



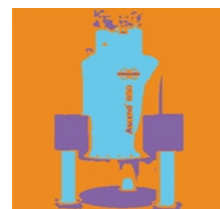
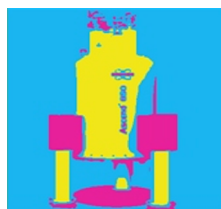
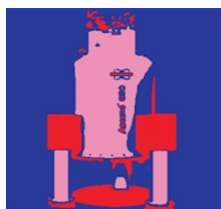
THE OHIO STATE UNIVERSITY
CAMPUS CHEMICAL INSTRUMENT CENTER



FT-ICR



NMR



OSU NMR Inauguration Symposium

October 3, 2015

Room 130 CBEC, 151 Woodruff Ave, Columbus, OH



Program

8:15 – 9:00 Sign-in for registered attendees in CBEC lobby
Sign-up for NMR tours taking place throughout the day

9:00 – 9:20 *Introductory Remarks*

Rafael Brüschweiler, CCIC-NMR director

Janet Weisenberger, Sr. Associate Vice President for Research

Christopher Hadad, Dean of Natural and Mathematical Sciences

Frank Laukien, President & CEO, Bruker Corporation

Session on Solid-State NMR of Biomolecules

Chair: Christopher Jaroniec

9:20 – 9:50 **Robert Griffin**, MIT

High frequency dynamic nuclear polarization

9:50 – 10:10 **Michael Weiss**, Case Western Reserve U.

How insulin binds: from structural biology to improved therapeutics

10:10 – 10:25 **Theint Theint**, OSU (Jaroniec lab)

Structural studies of Y145Stop prion protein amyloids

10:25 – 11:00 *Coffee break, poster session, and guided NMR tours*

Session on NMR of Biomacromolecules in Solution

Chair: Mark Foster

11:00 – 11:30 **Peter Wright**, The Scripps Research Institute, La Jolla

Characterization of the dynamic energy landscapes of proteins by NMR relaxation

- 11:30 – 11:50 **Jun Qin**, Case Western Reserve U.
NMR-based elucidation of weak protein-protein interactions in integrin signaling
- 11:50 – 12:05 **Brandon Crowe**, OSU (Foster lab)
Folding sheets: How a retrovirus targets its way to the host genome
- 12:05 – 12:25 **Matthias Buck**, Case Western Reserve U.
Fun at and in the membrane with plexins and GTPases: An overview of molecular dynamics and NMR studies of peptides and proteins that are on-going in the Buck lab
- 12:30 – 1:30 *Lunch (sandwiches in CBEC lobby)*
Poster session and guided NMR tours

Session on Metabolomics and Complex Systems

Co-chairs: Vicki Wysocki, Justin Wu, Rafael Brüschweiler

- 1:30 – 2:00 **Alan Marshall**, NHMFL & FSU
Ultrahigh resolution mass spectrometry: extending the size and detail of biomolecule structure analysis
- 2:00 – 2:20 **Michael Kennedy**, Miami U.
NMR-based metabolic profiling of the gut microbiome - type 1 diabetes connection
- 2:20 – 2:35 **Bo Zhang**, OSU (Brüschweiler lab)
Application of charged silica nanoparticles in NMR-based metabolomics
- 2:35 – 2:45 *Short break (start of NMR tours)*
- 2:45 – 3:15 **Manfred Spraul**, Bruker BioSpin, Germany
The use of NMR in clinical and translational research
- 3:15 – 3:45 **Art Edison**, U. Georgia
Advantages of ^{13}C in metabolomics
- 3:45 – 4:15 *Coffee break, poster session, and guided NMR tours*

Session on Solid-State NMR of Materials

Chair: Philip Grandinetti

- 4:15 – 4:45 **Melanie Rosay**, Bruker BioSpin, Billerica
Instrumentation and method development for dynamic nuclear polarization applications at 263-527 GHz (400-800 MHz)
- 4:45 – 5:00 **Deepansh Srivastava**, OSU (Grandinetti lab)
Measuring J-couplings in solids with phase incremented echo-train acquisition
- 5:00 – 5:20 **Anatoli Khitrin**, Kent State U.
A recipe for perfect pulse sequences
- 5:20 – 5:30 *Short break (start of NMR tours)*
- 5:30 – 5:50 **Manish Mehta**, Oberlin College
Solid-state NMR study of co-crystals
- 5:50 – 6:20 **Lyndon Emsley**, EPFL, Switzerland
Surface enhanced NMR spectroscopy for materials and catalysis
- 6:20 – 7:00 *Refreshments, poster session, and guided NMR tours*
- 7:00 – 9:00 pm *Sit-down dinner in CBEC lobby (please bring name tag)*