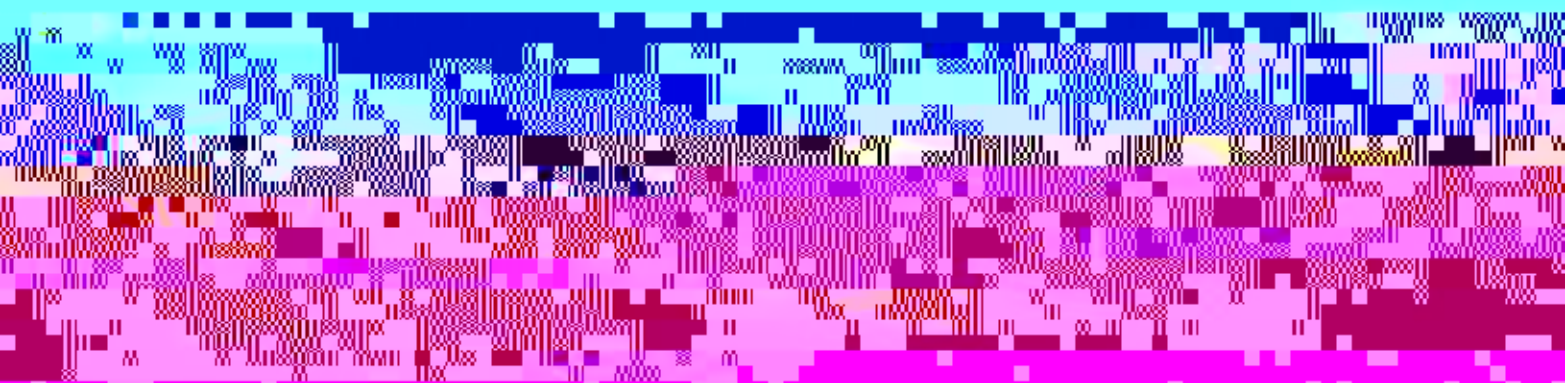
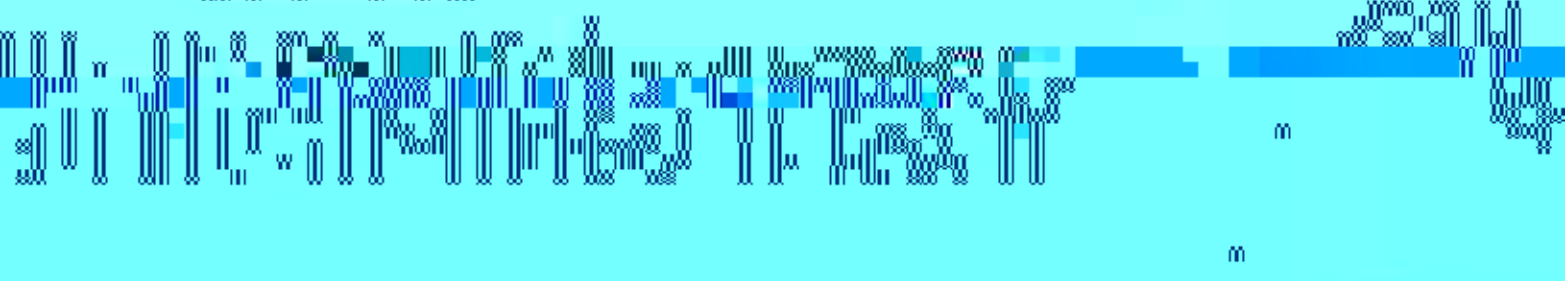
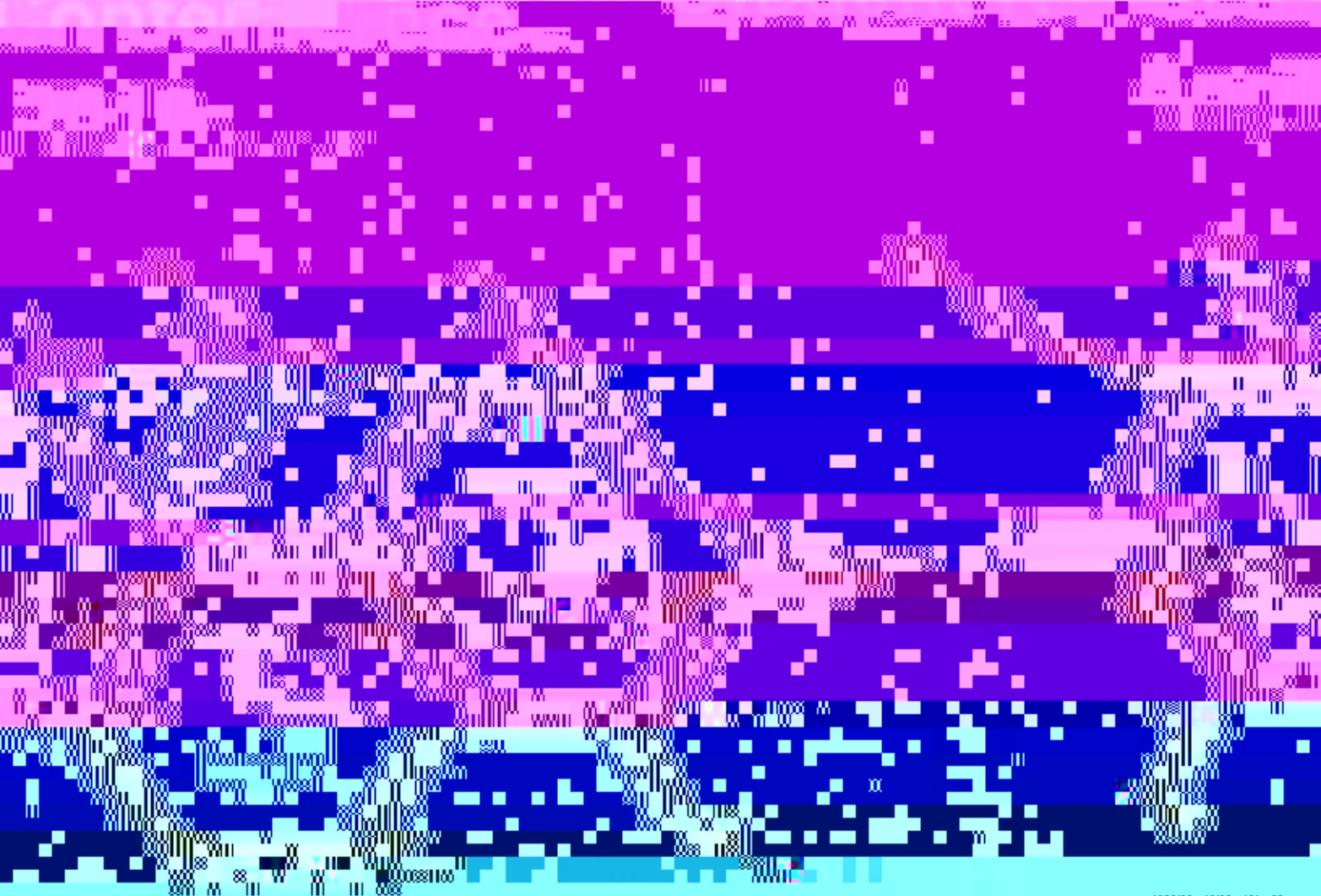


4th Raymond N. Cadi

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8th Raymond N. Castle Student Research Conference

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Welcome from the Castle Committee

Dear Colleagues and Friends,

Welcome to the 8th Raymond N. Castle Student Research Conference. In honor of Dr. Raymond N. Castle, this conference was created to promote his goals of scientific collaboration and science education.

The Raymond N. Castle Student Research Conference continues to be organized by students for students as an excellent opportunity for undergraduate and graduate chemistry students to share scientific ideas and research progress. Students are encouraged to not only gain presentation experience, but to use the conference as a chance to further their research endeavors by gaining valuable feedback from other members of the chemistry community. It is this interaction and the sharing of ideas that makes the Raymond N Castle Student Research Conference a worthwhile experience and a continued success.

We are especially proud of the research done by all students in the department, both graduate and undergraduate. Today, we have an opportunity to hear from over 100 students and our special guest, Dr. Lyle W. Castle. We encourage everyone to take advantage of this occasion and attend both the poster and oral presentations, especially the Plenary Lecture. We are honored and greatly appreciative that Dr. Lyle W. Castle is able to return to USF and speak at the conference in honor of his father.

Lastly, we would like to thank all members of the Chemistry Department that chose to volunteer their time and efforts, particularly the judges and Dr. Patricia Muisener and Dr. Brian Space for helping us plan and coordinate this year's conference. We are grateful for the financial support that allows us to host this conference and owe special thanks to the University of South Florida College of Arts and Sciences, the Tampa Bay Section of the American Chemical Society, and the multiple sponsors and affiliates who have generously contributed to this event. Most importantly, this conference would not exist without the efforts of those of you presenting your research today. Therefore, we gratefully acknowledge you and your research advisors, as well as all in attendance. Thank you all, and we hope you enjoy and learn from the 8th Raymond N. Castle Student Research Conference.

Sincerely,

The Castle Conference Committee

8th Raymond N. Castle Student Research Conference Committee

Committee Members:

Todd Gatlin (Co-Chair)
Christi Whittington Young (Co-Chair)
Biplob Bhattacharya
Christian Cioce
Kimberly Fields
Joseph Gill
Priyesh Jain
Chungsik Kim
William Maza
Sreya Mukherjee
Meagan Small
Melissa (Missy) Topper
Carissa Vetromile
Justin White
Tarah Word
Xue (Snow) Xu
Mingzhou Zhou

Faculty Advisors:

Dr Patricia Muisener
Dr Brian Space

Web Support:

Tony Green

Schedule of Events


Saturday, April 17, 2010

<u>Time</u>	<u>Event</u>
8:00-8:30	Welcome Session - Registration and Breakfast NES Lobby
8:30-8:45	Castle Conference Introduction CHE 100
8:45-11:30	Morning Session – Graduate Student Oral Presentations CHE 100
11:30-11:45	Break
11:45-12:45	Plenary Speaker – Dr Lyle W Castle CHE 100
12:45-1:45	Lunch NES Lobby
1:15-2:45	Poster Session – Graduate and Undergraduate Presentations NES Hall and Classrooms
2:45-3:00	Break
3:00-5:45	Afternoon Session – Graduate Student Oral Presentations CHE 100
5:45-6:00	Break
6:00-6:15	Awards Ceremony CHE 100

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Tampa, FL 33620

Affiliates



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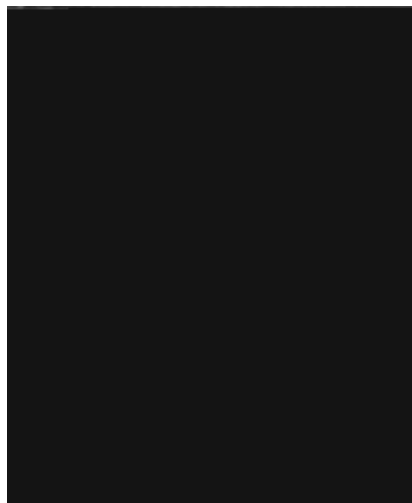
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Professor Raymond N. Castle

1916 – 1999



Raymond N. Castle was born on June 24, 1916 in Boise, Idaho where he attended Boise High School and Boise Junior College. A 1938 graduate in Pharmacy from the University of Idaho, Southern Branch in Pocatello, he completed the M.A. degree in Chemistry at the University of Colorado at Boulder in 1941. Shortly thereafter, he became a Chemistry instructor at the University of Idaho and then in 1943, returned to the University of Colorado in Boulder for a Ph.D. in Chemistry with a minor in Microbiology. After two years as a research chemist at the Battelle Memorial Institute in Columbus, Ohio, Dr. Castle accepted a position at the University of New Mexico as an Assistant Professor of Chemistry. He served as Chairman of the Chemistry Department from 1963 until 1970 before moving to Brigham Young University as Professor of Chemistry.

In 1981, Dr. Castle joined the faculty at University of South Florida as a Distinguished Research Professor. He and his wife, Ada, were a vibrant part of the Chemistry Department and for many years sponsored the Castle Lecture Series, which brought in numerous prominent scientists for lectures at USF.

A prolific researcher, Dr. Castle was an internationally recognized father figure in heterocyclic chemistry, both for his research and his involvement in meetings, symposia, and editorial boards. In 1964, he founded the *Journal of Heterocyclic Chemistry* and served as its editor. He also edited the *Lectures in Heterocyclic Chemistry* series, a publication of plenary lectures given at the International Congresses of Heterocyclic Chemistry, and was the American advisory editor for

Dr. Lyle W. Castle

Plenary Speaker



Dr. Lyle Castle earned a Bachelor's degree in Chemistry from Southern Utah University, a Master's degree from the University of Nebraska and a Doctoral degree in Organic Chemistry from the University of South Florida in 1992, working under the direction of Dr. Milton Johnston Jr. Dr. Castle joined the Chemistry Faculty at Idaho State University in 1994, and currently serves as Professor and Dean of Academic Programs at Idaho State University – Idaho Falls. He was appointed Dean of Academic Programs in Spring 2008. ISU – Idaho Falls currently serves nearly 3,000 students and places strong emphasis on science and engineering programs.

Throughout his career, Dr. Castle's research has largely focused on organic and organometallic synthesis, with special interest in the synthesis of heterocyclic compounds. Recent work involved the synthesis and characterization of heterocyclic compounds with potential application as photosensitizers for solar energy conversion devices. He has published numerous works in the field of heterocyclic chemistry and was named Cambridge's Who's Who in Professional of the year in Heterocyclic Chemistry in 2006.

Along with research, Dr. Castle has dedicated much time and effort towards teaching and preparing students for future careers in the sciences. He previously acted as Principal Investigator for an NSF funded grant to introduce FTNMR techniques and experiences into the general chemistry curriculum.

In September 1999, Dr. Castle took over as CEO and President of Hetero Corporation, and Editor-in-chief

Ylide Chemistry via Co(III) Corroles: Axial Ligand Effect of N-H Insertion Reactions with Diverse Diazocompounds

Mingzhou Zhou

The Design and Synthesis of Non-Peptidic α -helix Mimics Targeting MDM2-P53 Protein-Protein Interaction

Mike McIntosh

Elucidating the Reaction Mechanism and Electrochemical Behavior of Ellagic Acid, a Natural Polyphenolic Antioxidant

Sridhar Reddy Kaulagari

Design and Synthesis of Novel Phospho-Tyrosine Mimetics

Jingran Tao

Cobalt(II) Porphyrin Catalyzed Intramolecular C-H Amination Reaction with Carbonyl Azides

Break

Priyesh Jain

Design and Synthesis of Novel Cyclic III Peptide as β 1 Integrin Inhibitor

Seongmin Hong

Gold Nanoparticles, Effect Substrates of Surface Enhanced Raman Spectroscopy

Jeremy Beau

Investigations of Antimalarial and Antibiotic Compounds from Mangrove Endophytes

Gajendra Ingle

Graduate Talks Afternoon Session (CHE 100)

Roger Bass

Self-Healing Shape-Memory Polymers (IT/P 430)

Jeremy Beau¹, Hoangmy Chau¹, Nida Mahid¹, Lindsey Shaw², Tina Mutka³, Dennis E. Kyle³, and Bill J. Baker³

Investigations of Antimalarial and Antibiotic Compounds from Mangrove Endophytes

Gajendra Ingle¹, Y Liang¹, M Mormino¹, Jon Antilla¹

Chiral BIF4.7 13.Ørida

Mu Seong Kim¹, Julie Harmon¹

Dielectric Analysis of PHEMA and PMMA Composites with OC12 Nanoball

α β γ ϵ ϵ

William Maza¹, Xin Cui¹, Chungsik Kim¹, X Peter Zhang¹, Randy W Larsen¹

Ion Sensing Using a Novel Functionalized Metalloporphyrin: Spectroscopic Studies of Nitrite/Nitrate Binding to Zn(II)[3,5-DitBu-IbuPyrin]

The Barbara and Dean F Martin Graduate Poster Session

Analytical, Chemical Education, and Physical (NES North Hall)

_____ Christi Young¹, Alfredo Cardenas²

Analysis of Molecular Dynamics Simulations of Influenza A NS1 RNA Binding Domain

_____ Todd Gatlin¹, Santiago Sandi-Ureña¹

_____ Wen-shan Chang¹, Megan Small¹, Dean F Martin¹

Use of Model Compounds to Study Removal of Pharmaceuticals Using Octolig[®]

_____ Cynthia Nwachukwu^{1,3}, Nathan Gallant^{2,3}

Electrospun BSA Nanofibers: Integrin Binding with Fibronectin, Focal Adhesion Component and Cell Adhesion Strength

Parul Jain¹, Niloofar Ghazi-Moghaddam¹, Julie P Harmon¹

Bioorganic, Natural, and Organic (NES South Hall)

_____ Wai Sheung Ma¹, Tina Mutka², Dennis E Kyle^{2,3}, Lilian Vrijmoed⁴, Bill J Baker^{1,3}

_____ Tao Liang¹, Jon Antilla¹

Brønsted Acid Catalyzed Enantioselective Pinacol Rearrangement

_____ Biplob Bhattacharya¹, Silvia Robles¹, Edward Turos¹

N-Thiolated β -Lactams: Altering Microbiological Activity and Bacterial Cell Targeting with C3 Ring Functionality

β

β

β

_____ Sameer Kulkarni¹, Niranjan Namelikonda¹, Xiangdong Hu¹, Kenichiro Doi², Hong-Gang Wang², Roman Manetsch¹

Kinetic Target Guided Synthesis for the Identification of Bcl-XL-protein Interaction Modulators

_____ Kurt Van Horn¹, Anuradha Srivastava¹, Dennis Kyle², Roman Manetsch¹

Anti-leishmanial Activity of a New Series of Quinazolines

Roman Manetsch¹

nis Kyle²,

The Development and Use of an HPLC-based Assay to Determine Aqueous SolubiCollege/TT0 1 Tf-0.0005 Tc 044.ellular

The Clear Springs Land Undergraduate Poster Session

Analytical and Biochemical (NES 106)

_____ Rebecca Burt¹, Kimberly Fields¹, Whitney Burda², Natasa Dragicevic², Cynthia Bucher³, Alberto van Olphen³, Patrick Bradshaw², Lindsey Shaw², Peter Zhang¹

Biomedical Applications of Porphyrins and Small Molecules

_____ Nishal Patel¹, Erica B Turner¹, Abdul Malik¹

Sol-Gel Mixed Germania-Silica Poly(ethylene glycol) Monoliths for Capillary Microextraction Coupled to

_____ Christopher Lizardi¹, Eileen Schulman¹, Bryan Vo¹, Darius Wynn¹, Dean F Martin¹

Removal of Selected Nuisance Anions by Octolig[®]

_____ Robin Fulton¹, Abdullah Alhenda¹, Abdul Malik¹

Preparation of a Polar Hybrid Organic-Inorganic Germania-based Coating for Capillary Microextraction by Sol-gel Chemistry

_____ Lorenzo Rodriguez¹, Dean F Martin¹

Removal of Lithium from Solutions Using Octolig®

_____ Jorge Vega¹, Sharon Spencer¹, Brent Hilker¹, Julie P Harmon¹

¹Department of Chemistry, Univ

Blister Agent Analog Sequestration using Porphyrins and Polymer Hydrogels

_____ Sibel Demirel¹, Daniel Leyva¹, Ruben Durand¹, Vicky Lykourinou¹, Li-June Ming¹

Mechanistic Studies of Catalytic Activity of Cu(II)-Bound Copolymers in Oxidation of Catechols, DNA Cleavage and Modeling of Antioxidant Activity of Natural Products

_____ Anna Cardwell¹

Natural Product Cocrystals

Organic (NES 104)

_____ Petoria Gayle¹, Sameer Kulkarni¹, Xiangdong Hu¹, Hong-Gang Wang², Roman Manetsch¹

Protein-Protein Interaction Modulators & Role of Target Guided Synthesis

____ Mijal Guevara¹, Carolina Lopez¹, Ali Hussain¹

Formation of Bridged-Resorcinarene: Tetrabromoresorcinarene

____ Rosemary Persaud¹, Jason Cuce¹, Bill J Baker^{1,2}

Isolation and Further Chemical Investigation of Ecdysteroids from Synoicum Adareanum

____ Hoangmy Chau¹, Jeremy Beau¹, Bill Baker¹

Isolation and Chemical Extraction of Endophytes from Rhizophora Mangle for Bioactivity against S. aureus

_____ Ryan Baker¹, Charles Harter¹, Matt Lebar¹, Raymond Chowmond³, Tina Mutka², Dennis Kyle², Cedric Pearce⁴, Lilian Vrijmoed³, Bill Baker¹

Antimalarial Constituents of Fungi

_____ Jayesh Gopal¹, Bill J Baker¹, Matthew Lebar¹

Florida Marine Tunicates

____ Tony Kurian¹, Jeremy Beau¹, Dennis Kyle², Bill J Baker¹

Isolation of Endophytic Fungi from Exostema Cari

—

Steven Austin¹, Jeremy Beau¹, Bill J Baker¹

