. Texas Advanced Technology Program "Degradation of Aromatic Pollutants by an Artificial Oxidase", 1989-1991, \$105,000.
- 4. Texas Advanced Technology Program "Molecular Recognition Driven Co-Facial Assembly of Metallomacrocycles", 1989-1991, \$125,000.
- 5. The Robert A. Welch Foundation (F-1151) "Selective and Asymmetric Catalytic Olefin Hydrogenation", June 1st 1989-May 31st 1992; \$75,000.
- 6. Searle Foundation "Artificial Restriction Endonucleases", March 1st 1991-Feb. 28th 1994 \$162,000. One-year extension granted.
- 7. Camille and Henry Dreyfus Foundation (NF-89-35) "Bioorganic Catalyst Development", Sept. 1st 1989-Aug. 31 1994, \$25,000.

- 8. Monsanto Corporation "Research Support Donation as Part of Presidential Young Investigator Program", \$10,000 1990.
- 9. Texas Advanced Technology Program, "Rationally Designed Degradation Enzymes for Aromatic Pollutants", 1992-1994, \$160,409 (Co-PI with Jon Robertus).
- 10. North Atlantic Treaty Organization "Receptors for Co-Factor Hydrolysis", 1993-1994, \$12,000 (Co-PI with Franz Schmitdehen in Munich, Germany).
- 11. National Science Foundation, Presidential Young Investigator Award (CHE-9057208) "Development of Artificial Enzymes", Nov. 1st 1990-Oct. 31st 1995, \$125,000 (base), \$375,000 (with matching funds).
- 12. National Institutes of Health "Carbohydrate Artificial Receptors and Mechanistic Probes", 1994-1997, \$270,000.
- 13. National Institutes of Health "Artificial Metallonucleases", 1994-1997, \$270,000
- 14. Texas Advanced Technology, "On-Line Sensors for the Analysis of Common Beverage Additives", 1998-2000, \$150,000.
- 15. National Institutes of Health "The Development of an Electronic Tongue" (E. Anslyn, PI: total for four groups), (E. Anslyn, PI: total for four groups) 1998-2001, \$783,008.
- 16. National Science Foundation NER Program "Molecular Duplex Formation" (M. Krische P.I., total for two groups), (M. Krische P.I., total for two groups), 2002-2004, \$100,000.
- 17. Army Research Office, MURI, "Texas Consortium for the Development of Biological Sensors", \$2,999,000 (A. Ellington, PI; total for 10 groups) 05/01/1999-04/30/2004.
- 18. Beckman Foundation Technologies Initiative "Center for the Design and Fabrication of Sensor Arrays", \$2,500,000 (J. Shear, PI; total for 8 groups) 7/99 6/04.
- 19. National Science Foundation "Artificial Metalloenzymes for RNA Hydrolysis", \$310,000, 9/01/00-8/30/03.
- 20. Department of Defense "Anion Receptors and Selectors", PI with Co-PI Jonathan Sessler, \$350,000, 2000-2003.
- 21. National Science Foundation, "Multi-Modal Miniature Microscopes", Rebecca Richard-Kortum, PI, with three Co-PIs, 303,000, 2000-2003.
- 22. National Institutes of Health "Further Development of the UT Electronic Tongue" (E. Anslyn, PI: total for four groups), (E. Anslyn, PI: total for four groups) 2002-2006, \$900,000.
- 23. National Institutes of Health "Model Studies of Low Barrier Hydrogen Bonds in Catalysis", 2002-2006, \$750,000.
- 24. National Institutes of Health "Micro-Array Analysis of Saliva" (PI with 7 other co-PI's), (PI with 7 other co-PI's), 2002-2006, \$4,000,000.
- 25. National Institutes of Health "The Molecular Recognition of Urine" 2005-2006, \$100,000.
- 26. Welch Foundation "TI-3D" 07/06/07-12/31/07, \$100,000.
- 27. Welch Foundation "Creating Configurationally Stable Phosphoranes" 06/01/07-05/31/10, \$150,000.
- 28. Henry Ford Health & Hosp Svcs "Sponsored Research" 06/01/07-05/31/10, \$80,000.
- 29. Beacon/Emergent "Chemically Induced Electron Exchange Luminescence(CIEEL)" 03/01/07-02/28/08, \$90,000.
- 30. NSF-DFG "Optical Methods for EE Analysis of Simple Carboxylic Acids" 09/01/06-08/31/10, \$429,00.
- 31. Welch Foundation "Peptides as Differential Sensors" 06/01/07-05/31/10", \$150,000.
- 32. DARPA "Discovery of Functional Block Copolymers Through Single Molecule Sequencing" 09/01/14-08/31/18, \$1,154,631.
- 33. DTRA "Rapid, Selective, and SEsnitive Sensors for Nerge Agents" 09/01/15-08/31/18, \$439,223

### **CURRENT SUPPORT**

Funding	Project Title	Project	Total	Annual	PI
Agency		Period	Project	Project	or
			Amount	Amount	Co-I
	New Chemical Tools to Synthesize and	10/01/2017 -			
ARMY	Characterize Sequence-Defined Polymers	09/30/2020	\$234,282	\$117,141	PI
	Sensor Arrays Based on Molecularly				
	Imprinted Polymers for Diagnosis of Sjogren's	04/01/2016 -			
NIH	Syndrome	06/30/2021	\$679,594	\$135,919	Co-I
	Further Improving and Utilizing HTS	12/01/2017 -			
NIH	Methods for EE Determinations	11/30/2021	\$1,374,904	\$377,305	PI
	Center for Dynamics and Control of Materials	09/01/2017 -			
NSF MRSEC	- IRG 1	08/31/2023	\$2,599,999	\$95,500	Co-I
	GOALI: Utilizing Rapid Assays for				
	Determining Enantiomeric Excess and	06/01/2017 -			
NSF	Catalyst Discovery in Pharma	05/31/2021	\$450,000	\$150,000	PI

	Accelerating Professional Development for	01/01/2018 -			
HHMI	Undergraduate Science Majors	12/31/2023	\$1,500,000	\$93,985	Co-I
	Applications of Single Molecule Protein	04/01/2018 -			
ERISYON SRA	Sequencing	03/31/2021	\$145,169	\$92,760	Co-I

### Past Students and Post-doctoral Associates and Current Positions

Christine Hannon (MS) Marietta Corporation (Cortland, NY)

Colin Kubarych (MS) Private Mountain Climbing Instructor, Austin TX

Dr. Aaron Wright (Phd) PNNL

Dr. Adrian Bisson (PD)

BFF Technical Fabrics (Taunton, UK)

Dr. Akin Davulcu (MS)

Bristol Meyers Squibb (New Brunswick, NJ)

Dr. Alexandra Gade (Phd) Focus Forward (Cleveland, OH)

Dr. Alona Umali (PD) ATMI, Inc. (Burnet, TX)

Dr. Amanda Hargrove (Phd)

Dr. Amber Johnson (PD)

Dr. Andrew Hughes (Phd)

Assistant Professor, Duke University

Eurofins Lancaster Laboratories

Dow Chemical (Springhouse, PA)

Dr. Anna Piatek (PD) Professor, University of Warsaw (Poland)
Dr. Anne Kelly-Rowley (Phd) Dow Chemical Company. Midland, MI

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National Research Council Canada

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Rice University, Tech Transfer Office

Dr. Chia-yu Huang (Phd)

Venenum Biodesign (Trenton, NJ)

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Dr. Eric Hernandez (Phd) Harvard University

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Dr. Leo Joyce (Phd) Merck Pharmaceuticals (Rahway, NJ)

Dr. Mao-Sen Yuan (PD) Professor, Northwest A&F University (China)

Dr. Marc Maynor (PD) Deceased

Dr. Marco Bonizzoni (PD) Professor, University of Alabama

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