

Technical Program

Thursday June 5,

8:30 Welcome, Donald Brennan, Dean, College of Arts and Sciences, Saint Louis University

Session 1 - Paul Jelliss Presiding

OP1 8:45 am.

New Reactions of Organoboranes: Stereoselective Asymmetric Synthesis of 1,3-Diol Stereotriads from 1,3-Diborylpropenes.

John A. Soderquist,* Ana Z. Gonzalez, Eyleen Alicea, and Jose Roman

OP2 9:15 am.

Boron-based Hydrogen Chemical Storage

Larry G. Sneddon*

OP3 9:45 am.

Iron-Monocarborane Complexes: From CB_{10} to CB_6 and Back Again (Almost!)

Andreas Franken, Bruce E. Hodson, Robin A. McCown, Thomas D. McGrath,* and F. Gordon A. Stone

Morning Break 10:15 – 10:45 am

Session 2 - Narayan Hosmane Presiding

OP4 10:45 am.

A Novel Mechanism for the Boron Tribromide Mediated Aryl Propargyl Ether Cleavage Reaction

Kelly Hall, George W. Kabalka,* Srinivasa R. Marepally, Min-Liang Yao, and Webin Zeng.

OP5 11:15 am

Boron – the Keystone of Advanced Technical Materials – A Summary of How Ceradyne Builds Businesses in Many Markets with Boron Based Materials

Michael Kraft

OP6 11:45 am

β -Agostic Interactions in 15 Valence Electron 9-BBN Hydroborate Half-Sandwich Ti(III) Complexes and their Absence in Related 17 Valence Electron Complexes

Xuenian Chen, Ewan J. M. Hamilton,* Shengming Liu, Edward A. Meyers, Jung Su Park, and Sheldon G. Shore*

Lunch 12:15 – 1:30 am

Session 3 - Frieder Jäkle Presiding

OP7 1:30 pm

Activation/Borylation/Amidation/Oxidation in the Theater of Total Synthesis: A Synthetic Approach to Autolyticin.

Anna M. Norberg, Luis A. Sanchez, Feng Shi, Milton R. Smith, III, and Robert E. Maleczka, Jr

OP8 2:00 pm
Carborane Complexes of the $[M(\text{CO})_2(\text{NO})]^{2+}$ ($M = {}^{99\text{m}}\text{Tc}, \text{Re}$) Core: A New Class of Organometallic Probes for Correlated *In Vitro* and *In Vivo* Imaging
Andrea F. Armstrong* and John F. Valliant.

OP9 2:30 pm
Development of General Methods for the Selective Functionalization of Cyclopentadienyliron Tricarbadeboranyl Complexes: Halogenation and Palladium-catalyzed Coupling Reactions
Robert Butterick III, Patrick J. Carroll, Ariane Perez-Gavilan, and Larry G. Sneddon*

Afternoon Break 3:00 pm – 3:30 pm

Session 4 - Alan Welch Presiding

OP10 3:30 pm
Catalytic Phenylborylation Reaction by Iridium (0) Nanoparticles Produced from Hydridoiridium Carborane
Zhu Yinghui, Koh Chenyan, Ang Thiam Peng, A Emi, Winata Monalisa, Narayan S. Hosmane,* and John A. Maguire

OP11 4:00 pm
Functionalization of Polythiophenes with Electron-deficient Organoborane Moieties
Frieder Jäkle,* Haiyan Li, and Anand Sundararaman

OP12 4:30 pm
Gomberg-Type Substitution of Pyridine with the [closo-1- CB_9H_9] Fragment
Piotr Kaszynski* and Bryan Ringstrand

7:00 pm - 9:00 pm Poster Session and Reception

P1 *Vibrational Spectra of $\text{C}_2\text{B}_{10}\text{H}_{12}$ and Semiconducting Films*
R. J. Lacy, K.A. Nelson, D. A. Treichel, Orhan Kizilkaya,* and J.I. Brand

P2 *Silicon (IV) and Germanium (IV) Moieties Stabilized by Charge-Compensated Monoanionic Carborane Ligand [9-SMe₂-7,8- $\text{C}_2\text{B}_9\text{H}_{10}$]: Synthetic and Structural Investigation*
Narayan S. Hosmane,* Alexander R. Kudinov, John A. Maguire, Vladimir I. Meshcheryakov, and Chong Zheng

P3 *Photo-fragmentation of the Closo-carboranes*
Jing Liu, Danqin Feng, A.P. Hitchcock,* A.L.D. Kilcoyne, T. Tyliczszak, Riehs, E. Rühl,* J.D. Bozek, N.M. Boag, and P.A. Dowben*

P4 *Liquid Crystals Incorporating the [closo-1- CB_9H_{10}] Cluster Unique Structural Motif*
Adam Januszko, Piotr Kaszynski*, and Bryan Ringstrand

P5 *Selective Functionalization of Metallatricarbadeboranyl Complexes via Halogenation and Sonogashira Coupling Reactions*
Robert Butterick III, Patrick J. Carroll, Ariane Perez-Gavilan, and Larry G. Sneddon*

P6 *Polystyrene Supported Borane Complexes $\text{PS-BH}_2\cdot\text{D}$: Synthesis and Characterization*
Ami Doshi and Frieder Jäkle*

P7 *Metallacarborane Redox Mediation in Enzyme-immobilized Polymer-modified Bioanodes*
Paul A. Jelliss,* Anita Nukic, and Shelley D. Minter

- P8** *The Continued Development of Luminescent Rhenacarborane Complexes*
Paul A. Jelliss* and Shuai (Matthew) Xu
- P9** *Boronated Polyamines in the Boron Neutron Capture Therapy*
Narayan S. Hosmane,* Anila Kethe, Sonam H. Patil, Sri Harsha Vemuri, and Sunitha Krovvidi
- P10** *Synthesis and Characterization of New Halo and Halohydroxo Boron Hydrides*
Joel A. Dopke* and Kevin K. Klausmeyer
- P11** *Solvent-Coordinated Complexes of the [trans-B₂₀H₁₈]²⁻ Anion*
Nicholas Mustachio and Debra A. Feakes*
- P12** *Microwave-Assisted Synthesis of Targeted ^{99m}Tc-Metallocarborane Complexes*
Anika Louie and John F. Valliant*
- P13** *Chemical Routes for the Syntheses of Boron Nitride Nanotubes*
Mark G. Bradley, Shahana Chatterjee, Myung Jong Kim, Seung Min Kim, Benji Maruyama, Mark J. Pender, Eric Stach, and Larry G. Sneddon*
- P14** *Novel Synthesis of (Z)-Disubstituted Alkenes Containing (1,3-Dioxan-2-ylethyl) Moiety via Organoboranes.*
Narayan G. Bhat,* Caleb A. Flores, and Linessa M. Zuni
- P15** *Organoborane Reactions in Ionic Liquids*
George W. Kabalka* and Thomas Moore
- P16** *The Microwave-Enhanced Cross-Coupling Reaction Between Alkynyltrifluoroborates and Aryl Bromides*
Vitali Coltuclu, Eric Dadush, George W. Kabalka,* and Abhijit Naravane
- P17** *HBCl₂: An Efficient Dehydroxylation Reagent*
George W. Kabalka,* Travis Quick, Adam Pippin, and Min-Liang Yao
- P18** *Synthesis and Characterization of Novel Carborane Based Five-anion Precursors and Neutral Tantalum (V) Complexes*
Yinghuai Zhu,* Cjinnong Lee, Yijin Toh
- P19** *Cyanoborane- and Carboxyborane-Appended Cyclens & Cyclams*
Jaime A. Flores, Narayan S. Hosmane,* Sunitha Krovvidi, Michael Lattman, John A Maguire, and Sri Harsha Vemuri

Friday June 6

Session 5 - John Maguire Presiding

- OP13 8:30 am**
Metallocarboranes for Biotechnological Applications
Paul Jellis
- OP14 9:00 am**
Interactions of Carboranethiols with Gold Surfaces
Tomáš Baše,* Zdeněk Bastl, Michael G. S. Londesborough, and Jan Macháček

OP15 9:30 am

Elaborating Thiophenes, Pyrroles, and Indoles

Venkata A. Kallepalli,* Ghayoor A. Chotana, Sulagna Paul, Robert E. Maleczka, Jr., and Milton R. Smith, III*

Morning Break 10:00 – 10:30 am

Session 6 – George Kabalka Presiding

OP16 10:30 am

Boron-Containing Dermatologic Drug Design Using Soft-Drug Strategy

Yong-Kang Zhang,* Jacob J. Plattner, Tsutomu Akama, Qun Li, Yvonne Freund, Richard Kimura, Virginia Sanders, Wei Bu, and Liang Liu

OP17 11:00 am

Haloallylation of Aryl Aldehydes: A Novel Tandem Carbon-Carbon and Carbon-Halide Bond Forming Reaction

Travis Quick, Mike Quinn, George W. Kabalka,* and Min-Liang

OP18 11:30 am

Supraicosahedral Expansion of Heteroborane Clusters

David Ellis, Stefan Erhardt, Brian Hutton, Amelia McAnaw, Stuart A. Macgregor, Ruaraidh D. McIntosh, David McKay, Ross McLellan, M. Elena Lopez, Georgina M. Rosair, Hugo Tricas, Alan J. Welch,* and Sergey Zlatogorsky

Noon – Lunch followed by excursion to Forest park.

Dinner at the Saint Louis Zoo

Saturday June 7

Session 7 - Lol Barton Presiding

OP19 8:30 am

Isotope Incorporation Via Organoboranes

George W. Kabalka

OP20 9:00 am

Doping of Semiconducting C₂B₁₀H₁₂ Films with Iron, using Ferrocene

K. A. Nelson* and J. I. Brand

OP21 9:30 am

Synthesis and Reactivity of the Paramagnetic Species [6-(CO)-6,6-(PEt₃)₂- closo-6, 1-FeCB₈H₉]: Varying Oxidation States of the Iron Vertex in a Ferramonocarborane Cluster

Andreas Franken, Bruce E. Hodson, Thomas D. McGrath, and F. Gordon A. Stone*

Morning Break 10:00 – 10:30 am

Session 8 – John Soderquist Presiding

OP22 10:30 am

Synthesis of Reactive Intermediates Relevant to Iridium Catalyzed C–H Borylation

Milton R. Smith, III

OP23 11:00 am
Silicon Tetrachloride Promoted Cyclotrimerization Reactions: New Route to Carbosilane Dendrons
Barada Prasanna Dash, Rashmirekha Satapathy, John A. Maguire, and Narayan S. Hosmane*

OP24 11:30 am
Preparation and Reactions of Fluorine-containing Allylboronates: A Facile Route to Gem-difluorinated Molecules
P. V. Ramachandran

Lunch Noon – 1:30 pm

Session 9 – Don Matteson Presiding

OP25 1:30 pm
Formation of Intramolecular Rings and Iron Center Oxidation in Ferramonocarbollide complexes
Bruce Hodson, Andreas Franken, Tom McGrath, and F. Gordon A. Stone*

OP26 2:00 pm
Effects of Isomeric Purity and Mixing in Semiconducting Boron Carbide Devices
Benjamin W. Montag,* Ildar Sabirianov, Kyle A. Nelson, Neil P. Platt, Neil M. Boag, and Jennifer I. Brand

OP27 2:30 pm
Novel Coordination Modes of Amidotrihydroborate: Synthesis and Structure of Metallocene and Lanthanide Compounds Containing Amidotrihydroborate
Duane Wilson and Sheldon G. Shore

Afternoon Break 3:00 pm – 3:30 pm

Session 10 – Debra A. Feakes Presiding

OP28 3:30 pm
The nido-[7-PB₁₀H₁₂] Anion; a Useful Starting Material
Neil M Boag,* Andrew J. Guest and Neil P. Platt

OP29 4:00 pm
Ferrocene Based Chiral Lewis Acids for Catalysis and Supramolecular Recognition
Thilagar Pakkirisamy, Krishnan Venkatasubbaiah, Ramez Boshra and Frieder Jäkle*

OP30 4:30
Recent Studies of Alkyltrifluoroborate Chemistry
Donald S. Matteson*

7:00 – 9:00 pm. Conference Banquet in the Pere Marquet Gallery, Dubourg Hall