

Physical Chemistry Division

23 – Mohammed K. Abdel-Rahman (Trenary), *Propyne Hydrogenation over a Pd/Cu(111) Single Atom Alloy Catalyst Studied with Infrared Spectroscopy*

24 – Rehak, Pavel L (Kral), *Molecular dynamics simulations of metabolite fibrils*

25 – Mark Muir (Trenary), *Hydrogenation of Acetylene to Ethylene on a Pd/Ag(111) Single Atom Alloy Surface*

26 – Ravi Ranjan (Trenary), *Spectroscopic Characterization of Ethylidyne formed from Acetylene on Pd(111)*

27 – Yanxiao Han (Kral), *Molecular dynamics simulations of nanoparticles with proteins*

28 – Arephin Islam (Trenary), *Infrared spectroscopy of CO₂ hydrogenation over the Cu(111) and Pd/Cu(111) single atom alloy surfaces under ambient pressure conditions*

29 – Sayantan Mahapatra (Jiang), *Angstrom Scale Chemical Analysis of Intermolecular and Molecule-Substrate Interactions by Ultrahigh Vacuum Tip-Enhanced Raman Spectroscopy*

30 – Jeremy Schultz (Jiang), *Insights into Molecular Adsorbate-Substrate Interactions by Tip-Enhanced Raman Spectroscopy at the Angstrom-Scale*

31 – Jason M. Gross (Hanley), *Comparing Flat-Top & Gaussian Femtosecond Laser Ablation of Silicon for Depth Profiling in Mass Spectrometry*

32 – Konstantinos Mazarakos (Zhou), *Coupling Between Macromolecular Regulators Leads to Switch-Like Control of Liquid-Liquid Phase Separation*

33 – Aayush Gupta (Zhou), *Computational Pipeline to Discover Inhibitors of RPN11 using Machine Learning and Image Processing*

34 – Souvik Dey (Zhou), *Sequence-specific conformational and dynamic properties of intrinsically disordered FtsQ*

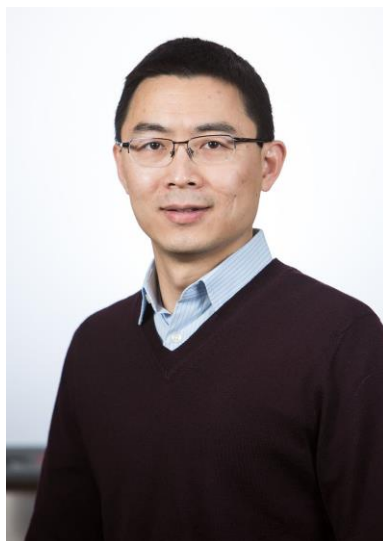
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Keynote Speaker

Dr. Libin Xu

**Assistant Professor, School of
Pharmacy**

University of Washington



**“Journey from chemistry of
sterols to biology of
neurodevelopment”**

Organizing Committee:

Dr. Stephanie Cologna

Indrani Banerjee

Sanoj

Chandimal Pathmasiri

Robert Zhang



UIC CHEMISTRY

Chemistry Research Symposium

October 4th, 2019

Science & Engineering
South (SES)

Alumni Career Panel

SES 138(Lunch Provided)

11am-12:30pm **Panelists: Dr.Libin Xu (Uwashington)**
Dr.Henry Chan(ANL)
Dr.Ashley Pumphrey(Abbvie)
Dr.Rita Hatfield (UIC)

Oral Presentations

SES 238

1:00-1:15 pm **Welcome and Introduction**

1:15-1:40 pm **Sourav Ghorai**
Lee Group
Organic Chemistry
Aryne-based Multi-component
Coupling Reactions Enabled by
Silver-Catalyzed Addition of
Isonitriles

1:40-2:05 pm **Ha Pham**
Miller Group
Biochemistry
High Dynamic-Range LRET
Biosensors of Rac1

2:05-2:20 pm **Coffee Break**

2:20-2:45 pm **Stephanie Werner**
Stieff Group
Chemical Education
How diverse are the STEM
disciplines? A comparative study of
representation, retention, and
attrition of underrepresented
groups in Chemistry, Physics, and
Biological Sciences

2:45-3:45 pm **Keynote Address**
Dr.Libin Xu
UIC Alumnus, Newcomb Group

Poster Session

Math& Science Learning Center
(MSLC)

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4:00-5:30 pm **Poster session and refreshments**

Poster Number – Presenter (Advisor), Title

Analytical Chemistry Division

- 1 – Will Judge (Cabana)**, Nanoscale Crystal Structure Mapping of Primary Particles Using Scanning X-Ray Diffraction Microscopy (SXDM)
- 2 – Oded Yogev (Shippy)**, Using MALDI-TOF-MS to identify and quantify free amino acids in human tears
- 3 – Will Lafon (Cologna)**, Reaction of 1H-Tetrazoles within Microdroplets via Electrospray Ionization Mass Spectrometry
- 4 – Chandimal Pathmasiri (Cologna)**, Mass spectrometry analysis reveals alteration of phosphoinositides in Niemann-Pick Disease, type C1
- 5 – Raveendra C. Wickramasinghe (Hanley)**, Femtosecond Laser Desorption Postionization Mass Spectrometric Imaging of Organic Biomarkers Buried in Geological Samples
- 6 – Aruni Chathurya Pulukkody (Hanley)**, Regio-Specific Sampling of Bacterial Biofilms by Laser Ablation Sample Transfer for Bottom-Up Proteomics
- 7 – Patrick Fisher (Shippy)**, Extracellular Fluid Collection and Analysis of Drosophila Melanogaster Brain tissue with Low-Flow Push-Pull Perfusion (LFPP)

Biochemistry Division

- 8-Ha Pham (Miller)** High Dynamic-Range LRET Biosensors of Rac1
- 9– Guodong Hu (Zhou)**, Alternative ligand binding poses and unbinding paths in a PreQ1 riboswitch
- 10 – Archishman Ghosh (Zhou)**, Macromolecular Regulation of Protein Liquid-Liquid Phase Separation
- 11 – Ramesh Prasad (Zhou)**, Membrane Association and Functional Mechanism of Synaptotagmin-1 in Vesicle Fusion

12 – Pawanthi Buwaneka (Cho), High throughput ELISA based method for screening lipid selectivity of proteins by phage display

13 – Bhagya Mendis (Lorieau), Solution state NMR structure of Influenza A virus Matrix Protein 1- C Domain in DPC micelles at low pH.

14 – Alexander Malooley (Lorieau), Micelle-bound pro-Islet Amyloid Polypeptide Contains a Carboxy-terminal Helical Segment

15 – Audra Lemley (DiMugno), Non-natural Amino Acids for in vivo Lifetime Extension of Guinea Pig L-Asparaginase as a Chemotherapeutic

Chemical Education Division

16 – Stephanie Werner (Stieff), How diverse are the STEM disciplines? A comparative study of representation, retention, and attrition of underrepresented groups in Chemistry, Physics, and Biological Sciences

Inorganic Chemistry Division

17 – Eva Allen (Cabana), Tailored Architectures to Stabilize Electrode-Electrolyte Interfaces in Cathode Materials for Li-ion Batteries

18 – Suresh Chandranath Rathnayaka (Mankad), Rational ligand design for synthesizing structural and functional model compounds of the active site of Nitrous Oxide Reductase (N2OR)

19 – Rickey Kellow (Mankad), Mankad Group Research Projects

Organic Chemistry Division

20 –Anh Le (Lee), Formal [4+2] cycloaddition between alkynes and allenynes to generate functionalized toluenes

21 – Laura Alonso (Anderson), Mechanistic Investigation of 4π-Electrocyclization of N-vinylnitrones

22 – Abdullah Alshreimi (Anderson), Spirocyclic Pyrrolines Synthesis via a Dearomative Rearrangement