New York's American Chemical Society – Student Activities Committee
64th Annual Undergraduate Research Symposium
Lehman College
Bronx, NY
Saturday, May 7, 2016

8:00	**Registration and Continental Breakfast**	**Lobby, Music Building**
9:00	**Welcoming Remarks**	**Faculty Dining Hall, Music Building**
	Dr. Paul Sideris	Co-Chair, NY ACS, Student Activities Committee
	Dr. Naphtali O'Connor	NY ACS, Student Activities Committee
	Dr. Anny Morrobel-Sosa	Provost, Lehman College
	Dr. Alison Hyslop	2016 Chair, NY ACS
9:20	**Keynote Address**	**Faculty Dining Hall, Music Building**
	Dr. Scott D. Edmondson	**Merck and Co. Inc.**

Stories of Drug Discovery: Discovery of Januvia™ (Sitagliptin) For Diabetes And Vibegron For Overactive Bladder

10:20	**Dr. Paul Sideris**	**Instructions for the day**
10:30	**Group Photo**	**Lawn**
11:00	**Presented Papers** Analytical Chemistry Biochemistry Chemical Education Environmental/Green Chemistry Inorganic Chemistry Nano and Surface Chemistry Organic Chemistry Physical Chemistry Polymer Chemistry	**Carman Hall**
12:40	**Luncheon / Award Reception**	**Faculty Dining Hall, Music Building**
1:25	**Presentation of Certificates**	
	Dr. Ipsita Banerjee	Co-Chair, NY ACS Student Activities Committee
	Dr. Meredith Foley	Co-Chair, NY ACS Student Activities Committee
1:45	**Ice Cream Social** **Raffle** (including a Kaplan Test Prep Package valued at more than $2K)	**Faculty Dining Hall, Music Building**

SESSION MODERATORS

Moderator	Representing	Room	Section
Binh Nguyen	CUNY, Lehman	CA-227	Analytical Chemistry I
Serina Kennebrew	CUNY, Queensborough	CA-227	Analytical Chemistry I
Carlisa Pena	CUNY, Lehman	CA-231	Analytical Chemistry II
Sitora Firdavsi	CUNY, Queensborough	CA-231	Analytical Chemistry II
Karen Lau	CUNY, Lehman	CA-233	Analytical Chemistry III/Edu.
Rawlric Sumner	CUNY, Queensborough	CA-233	Analytical Chemistry III/Edu.
Linda Kontoh	CUNY, Lehman	CA-311	Biological Chemistry I
Jacqueline Sarmiento	CUNY, Queensborough	CA-311	Biological Chemistry I
Madeline Wong	CUNY, Lehman	CA-312	Biological Chemistry II
Abdullah Allaoa	CUNY, City Tech	CA-312	Biological Chemistry II
Sana Batool	CUNY, Lehman	CA-313	Biological Chemistry III
Andrew Wills	CUNY, City Tech	CA-313	Biological Chemistry III
Shanell George	CUNY, Lehman	CA-315	Biological Chemistry IV
Brittiny Dhital	CUNY, City Tech	CA-315	Biological Chemistry IV
Tarialy Hernandez	CUNY, Lehman	CA-317	Biological Chemistry V
Elizabeth Rosenzweig	CUNY, City Tech	CA-317	Biological Chemistry V
Torffic Hassan	CUNY, Lehman	CA-235	Green Chemistry I
Manuela Hoyos	CUNY, City Tech	CA-235	Green Chemistry I
Victoria Olaseun	CUNY, Lehman	CA-237	Green Chemistry II
Miguel Andres Gomez	CUNY, City Tech	CA-237	Green Chemistry II
Nabeela Van	CUNY, Lehman	CA-348	Inorganic Chemistry I
Nadia Okyere	CUNY, City Tech	CA-348	Inorganic Chemistry I
Charles Seaks	Fordham University	CA-349	Inorganic Chemistry II
Andrew Ramirez	CUNY, York	CA-349	Inorganic Chemistry II

SESSION MODERATORS

Moderator	Representing	Room	Section
Louis Moskovitz	Fordham University	CA-322	Nano/Surface Chemistry I
Chanika Allison	CUNY, York	CA-322	Nano/Surface Chemistry I
Patrick Jennings	Fordham University	CA-323	Nano/Surface Chemistry II
Karishma Sookraj	CUNY, York	CA-323	Nano/Surface Chemistry II
Alexander Ng	St. John's University	CA-324	Nano/Surface Chemistry III
Ezer Castillo	Adelphi University	CA-324	Nano/Surface Chemistry III
Evens Esperance	CUNY, Queensborough	CA-325	Nano/Surface Chemistry IV
Alexis Chinn	St. John's University	CA-325	Nano/Surface Chemistry IV
Alisha Memon	St. John's University	CA-330	Organic Chemistry I
Nguyen Le	Adelphi University	CA-330	Organic Chemistry I
Coral Pichardo	St. John's University	CA-331	Organic Chemistry II
Rochile Khan	Adelphi University	CA-331	Organic Chemistry II
Eric Yeung	St. John's University	CA-332	Organic Chemistry III
Izidora Bozic	St. John's University	CA-332	Organic Chemistry III
Justin Melendez	St. John's University	CA-333	Organic Chemistry IV
Savanah Valenzuela	St. John's University	CA-333	Organic Chemistry IV
Chheten Sherpa	CUNY, York	CA-245	Physical Chemistry
Yifu Zhu	St. John's University	CA-303	Polymer Chemistry

ANALYTICAL CHEMISTRY I

Room: Carman Hall CA-227 **Moderator(s):** Binh Nguyen/Serina Kennebrew

11:00 REFRACTIVE INDEX OF MALONIC ACID MEASURED BY ZOOM-IN METHOD. Brian Um and Jun H. Shin Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:15 DETERMINATION OF THE REFRACTIVE INDEX OF BENZOIC ACID MEASURED BY EXTENSION METHOD. Ha Eun Kim and Jun H. Shin Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:30 THERMODYNAMIC STUDY OF ESTERIFICATION USING A MICROWAVE REACTOR. Hyeon Yun and Jun H. Shin Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:45 DETERMINATION OF THE TOTAL AMOUNT OF ANTIOXIDANTS VIA THE FOLIN CIOCALTEAU METHOD. Julie Leong, Margaret de los Santos, Pedro Irigoyen, Soraya Svoronos and Paris Svoronos Department of Chemistry, Queensborough Community College, Bayside, NY 11364

12:00 THE DETERMINATION OF GALLIC ACID PRESENT IN JUICE AND TEA BEVERAGES USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY. Margaret de los Santos, Julie Leong, Tian Xu, Soraya Svoronos and Paris Svoronos Department of Chemistry, Queensborough Community College, Bayside NY 11364

ANALYTICAL CHEMISTRY II

Room: Carman Hall CA-231 **Moderator(s):** Carlisa Pena/Sitora Firdavsi

11:00 DETERMINATION OF THE IONIZATION CONSTANT OF WEAK CARBOXYLIC ACIDS USING MISCROSCALE FREEZING POINT DEPRESSION MEASUREMENTS. David Kwun, Bruce Montalbano and Paris Svoronos Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:15 PREPARATION AND CHARACTERIZATION OF SILICA-PORPHYRIN-LIPOSOMES FOR SELECTIVE PHOTODYNAMIC THERAPY. German Fuentes, Eric Doucet, Ronald Spinelle and Ruomei Gao Department of Chemistry and Physics, State University of New at Old Westbury, Old Westbury, NY 11568

11:30 PARTICLE SIZES AND SINGLET OXYGEN PRODUCTION OF SILICA-PORPHYRIN–LIPOSOMES. Eric Doucet, Allison Abraham, Michael Quinones, Penelope Riascos, German Fuentes, Ronald Spinelle, and Ruomei Gao Chemistry and Physics Department, SUNY College at Old Westbury, Old Westbury, NY 11568

11:45 CARBON DIOXIDE HYDROGENATION TO VALUE-ADDED CHEMICALS OVER A PALLADIUM-BASED HETEROGENEOUS CATALYST. Susanna Mirabelli and Cheng Zhang Department of Chemistry, LIU Post College of Liberal Arts and Science, Brookville NY, 11548

12:00 DETERMINATION OF THE PIGMENT COMPOSITION IN THE BUTTERFLY SPECIES ELYMNIAS HYPERMNESTRA BALIENSIS. Erisa Gjinaj, Silvio Panettieri, David J. Lohman and George John Department of Chemistry, The City College of New York, New York, NY 10031

ANALYTICAL CHEMISTRY III/CHEMICAL EDUCATION

Room: Carman Hall CA-233 **Moderator(s):** Karen Lau/Rawlric Sumner

11:00 PHOSPHOPROTEOMICS OF HUMAN IMMUNODEFICIENCY VIRUS-1. Manjeet Kaur, Lois Anti, Katerina Murtazaeva, Jennifer Michel, Meyr Yousupov, Pratik Kumar Rathod and Emmanuel Chang Department of Chemistry, York College-CUNY, New York, NY 11419

11:15 ELECTROCHEMICAL AND PHOTOELECTROCHEMICAL INVESTIGATIONS OF GC|PIN-5-COOH|CDS|TYROSINASE SYSTEM FOR THE CATALYSIS OF REDOX REACTIONS IN PHENOLIC COMPOUNDS. Diana Chaykina,[1] Sophia King,[1] Magdalena Osial,[2] Justyna Widera[1] and Krystyna Jackowska[2] [1]Department of Chemistry, Adelphi University, Garden City, NY 11530 [2]Faculty of Chemistry, University of Warsaw, 1 Pasteura Street, Warsaw, Poland

11:30 SYNTHESIS AND DELITHIATION OF $LIMN_{2-X}AL_XO_4$ (X= 0.25, 0.5. 0.75). Apegnadjro Koffi and Therese Soosaraij Chemistry and Chemical Technology Department, Bronx Community College – CUNY, Bronx, NY 10453

11:45 SEQUENCE REQUIREMENTS FOR FOX-4 AMPYLATION. Anastasia Brodovskaya and Scott Lefurgy Department of Chemistry, Hofstra University, Hempstead, NY 11549

12:00 A PRACTICAL SYNTHESIS OF ALPHA AND BETA IONONE. Saif Kaleem and James V. McCullagh Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471

BIOLOGICAL CHEMISTRY I

Room: Carman Hall CA-311 **Moderator(s):** Linda Kontoh/Jacqueline Sarmiento

11:00 TOWARDS THE CHEMO-ENZYMATIC SYNTHESIS OF THE HEPTAPEPTIDE ANTIBIOTIC COMPLESTATIN: INVESTIGATING THE ROLE OF THE P450 OXYGENASES COMI AND COMJ IN ARYL LINKAGE FORMATION. Aurelio Mollo, Joshua Bulos, A. Nikolai von Krusenstiern, and Louise Charkoudian, Department of Chemistry, Haverford College, PA 19041

11:15 DEVELOPMENT OF A PROTEIN–BASED FERROFLUID FOR THERANOSTIC APPLICATION. Teeba Jihad,[1] Sumayya Vawda,[1] Che Fu Liu,[1] Lindsay K. Hill[1,2] and Jin K. Montclare[1,2,3] [1]Department of Chemical and Biomolecular Engineering, New York University Tandon School of Engineering, Brooklyn, NY 11201 [2]Biomedical Engineering, SUNY Downstate Medical Center, Brooklyn, NY 11203 [3]Department of Chemistry, New York University, New York, NY 10003

11:30 SYNTHESIS AND STABILIZATION OF A PROTEIN- BASED BIOMATERIAL FOR DURG DELIVERY. Sumayya Vawda,[1] Lindsay K. Hill,[1,2] Che Fu Liu,[1] Teeba Jihad,[1] and Jin Kim Montclare[1,2,3] [1]Department of Chemical and Biomolecular Engineering, New York University Tandon School of Engineering, Brooklyn, NY 11201 [2]Biomedical Engineering, SUNY Downstate Medical Center, Brooklyn, NY 11203 [3]Department of Chemistry, New York University, New York, NY, 10003

11:45 SMALL MOLECULE ENCAPSULATION IN THE COILED-COIL DOMAIN OF CARTILAGE OLIGOMERIC MATRIX PROTEIN FOR THE TREATMENT OF OSTEOARTHRITIS. Nicole L. Schnabel,[1] Liming Yin,[1] Albert S. Agustinus,[1] Takeshi Minashima,[2] Thorsten Kirsch[2] and Jin K. Montclare[1,3,4] [1]Department of Chemical and Biomolecular Engineering, NYU Tandon School of Engineering, Brooklyn, NY 11201 [2]Hospital for Joint Diseases, NYU Langone Medical Center, New York, NY 10003 [3]Department of Chemistry, New York University, New York, NY, 10003 [4]Department of Biochemistry, SUNY Downstate Medical Center, Brooklyn, NY, 11203

12:00 DIFFERENTIAL DEPHOSPHORYLATION OF EGFR BY PTP1B. Leidy Gomez, Aileen Espinal and Youngjoo Kim Department of Chemistry & Physics, SUNY College at Old Westbury, Old Westbury, NY 11568

BIOLOGICAL CHEMISTRY II

Room: Carman Hall CA-312 **Moderator(s):** Madeline Wong/Abdullah Allaoa

11:00 PRELIMINARY STUDIES ON THE INTERACTION OF SUGAR-LINKED DYES AND A DRUG CARRIER PROTEIN. Alexandra DePasquale and Diana Samaroo Department of Chemistry, CUNY – NYC College of Technology, Brooklyn, NY 11201

11:15 EXPANDING THE SUBSTRATE SPECIFICITY OF OCTOPINE DEHYDROGENASE FROM BAY SALLOPS. Diego J. Prado, Maureen Krause and Scott T. Lefurgy Department of Chemistry, Hofstra University, Hempstead, NY 11549

11:30 STRUCTURE-FUNCTION RELATIONSHIPS IN FOX-4 CEPHAMYCINASE. Angelika Rafalowski and Scott Lefurgy Department of Chemistry, Hofstra University, Hempstead, NY 11549

11:45 BUILDING CEFOXITIN RESISTANCE INTO P99 CEPHALOSPORINASE. Jennifer Musumeci and Scott Lefurgy Department of Chemistry, Hofstra University, Hempstead, NY 11549

12:00 MODULATION OF PEA-15 BINDING SPECIFICITY BY PHOSPHORYLATION AND POSSIBLE ROLES OF CHARGE- TIRAD RESIDUES IN MEDIATING CONFORMATIONAL CHANGES. Victor Leon, Chanel Wright and Yufeng Wei Department of Chemistry, New Jersey City University, Jersey City, NJ 07305-1597

BIOLOGICAL CHEMISTRY III

Room: Carman Hall CA-313 **Moderator(s):** Sana Batool/Andrew Wills

11:00 POTATO WOUND-HEALING TISSUES: A RICH SOURCE OF NATURAL ANTIOXIDANT MOLECULES FOR FOOD PRESERVATION. Isabel Wang, Keyvan Dastmalchi and Ruth E. Stark Department of Chemistry and Biochemistry, The City College of New York, New York, NY 10031

11:15 IN-VITRO SELF ASSEMBLY OF METABOLITES FROM POTATO WOUND TISSUE EXTRACTS. Stephan Smith, Keyvan Dastmalchi and Ruth E. Stark, Department of Chemistry and Biochemistry, The City College of New York, New York, NY 10031

11:30 AMYLOID FORMATION OF HIAPP12-18. Harunur Roshid, Gabriela Arias, Kendra Ceci and Ruel Desamero Department of Chemistry, CUNY York College, Jamaica, NY 11451

11:45 DESIGNING BISPECIFIC APTAMERS FOR INCREASED STABILITY IN HUMAN SERUM. George E. Maio,[2] Hasan E. Zumrut,[1] Prabodhika Mallikaratchy[1,2] [1]Biochemistry PhD Program, City University of New York, The Graduate Center, New York, NY 10016 [2]Department of Chemistry, City University of New York: Lehman College, Bronx, NY 10468

12:00 STUDYING HUMAN IRE1ALPHA CONFORMATIONAL CHANGES IN RESPONSE TO MUTATIONS OF KEY RESIDUES USING MD SIMULATIONS. Gabriela Witek, Michael Tong, Markus Seeliger and Carlos Simmerling Department of Pharmacology, Stony Brook University, Stony Brook, NY, 11790

12:15 EXAMINING THE BIOCHEMICAL EFFECT OF ANTI-PHOSPHOLIPID ANTIBODY BINDING ON MICRORNA EXPRESSION AND REGULATION OF TISSUE FACTOR IN BREAST CANCER CELL LINE. Irene Sun,[1] Elaine Lin,[2] Regina Sullivan[1] and Andrew Van Nguyen[1] [1]Department of Biological Sciences and Geology, The City University of New York - Queensborough Community College, Bayside, NY 11364 [2]Cell, Developmental & Cancer Biology, Oregon Health & Science University, Portland, OR 97239-3098

BIOLOGICAL CHEMISTRY IV

Room: Carman Hall CA-315 **Moderator(s):** Shanell George/Brittiny Dhital

11:00 EFFECTS OF CIS AND TRANS DOUBLE BONDS ON LIPID MEMBRANE PROPERTIES. Jacqueline Denver, Alessandra Armetta and Sunghee Lee Department of Chemistry, Iona College, New Rochelle, NY 10801

11:15 PHOSPHOPROTEOMICS OF HUMAN IMMUNODEFICIENCY VIRUS-1. Lois Anti, Pratikkumar Rathod, Manjeet Kaur and Emmanuel Chang Department of Chemistry, CUNY-York College, Jamaica, NY 11451

11:30 USING DIFFERENT COMPUTATIONAL AND EXPERIMENTAL SPECTROSCOPIES TO DEMONSTRATE PHOSPHATE AND METAL INTERACTION AT DIFFERENT PHS. Roksana Azad, Muhaned Mohamed, Pamela Lebrón, and Ruel Z.B. Desamero Department of Chemistry, CUNY-York College, Jamaica, NY 11451

11:45 A HYBRID ASPIRIN THAT RELEASES NITRIC OXIDE AND HYDROGEN SULFIDE, MODULATES GLUTAMATE RECEPTORS IN THE BRAIN. Michael Olufawo,[1] Christopher Chan[2] and Niharika Nath[1] [1]Department of Life Sciences, New York Institute of Technology, New York, NY 10023 [2]Department of Physiology and Pharmacology, Sophie Davis School of Biomedical Education, City University of New York, NY 10031

12:00 SIGNIFICANCE OF HEAVY METAL ATPASE 3, GLUTATIONE, AND PHYTOCHELAIN IN CADMIUM DETOXIFICATION IN ORYZA SATIVA. Yardley Martinez,[1] Michael Tavarez[2] and Renuka Sankaran[3] [1]Bronx Community College, Bronx, NY 10453 [2]CUNY Graduate Center, New York, NY 10016 [3]Department of Biological Sciences, Lehman College, Bronx, NY 10468

12:15 EXTRACT FROM PLANTAGO LANCEOLATA HAS AN IMPORTANT MUCOLYTIC EFFECT ON THE RESPIRATORY TRACT MUCUS. Joey Costanzo and George Proteasa Department of Biological Sciences, Queensborough Community College, Bayside, NY 11364

BIOLOGICAL CHEMISTRY V

Room: Carman Hall CA-317 **Moderator(s):** Tarialy Hernandez/Elizabeth Rosenzweig

11:00 SPECTROSCOPIC STUDY OF THE INTERACTION BETWEEN HUMAN SERUM ALBUMIN AND DIPICOLINIC ACID. Matthew Feliciano, James Irizarry and Jianwei Fan Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

11:15 BUILDING A LIBRARY OF TAGGED CHROMOSOMAL PROTEINS Gabriela Bukanowska and Bryan Wilkins Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

11:30 RESOLVING THE YEAST NUCLEOSOMAL INTERACTOME. Lai King Mo Ng and Bryan Wilkins Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

11:45 A STUDY IN NUTRIGENOMICS: HOW DO DIETARY VARIATIONS INFLUENCE EPIGENETIC STATUS? Tiffany Rodriguez and Bryan Wilkins Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

12:00 PREPARATION OF PORPHYRIN EMBEDDED LIPOSOMES FOR IN VITRO CELLULAR STUDIES. Steven Maio, Shadi Khayyo, Arian Novaj, Dorina Ismailgeci and Pamela Kerrigan Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471

12:15 ATOMIC FORCE MICROSCOPY MEASUREMENTS OF MDA-MB 468 CELLS TREATED WITH SINGLE WALLED CARBON NANOTUBES. Mathiu Perez Rodriguez, Sunil Dehipawala,[1] Tirandai Hemraj-Benny[2] and Regina Sullivan[3] [1]Department of Physics, Queensborough Community College, Bayside, NY 11364 [2]Department of Chemistry, Queensborough Community College, Bayside, NY 11364 [3]Department of Biological Sciences and Geology, Queensborough Community College, Bayside, NY 11364

GREEN CHEMISTRY I

Room: Carman Hall CA-235 **Moderator:** Torffic Hassan/Manuela Hoyos

11:00 SYNTHESIS OF PYRROLIDINIUM IONIC LIQUIDS BEARING SYMMETRICAL AND ASYMMETRICAL FLUOROUS ANIONS. Jasodra Ramdihal,[1] Chanele Rodriguez,[1] Edward Castner[2] and Sharon Lall-Ramnarine[1] [1]Department of Chemistry, Queensborough Community College of CUNY, Bayside, NY 11364 [2]Department of Chemistry and Chemical Biology, Rutgers University, Piscataway, NJ 08854

11:15 THE EFFECT OF ALKYL VERSUS ETHER SIDE CHAINS ON THE PHYSICAL PROPERTIES OF IONIC LIQUIDS. Chanele Rodriguez,[1] Nicole Zmich,[2] Suraj Dhiman,[2] James F. Wishart,[2] Edward Castner[3] and Sharon Lall-Ramnarine[1] [1]Department of Chemistry, Queensborough Community College of CUNY, Bayside, NY 11364 [2]Chemistry Department, Brookhaven National Laboratory, Upton, NY 11973 [3]Department of Chemistry and Chemical Biology, Rutgers University, Piscataway, NJ 08854

11:30 IMIDAZOLIUM IONIC LIQUIDS BEARING SYMMETRICAL AND ASYMMETRICAL CATIONS AND ANIONS. Kristina Papacostas,[1] Eddie Fenandez,[1] Edward Castner[2] and Sharon Lall-Ramnarine[1] [1]Department of Chemistry, Queensborough Community College, Bayside, NY 11364 [2]Department of Chemistry and Chemical Biology, Rutgers University, Piscataway, NJ 08854

11:45 SYNTHESIS AND PROPERTIES OF ASYMMETRIC DICATIONIC IONIC LIQUIDS. Eddie Fernandez,[1] Suraj Dhiman,[2] James Wishart,[2] Robert Engel[1] and Sharon Lall-Ramnarine[3] [1]Department of Chemistry and Biochemistry, Queens College-CUNY, Flushing, NY 11367 [2]Chemistry Department, Brookhaven National Laboratory, Upton, NY 11973 [3]Department of Chemistry, Queensborough Community College-CUNY, Bayside, NY 11364

12:00 STUDIES ON THE EFFECT OF GELATOR COMPOSITION ON MOLECULAR GELS. Riliwan Sanni, Malick Samateh, Sai S. Sagiri and George John Department of Chemistry, City College of New York, New York, NY 10031

GREEN CHEMISTRY II

Room: Carman Hall CA-237 **Moderator:** Victoria Olaseun/Miguel Andres Gomez

11:00 UTILIZATION OF WASTE SEASHELLS AND LOW-COST FEEDSTOCKS FOR BIODIESEL PRODUCTION. Thérèse A. Kelly, Adrienne Perea and Yelda Hangun-Balkir Departments of Biology and Chemistry, Manhattan College, Bronx, NY 10471

11:15 CONCENTRATION OF ANTHROPEGNIC GREENHOUSE GASES AND THEIR CORRELATION TO ASTHAMA RATES. Bryan Luna and Dickens Saint Hilaire Department of Chemistry, Bronx Community College, Bronx, NY 10033

11:30 DEVELOPMENT OF A NOVEL FE BASED HETEROGENEOUS CATALYST FOR CO2 CONVERSION. Scott Bamonte and Cheng Zhang Department of Chemistry, Long Island University, Brookville, NY 11548

11:45 IMPROVING RADIATION DETECTOR ALGORITHMS WITH BETTER RADIOACTIVE SOURCE SPECTRA. Lindsay Bonich and Biays Bowerman Department of Nonproliferation and National Security at Brookhaven National Laboratory, Suffolk County Community College, Selden, NY 11784

12:00 HIGH HARDNESS LOW THERMAL CONDUCTIVITY AND SUPERLATIVE OXIDATION RESISTANCE IN A PSEUDOICOSAHEDRAL CRAL BINARY. Jaskarun Pabla and Jack Simonson Department of Physics, Farmingdale State College – SUNY, Farmingdale, NY 11735

INORGANIC CHEMISTRY I

Room: Carman Hall CA-348 **Moderator(s):** Nabeela Van/Nadia Okyere

11:00 SYNTHESIS OF ONE-DIMENSIONAL NANOMATERIALS FOR SOLAR ENERGY CONVERSION. Nicole Waterhouse and Alexander C. Santulli Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471

11:15 CHARACTERIZATION AND COMPARISION OF IRON SPECIES IN PLANTS AND SOIL. Udya Dewanamuni,[1] Sunil Dehipawala[1] and Harry Gafney[2] [1]Department of Physics, Queensborough Community College, Bayside, NY 11364 [2]Department of Chemistry & Biochemistry, Queens College, Flushing, NY 11367

11:30 PRODUCTION OF MAGNETIC CORE/METAL OXIDE SHELL NANOPARTICLES FOR WATER PURIFICATION. Jasmine Parks,[1] Adanfa He,[2] Arvind Damodara Kannan,[2] Houssain Azam,[2] and Alexander C. Santulli[1] [1]Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471 [2]Department of Civil Engineering, Manhattan College, Riverdale, NY, 10471

11:45 MICROWAVE-ASSISTED SYNTHESIS OF IMIDAZOLIUM-BASED IONIC LIQUIDS FOR LIFEPO4 CRYSTAL ENGINEERING. Yueli Chen,[1] Lisa Cirrincione,[2] Mallory Gobet,[2] Steve Greenbaum[2] and Paul J. Sideris[1] [1]Department of Chemistry, Queensborough Community College, Bayside, NY 11364 [2]Department of Physics and Astronomy, CUNY Hunter College, New York, NY 10065

12:00 HYDROTHERMAL SYNTHESIS AND CHARACTERIZATION OF LITHIUM MIXED-TRANSITION-METAL PHOSPHATES. Krystal Lee and Paul J. Sideris Department of Chemistry, Queensborough Community College, Bayside, NY 11364

INORGANIC CHEMISTRY II

Room: Carman Hall CA-349 **Moderator(s):** Charles Seaks/Andrew Ramirez

11:00 WHAT'S OLD IS NEW – PURIFYING SR-82 WITH NEW SOLID SUPPORTS. Shane Stone[1] and Jonathan Fitzsimmons[2] [1]Syracuse University, Syracuse, NY 13244 [2]Collider-Accelerator Department, Brookhaven National Laboratory, Upton, NY 11973

11:15 $RE^{V}O$ FGC TRIPEPTIDE STABILITY CALCULATIONS: MODELS TO UNDERSTAND THE STRUCTURE AND BINDING OF ^{188}RE RADIOTHERAPEUTIC AGENTS. Ordy Gnewou, Bihn Nguyen, Stacy Bassoo, Donna McGregor, Gustavo Lopez, Benjamin Burton-Pye Department of Chemistry, Lehman College, Bronx, NY 10468

11:30 TRIPEPTIDE SEQUENCES AS MODELS TO UNDERSTAND THE STRUCTURE AND BINDING OF 188RE RADIOTHERAPEUTIC AGENTS. Joshua Molina, Mitasha Palha, Ann Palathingal, Donna McGregor, Gustavo Lopez and Benjamin Burton-Pye Department of Chemistry, Lehman College, Bronx, NY 10468

11:45 SYNTHESIS AND CHARACTERIZATION OF [RHIII(NNN)(NN)L]N+. Peter Nunez and Daniel Amarante Division of Natural Sciences, College of Mount Saint Vincent, Riverdale, NY 10471

12:00 SYNTHESIS OF TWO NOVEL LIGAND SCAFFOLDS FOR BIMETALLIC CATALYTIC HYDROFORMYLATION REACTIONS. Prashun Ghosh Roy and Richard J. Rosso Department of Chemistry, St. John's University, Queens, NY 11439

12:15 INVESTIGATION INTO ZINC(II) ION COORDINATION WITH TETRACYCLINE VIA FOUIER TRANSFORM INFRARED SPECTROSCOPY. Alex Gilbert, Botai Xuan, Harshul Khanna, Evan Flores and Sabrina Sobel Department of Chemistry, Hofstra University, Hempstead, NY 11549

NANO AND SURFACE CHEMISTRY I

Room: Carman Hall CA-322 **Moderator(s):** Louis Moskovitz/Chanika Allison

11:00 ORGANIC FIELD-EFFECT TRANSISTOR FABRICATION USING HEXATRIACONTANE AS A DIELECTRIC LAYER. Sandi Grace, Kevin Malley, Marcos Castillo and Bumjung Kim Department of Chemistry, New Jersey City University, Jersey City, NJ 07305

11:15 STUDYING THE MORPHOLOGY OF CARBON NANOSTRUCTURE EMBEDDED POLYMERS. Raul Rivas, Charles Seaks and Vicki Flaris Department of Chemistry and Chemical Technology, Bronx Community College, Bronx, NY 10453

11:30 IRON OXIDE NANOCAGES FOR MEDICAL APPLICATIONS. Sham Rampersaud,[1] Kristina Fabijanic,[1] Justin Fang,[1] Stefan Silver[2], Trisha Jaikaran,[2] Yuleisy Ruiz,[2] Murielle Houssou,[2] Shahana Mahajan,[2] Hiroshi Matsui[1] [1]Department of Chemistry, Hunter College, New York, NY 10065 [2]Department of Health Sciences, Hunter College-CUNY/Weill Cornell Medical College, New York, NY 10065

11:45 THE INFLUENCE OF THE PHENYL GROUP UPON THE MELTING GELS BEHAVIOR. Gabriela Rodriguez,[1] Tim Mc Clurg,[2] Mihaela Jitianu,[2] Lisa C. Klein[3] and Andrei Jitianu[1] [1]Department of Chemistry, Lehman College-CUNY, Bronx, NY 10468 [2]Department of Chemistry, William Paterson University, Wayne, NJ 07470 [3]Department of Materials Science and Engineering, Rutgers University, Piscataway, NJ 08854

12:00 COMPARATIVE STUDY OF FORMATION OF HYDROXYAPATITE. Martin Kowaleff, Naphtali O'Connor and Andrei Jitianu Department of Chemistry, Lehman College-CUNY, Bronx, NY 10468

NANO AND SURFACE CHEMISTRY II

Room: Carman Hall CA-323 **Moderator(s):** Patrick Jennings/Karishma Sookraj

11:00 TIME-LAPSE MICROSCOPY OF SELF-ASSEMBLED 3D DNA CRYSTALS CONTAINING LNA/DNA HYBRID PAIRS. Andre Tan,[1] Michael Alexander Jong,[1] Fiona Conn,[1] Jesper Wengel,[2] Yoel P. Ohayon,[1] Carina Hernandez,[1] Stephan Ginell,[3] Ruojie Sha,[1] Jens J. Birktoft,[1] Chengde Mao[4] and Nadrian C. Seeman[1] [1]Department of Chemistry, New York University, New York, NY 10003 [2]Nucleic Acid Center, Department of Physics, Chemistry and Pharmacy, University of Southern Denmark, Campusvej 55, 5230 Odense M, Denmark [3]Structural Biology Center, Argonne National Laboratory, Argonne, IL 60439 [4]Department of Chemistry, Purdue University, West Lafayette, IN 47907

11:15 SELF-ASSEMBLY OF SHORT AROMATIC PEPTIDES TO DESIGN A PROTON WIRE. Andre Ferguson, Joseph Cruz, Donna McGregor, Gustavo Lopez, Benjamin Burton-pye Department of Chemistry, Lehman College, Bronx, NY 10468

11:30 PHOTOELECTROCHEMICAL STUDIES OF A NOVEL CATALYST FOR THE DETECTION OF PHENOLIC COMPOUNDS. Sophia King,[1] Diana Chaykina,[1] Magdalena Osial,[2] Justyna Widera[1] and Krystyna Jackowska[2] [1]Department of Chemistry, Adelphi University, Garden City, NY 11530 [2]University of Warsaw, Warsaw, Poland

11:45 STUDYING THE POROSITY OF POLYINDOLE. Donald Wunder and Justyna Widera Department of Chemistry, Adelphi University, Garden City, NY 11530

12:00 MEASURING THE NANOMECHANICAL PROPERTIES OF TOMATO CUTICLES USING ATOMIC FORCE MICROSOPY. Eseosa Aiwerioghene, Keyvan Dastmalchi and Ruth E. Stark Department of Chemistry and Biochemistry, City College of New York, New York, NY 10031

NANO AND SURFACE CHEMISTRY III

Room: Carman Hall CA-324 **Moderator(s):** Alexander Ng/Ezer Castillo

11:00 PREPARATION OF GRAPHENE OXIDE-AMINO ACID CONJUGATE NANOASSEMBLIES AND THEIR BIOCOMPATIBILITY STUDIES. Patrick T. Barrett, Steven M. Romanelli and Ipsita A. Banerjee Department of Chemistry, Fordham University, Bronx, NY 10458

11:15 DESIGN AND SYNTHESIS OF BIOMIMETIC SCAFFOLDS FOR TENDON TISSUE. Grant A. Knoll, Steven M. Romanelli and Ipsita A. Banerjee Department of Department of Chemistry, Fordham University, Bronx, NY 10458

11:30 NEW NANOSCALE IRON-CHELATORS FOR MITIGATING IRON-OVERLOAD. Steven M. Romanelli, Alexandra M. Brown and Ipsita A. Banerjee Department of Chemistry, Fordham University, Bronx, NY 10458

11:45 GOLD NANOPARTICLE-PEPTIDE BOUND NANOSTRUCTURES AS THERANOSTIC DRUG DELIVERY DEVICES. Alexndra Brown, Anthony Santora, Grant Knoll and Ipsita A. Banerjee Department of Chemistry, Fordham University, Bronx, NY 10458

NANO AND SURFACE CHEMISTRY IV

Room: Carman Hall CA-325 **Moderator(s):** Evens Esperance/Alexis Chinn

11:00 ONE-POT OXIDATIVE POLYMERIZATION OF RHODANINE CATALYZED BY SILVER NANOPARTICLES IN DIMETHYLFORMAMIDE (DMF). Tao Hong and Moni Chauhan Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:15 DEGRADATION OF CONGO RED DYE BY NOVEL SYNTHESIZED SINGLE-WALLED CARBON NANOTUBE-RUTHENIUM NANOPARTICLES COMPOSITES. Nelson F. Tobar and Tirandai Hemraj-Benny Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:30 RUTHENIUM INTERACTIONS WITH ETHANOL UPON MICROWAVE IRRADIATION. Nicholas E. Carrero and Tirandai Hemraj-Benny. Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:45 PARTIAL SULFONATION OF POLYANILINE NANOFIBERS. Derek Perry and David M. Sarno Department of Chemistry, Queensborough Community College of CUNY, Bayside, NY 11364

ORGANIC CHEMISTRY I

Room: Carman Hall CA-330 **Moderator(s):** Alisha Memon/Nguyen Le

11:00 USE NATIVE PLANTS/OILS TO SYNTHESIZE NOVEL ANTIMICROBIAL SURFACES. Kenya Velez, Cho Chan and JaimeLee Rizzo Department of Chemistry, Pace University, New York City, NY 10038

11:15 DEVELOPMENT OF NOVEL SUBSTRATE INHIBITORS OF BACTERIAL PHOSPHOLIPID BIOSYNTHESIS AS NEW ANTIBACTERIAL AGENTS. Briana Jagdharry, Pooja Saklani and David P. Brown Department of Chemistry, St. John's University, Queens, New York 11439

11:30 CHARGE-TRANSFER COMPLEXES AND ION PAIRS OF THIOPHENE DONORS AND STRONG ELECTRON ACCEPTORS QUANTIFIED BY CONDUCTIVITY AND ABSORPTION SPECTROSCOPY. Armela Hasa,[1] Richie Bradice,[1] Anthony Monzon,[1] John R. Miller[2] and Lori Zaikowski[1] [1]Department of Chemistry and Physics, Dowling College, Oakdale, NY 11769 [2]Department of Chemistry, Brookhaven National Laboratory, Upton, NY 11973

11:45 PROGRESS TOWARD CONVERSION OF BENZOIN TO *DL*-HYDROBENZOIN – A SYNTHETIC STRATEGY BASED ON THE FELKIN-ANH MODEL. Arnold Muccini and Shahrokh Saba Department of Chemistry, Fordham University, Bronx, NY 10458

ORGANIC CHEMISTRY II

Room: Carman Hall CA-331 **Moderator(s):** Coral Pichardo/Rochile Khan

11:00 SYNTHESIS OF X-SHAPE MOLECULES AS ELECTRON ACCEPTORS IN ORGANIC SOLAR CELLS. Francisco Caban, Yi (Jane) Jiang and Sujun Wei Department of Chemistry, Queensborough Community College, Bayside, NY 11364

11:15 A NEW SYNTHESIS OF PYRROLES USING THE CADOGAN APPROACH. Yanan Liu,[1] Sasan Karimi,[1] Shuai Ma,[2] Gopal Subramaniam[2] [1]Department of Chemistry, Queensborough Community College, Bayside, NY 11364 [2]Department of Chemistry and Biochemistry, Queens College, Flushing, NY 11367

11:30 THE INTERPLAY OF NITROGEN-ATOM INVERSION AND CONFORMATIONAL INVERSION IN ENANTIOMERIZATION OF 1*H*-1-BENZAZEPINES. Ani Coaderaj,[1] Gopal Subramaniam,[2] Sasan Karimi,[3] David Szalda,[1] Allen Ko,[1] Aaron Lam,[1] Jeffrey Li,[1] Leyla Cavdar,[1] Lukasz Bogdan,[1] Kitae Kwon,[1] Edyta Greer[1] and Keith Ramig[1] [1]Department of Natural Sciences, Baruch College of the City University of New York, New York, NY 10010 [2]Department of Chemistry and Biochemistry, Queens College of the City University of New York, Flushing, NY 11367 [3]Department of Chemistry, Queensborough Community College of the City University of New York, Bayside, NY 11364

11:45 SYNTHESIS OF TETRAHYDROISOQUINOLINE/D3 ANTAGONIST HYBRIDS AS POTENTIAL ANTI-COCAINE AGENTS. Alkaya Massaly, Wayne W. Harding and Satishkumar V. Gadhiya Department of Chemistry, CUNY Hunter College, New York, NY 10065

ORGANIC CHEMISTRY III

Room: Carman Hall CA-332 **Moderator(s):** Eric Yeung/Izidora Bozic

11:00 STUDIES TOWARDS THE COMPLETE REMOVAL OF CHROMIUM (VI) WITH INSOLUBLE ASCORBIC ACID DERIVATIVES. Mary Cacace and John Regan Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471

11:15 WATER PURIFICATION: CONVERTING CR(VI) TO CR(III) WITH CATECHOL DERIVATIVES. Paulo Markaj and John Regan Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471

11:30 RECYCLING POLYMERIC SCAVENGING REAGENTS FOR USE IN NEW SYNTHETIC TRANSFORMATIONS. Gabrielle Trombetta and John Regan Department of Chemistry and Biochemistry, Manhattan College, Riverdale, NY 10471

11:45 CATALYZED INTERESTERIFICATION OF SHORT AND MEDIUM CHAIN FATTY ACID TRIACYLGLYCEROLS: SYNTHESIS AND CHARACTERIZATION. Sara Girgis, Gabrielle Cabrera, William Nirode and Ronald P. D'Amelia, Department of Chemistry, Hofstra University, Hempstead, NY 11549

ORGANIC CHEMISTRY IV

Room: Carman Hall CA-333 **Moderator(s):** Justin Melendez/Savanah Valenzuela

11:00 OXIDATION OF MESO-SUBSTITUTED TRI AND TETRA PORPHYRINS. Dorina Ismailgeci, Shadi Khayyo, Valerie Khayyo, Steven Maio, Arian Novaj, Pamela Kerrigan Department of Chemistry/Biochemistry, College of Mount Saint Vincent, Riverdale, NY 10471

11:15 THE PURIFICATION AND ANALYSIS OF DISTINCT PORPHYRIN MOLECULES. Shadi Khayyo, Arian Novaj, Steven Maio, Dorina Ismailgeci, Valerie Khayyo and Pamela K. Kerrigan Department of Chemistry/Biochemistry, College of Mount Saint Vincent, Riverdale, NY 10471

11:30 DECONVOLUTION OF COMPLEX SPLITTING PATTERNS IN ^{1}H-NMR SPECTRA USING *AB INITO* QUANTUM CALCULATIONS. Ameen Al Qadi and Paul Smith Department of Chemistry, Fordham University, Bronx, NY 10458

11:45 THEORETICAL STUDY OF THE CHEMOSELECTIVITY IN METAL FRAGMENT-CONTAINING 1,4-BUTADIENE AND ETHYLENE IN METALLA-DIELS-ALDER REACTION. Kitae Kwon, Elena Votto, Anastasiya Badziai and Edyta M. Greer Department of Natural Sciences, Baruch College, New York, NY 11361

12:00 PHYSICAL-ORGANIC STUDY OF THE PHOTOOXYGEN-ATOM EXCHANGE OF NITROSAMINES WITH MOLECULAR OXYGEN. Radhika Viswanathan,[1] Ashwini A. Ghogare,[1,2] Ciro Debaz,[1] Inna Abramova,[1] Edyta Greer,[3] Marilene S. Oliveira,[4] Fernanda M. Prado,[4] Paolo Di Mascio[4] and Alexander Greer[1,2] [1]Chemistry Department, Brooklyn College, Brooklyn, NY 11210 [2]Graduate Center of CUNY, New York, NY 10016 [3]Baruch College, New York, NY 10010 [4]University of São Paulo, São Paulo, Brazil

PHYSICAL CHEMISTRY

Room: Carman Hall CA-245 **Moderator(s):** Chheten Sherpa

11:00 COMPUTATIONAL DESIGN AND DOCKING OF INHIBITORS TO BETA LACTAMASES AND PENICILLIN BINDING PROTEINS. Jaisima Minhas and Meredith Foley Department of Chemistry, St. John's University, Jamaica, NY 11439

11:15 MOLECULAR DYNAMICS SIMULATIONS ON DIHYDROOROTATE DEHYDROGENASE (DHOD-CLASS A). Sazzad Hossain and Yolanda A. Small Department of Chemistry, York College City University of New York, Jamaica, NY 11451

11:30 A DENSITY FUNCTIONAL STUDY OF PROTON ACIDITY IN THE THIAZOLIUM RING. Anthony DiProperzio and Joseph Capitani Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

11:45 THE INVESTIGATION OF THE BINDING CAPABILITY OF HUMAN SERUM ALBUMIN TO DIPICOLINIC ACID BY UV/VISIBLE ABSORPTION AND FLUORESCENCE SPECTROPSCOPY. Marisa Kroger, Sophia Prentzas and Jianwei Fan Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

12:00 THE EFFECT OF TEMPERATURE AND VANADIUM CONCENTRATION ON PROTON TRANSPORT THROUGH NAFION 117 MEMBRANE. Danny Dilone, Domenec Paterno and Sophia Suarez Department of Physics, Brooklyn College, Brooklyn, NY 11210

12:15 DETERMINING THE CRYSTAL STRUCTURE OF A MICROPOROUS ALUMINOSILICATE ZEOLITE, SUZ-9. Christine Schmidt and Richard M. Kirchner Department of Chemistry and Biochemistry, Manhattan College, Bronx, NY 10471

POLYMER CHEMISTRY

Room: Carman Hall CA-303 **Moderator(s):** Yifu Zhu

11:00 PERIODICALLY SEQUENCED POLYPEPTIDES: INTERFACIAL PATTERNING. Carlos Tavarez, Ye Joon Seo, Matthew Kubilius, Raymond Tu Department of Chemical Engineering, City College of New York, New York, NY 10031

11:15 USING LINEAR BLOCK-POLY(ε-CAPROLACTONE)-BLOCK-POLY(L-LACTIDE) SYSTEMS TO REMOVE ORGANIC POLLUTANTS FROM WATER. Katrina Bernhardt and Amy M. Balija Department of Chemistry, Fordham University, Bronx, NY 10458

11:30 UNDERSTANDING THE FORMATION AND SIZE DISTRIBUTION OF POROUS POLY(*O*-TOLUIDINE) MICROSPHERES. Jean Hwang and David M. Sarno Department of Chemistry, Queensborough Community College of CUNY, Bayside, NY 11364

11:45 DO POLYMERS INFUSED WITH ION CHARGED PARTICLES EXHIBIT ANTI-BACTERIAL PROPERTIES? R. Josman, H. Siccardi, R. Matos, V. Flaris and A. Gilman Chemistry and Chemical Technology Department, Bronx Cummunity College – CUNY, Bronx, NY 10453