



Monday May 13, 2024

Room A

8:45-9:00 Opening Ceremony

Chair: Hisako Hashimoto

9:00-9:45 **1AP01** T. D. Tilley, R. C. Handford, R. Bryant (University of California, Berkeley)
Reactive metal-silicon complexes in bond activations and chemical transformations

Chair: Vladimir Ya. Lee

10:00-10:20 **1AI01** A. Chandran,^{1,2} J. M. Slattery,² J. M. Lynam,² M. Grellier¹ (¹Laboratoire de Chimie de Coordination, ²University of York)
Ruthenium σ -complexes for chemoselective mono-hydrosilylation of nitriles

10:20-10:40 **1AI02** L. Deng (Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences)
Structurally well-defined cobalt-NHC catalysts for hydrosilylation reactions of alkenes and alkynes

10:40-11:10 **1AK01** M. Drieß (Technical University Berlin)
Tuning the reactivity of bis-silylenes to engender selective chemical transformations

Chair: Matthias Drieß

11:10-11:25 **1AO01** V. Ya. Lee,¹ J. Wang,¹ T. Sasamori,¹ K. Takeuchi,² N. Fukaya² (¹University of Tsukuba, ²AIST)
Electrophilic behavior of the "Nucleophilic" pyrimidane: Reactivity of Ge-pyrimidane towards organolithium reagents

11:25-11:45 **1AI03** Y. Nakajima,¹ K. Iizuka,¹ S. Ni,² S. Sakaki² (¹Tokyo Institute of Technology, ²Kyoto University)
Oxidative addition of Si-Cl bond to Fe(0) complex with radical character and application to hydrosilane formation

Lunch

ASiS Special Session *Chair: Soichiro Kyushin*

13:20-13:40 **1AI04** M. Suginome (Kyoto University)
Toward a new phase of silylene transfer reactions

13:40-14:00 **1AI05** H. Liu (Shandong University)
Silsesquioxanes-based functional materials for sustainable development

14:00-14:20 **1AI06** H. Sohn (Chosun University)
One-pot synthesis of water-soluble silicon quantum dots and their applications

14:20-14:40 **1AI07** H.-W. Fu,¹ Y.-J. Guo,¹ R.-J. Chein,² C.-W. Chiu¹ (¹National Taiwan University, ²Institute of Chemistry, Academia Sinica)
Synthesis and catalytic applications of chiral tetrylenes



Coffee Break

Professor Robert West Memorial Session *Chair: Kim Baines*

- 14:55-16:15 J. Michl (University of Colorado Boulder) (online participation)
P. Boudjouk (North Dakota State University) (online participation)
K. Tamao (Toyota Physical and Chemical Research Institute)
A. Sekiguchi (AIST)
M. Drieß (Technical University Berlin)

Chair: Takeaki Iwamoto

- 16:30-17:15 **1AP02** L. Greb (Universität Heidelberg)
Pushing and twisting silicon: ligand control on the electronic, structural and redox properties of Si(IV)



Monday May 13, 2024

Room B

Chair: Tsukasa Matsuo

10:00-10:20 **1BI01** M. O. Hight, A. E. Pimentel, T. C. Siu, J. Seo, M. Imex Aguirre Cardenas, T. A. Su (University of California, Riverside)
Silicon clusters and polycarbosilanes in molecular electronics

Chair: Joseph Furgal

10:20-10:35 **1BO01** K. Naka, I. Tokunami, H. Imoto (Kyoto Institute of Technology)
Surface segregation of functional siloxane-based cages in a polymer matrix

10:35-10:50 **1BO02** C. Croutxé-Barghorn, L. Halbardier, E. Goldbach, A. S. Schuller, X. Allonas (University of Haute –Alsace)
3D printing of hybrid materials by combination of photo sol-gel process and photopolymerization

10:50-11:05 **1BO03** L. Yang, Y. Cheng, R. Hifumi, I. Tomita (Tokyo Institute of Technology)
Precision synthesis of silicon-containing nanostructured materials through living coordination polymerization

11:05-11:20 **1BO04** Z. He,¹ L. Feng,¹ J. Xie,² H. Liu,¹ W. W. Yu,¹ J. Zhang¹ (¹Shandong University, ²Yangzhou University,)
Melt transesterification involving siloxane diol

Chair: Yoshinori Yamanoi

11:20-11:40 **1BI02** E. Moyer, S. Sulaiman, N. Hu, K. Liu, A. Garibaldi, E. Guzman (Gelest, Inc.)
In search of viable silicon-based alternatives to PFAS materials



Monday May 13, 2024

Room C

Chair: Jonathan O. Bauer

10:00-10:30

1CK01 S. Inoue (Technische Universität München)
Facile bond activation of small molecules by acyclic silylenes

10:30-10:45

1CO01 J.-L. Kirchoff, M. Nuss, T. Mairath, C. Strohmann (TU Dortmund)
Better understanding of selective transformation of Si–N,O-functionalized organosilanes

Chair: Shigeyoshi Inoue

10:45-11:00

1CO02 L. Sévery, A. Mifleur, T. Cantat (Université Paris-Saclay)
Towards the experimental determination of the thermodynamic hydricity of hydrosilanes

11:00-11:15

1CO03 Y. Mizuhata, Y. Omatsu, W. Ijichi, N. Tokitoh (Kyoto University)
Syntheses of novel siliconoids and their skeletal transformation reactions

11:15-11:30

1CO04 A. Kawachi, Y. Kowada, S. Hirotsu (Hosei University)
Preparation and reactions of boron-substituted silyllithium

11:30-11:45

1CO05 V. S. Ajithkumar, S. S. Sen (CSIR-National Chemical Laboratory)
The tale of hypersilyl tetraenes as a versatile synthon



Monday May 13, 2024

Room D

Chair: Mikio Yamahiro

10:00-10:20 **1DI01** Y. Kaneko,¹ K. Sonoda,¹ N. Tohnai² (¹Kagoshima University, ²Osaka University)

Stereoselective preparation of different cyclic tetrasiloxane isomers: Effect of the superacid catalyst employed

10:20-10:40 **1DI02** H. Imoto, K. Naka (Kyoto Institute of Technology)
Precise molecular design for cage silsesquioxane materials

Chair: Yoshiro Kaneko

10:40-11:00 **1DI03** P. Sangtrirutnugul, V. Ervithayasuporn, K. Kwanplod, T. Chaiprasert, K. Yawananonta (Mahidol University)

The diverse catalytic applications of functionalized polyhedral oligomeric silsesquioxanes



Tuesday May 14, 2024

Room A

Chair: Masaichi Saito

9:00-9:45 **2AP01** S. Dehnen (Karlsruhe Institute of Technology)
Multinary clusters based on (heavier) group 14 elements

Chair: Kenkichi Sakamoto

10:00-10:30 **2AK01** D. Scheschkewitz (Saarland University at Saarbrücken)
Heavier analogues of vinyl anions: Synthetic workhorses in low-valent main group chemistry

Chair: David Scheschkewitz

10:30-10:50 **2AI01** M. Saito (Saitama University)
A silylium ion incorporated into a σ -delocalized system

Professor William Leigh Memorial Session Chair: Kim Baines & Michael Brook

10:50-10:55 Michael Brook

10:55-11:25 **2AK02** L. Albers, L. Bührmann, Z. Dong, N. Geibel, C.-H. Liu, M. Würdemann, T. Müller (Carl von Ossietzky University Oldenburg)
Silole and germole dianions as precursors for unusual main group element compounds

11:25-11:40 **2AO01** K. Sakamoto, T. Sugino, S. Oka, J. Lee, A. Furusawa, S. Nagata, H. Takagi, K. Inagaki, Y. Sugiyama, K. Nagata, K. Ochiai, R. Miyazawa, S. Kobayashi, S. Nishi, R. Iwasaki (Shizuoka University)
Synthesis and properties of 9bH-9b-silaphenalene: A silicon-containing antiaromatic compound

11:40-11:55 Kim Baines

Lunch

Professor Ian Manners Memorial Session Chair: Kim Baines

13:20-13:30 Kim Baines

13:30-13:50 **2AI02** M. Rokni,^{1,2} K. W. Park,^{1,2} W. Sheard,^{1,2} E. M. Leitao^{1,2} (¹The University of Auckland, ²The MacDiarmid Institute for Advanced Materials and Nanotechnology)
Siloxane cross-linked polysulfides

13:50-14:10 **2AI03** C. Jing,^{1,2} Z. Pan,^{1,2} Y. Li,¹ C. Xu^{1,2} (¹Institute of Chemistry, Chinese Academy of Sciences, ²University of Chinese Academy of Sciences)
Synthesis and application of silicon-containing polymers for 3D printing

14:10-14:25 **2AO03** M. Tanabe,^{1,2} K. Osakada^{1,3} (¹Tokyo Institute of Technology, ²Fukushima Medical University, ³AIST)



Multinuclear Pd and Pt complexes with bridging Si-ligands. Their bonding, structures, and chemical properties

14:25-14:40

2AO04 M. Nanjo,¹ K. Nagasaki,¹ K. Kasahara,¹ A. Kitane,¹ G. Masuda² (¹Tottori University, ²Nisshinbo Holdings Inc.)

Synthesis and properties of halogen-free ionic liquids containing silyl-substituted tetraalkylborates

Coffee Break

Chair: Takahiro Gunji

14:55-15:25

2AK03 M. Unno, N. Takeda, A. Ouali, Y. Liu (Gunma University)

Recent development of double-decker silsesquioxanes

15:25-15:55

2AK04 J. J. R. Arias,¹ Z. Zhang,¹ Y. Liu,² M. Takahashi,² M. Unno,² N. Yodsin,³ P. Pimbaotham,⁴ S. Jungsuttiwong,⁴ P. Mahalingam,⁵ J. Azoulay,⁵ M. Rammo,⁶ A. Rebane,⁷ R. M. Laine¹ (¹University of Michigan, ²Gunma University, ³Silpakorn University, ⁴Ubon Ratchathani University, ⁵Georgia Institute of Technology, ⁶National Institute of Chemical Physics and Biophysics, ⁷Montana State University)

Conjugation in polysiloxane copolymer via unexpected Si-O-Si $d\pi$ - $p\pi$ overlap, a second mechanism?

15:55-16:15

2AI04 M. Wong Chi Man (Institut Charles Gerhardt Montpellier)

Sol-gel processing of new styryl-substituted cage silsesquioxanes: T₈, T₈-F, T₁₀, T₁₂ and an unprecedented t18 cage

Chair: Shigehiro Yamaguchi

16:30-17:15

2AP02 C. Cui, Y. Ding, L. Guo, W. Jin, M. Tian, J. Zhang (Nankai University)

Synthesis and reactivity of NHB-substituted low-valent silicon compounds



Tuesday May 14, 2024

Room B

Chair: Shabana Khan

- 10:00-10:20 **2BI01** N. Nakata (Saitama University)
Strong σ -donating *N*-heterocyclic silylenes supported by iminophosphonamides
- 10:20-10:40 **2BI02** M. P. Müller, P. Hädinger, A. Hinz (Karlsruhe Institute of Technology)
Modular access to acyclic silylenes: Effects of heteroatom substitution
- 10:40-10:55 **2BO01** A. Pöcheim, R. Zitz, J. Hlina, J. Baumgartner, C. Marschner (Graz University of Technology)
Silylated and germylated rare earth elements

Chair: Georgii Nikonov

- 10:55-11:10 **2BO02** T. Kodama, K. Uchida, M. Tobisu (Osaka University)
Synthesis, electronic structure, and reactivity of germylenes bearing a phenalenyl-based ligand
- 11:10-11:25 **2BO03** A. Kostenko, F. J. Kiefer, T. Eisner, S. Inoue (Technische Universität München)
The divergent reactivity of disilenes toward Lewis bases
- 11:25-11:55 **2BK01** H. Ito (Hokkaido University)
General synthesis of silylboranes and their application to iterative oligosilane synthesis

Lunch

Chair: Makoto Ogawa

- 13:20-13:40 **2BI03** N. Fukaya (AIST)
From silica to alkoxysilanes on the way to CO₂ utilization
- 13:40-13:55 **2BO04** Y. Chen,¹ M. Melendez-Zamudio², Y.-G. Yu², L. Gellé², M. A. Brook²
(¹EnRoute Interfaces Inc., ²McMaster University)
Waste tire rubber in silicones: Reducing the carbon footprint without sacrificing silicone properties
- 13:55-14:10 **2BO05** R. Miyamoto, K. Kanamori, H. Nakagawa, H. Tanaka, H. Kaji (Kyoto University)
Application of large monolithic silica: Supersaturated halogen-free purification for sustainable liquid chromatography
- 14:10-14:25 **2BO06** E. Mejía (Leibniz Institute for Catalysis)
Development and applications of silica-supported heterogeneous catalysts made from agricultural bio-waste



14:25-14:40 **2BO07** Y. Boiko,¹ V. Kyshkarova,² V. Tomina,¹ M. Vaclavikova,² I. Melnyk² (¹NAS of Ukraine, ²Institute of Geotechnics SAS)
Silica/Pectin hybrid material as efficient sorbent for lead(II) ions removal from aqueous solutions

Coffee Break

Chair: Akiyoshi Takehira

14:55-15:15 **2BI04** B. Arkles,¹ K. Pannell,² A. Thomas,³ L. Clemintino,³ D. Segarnick³ (¹Catemer Inc., ²University of Texas, ³Rutgers, The State University of New Jersey)
Silacrown ethers: Development as ion transport agents and potential therapeutics for channelopathy diseases

15:15-15:30 **2BO08** Z. J. Raczywolski,¹ E. Livermore,^{1,2} J. Dargacz,¹ P. M. Zelisko¹ (¹Brock University, ²Cardiff University)
Silicon-Containing Lipid Structures

15:30-15:45 **2BO09** L. Brewitz, E. Salah, C. J. Schofield (University of Oxford)
The effect of silicon incorporation on the potency of nirmatrelvir and derivatives

Chair: Atsushi Kawachi

15:45-16:05 **2BI05** T. F. Fässler, K. Frankiewicz, B. Frank (Technical University of Munich)
Variable Si to Ge ratios in polyhedral nine-atom clusters — Cluster dynamics and isomerization processes

16:05-16:20 **2BO10** J. O. Bauer, A. Falk (University of Regensburg)
Studies on dihydrogen release from phosphine sulfide- and amino-functionalized silicon-based systems



Tuesday May 14, 2024

Room C

Chair: Ikuyoshi Tomita

- 10:00-10:15 **2CO01** S. Ito, Y. Ito, K. Tanaka (Kyoto University)
Near-infrared emissive conjugated polymers composed of square-pyramidal five-coordinated silicon formazanates
- 10:15-10:30 **2CO02** J. Furgal, M. Rashed, C. Sims, E. Chandler, M. Fyfe (Bowling Green State University)
Photoresponsive R-alkoxysilane/siloxane systems and their applications in surface treatment, 3D printing, and coatings
- 10:30-10:45 **2CO03** M. Gon, S. Saotome, K. Tanaka (Kyoto University)
Development of paintable hybrid polymers showing thermally-stable white-light emission based on POSS
- 10:45-11:00 **2CO04** S. Bouveyron,¹ J. Delorme,² R. Mirgalet,² D. Blanc,² J. Raynaud,¹ V. Monteil¹
(¹Lyon 1 University, ²Elkem Silicones France)
New cobalt catalysts for alkene hydrosilylation and crosslinking of silicones

Chair: Makoto Tanabe

- 11:00-11:15 **2CO05** T. Takasuga, A. Kuwayama, T. Matsumoto, A. Mori, T. Nishino (Kobe University)
Lowering of surface free energy by introducing siloxane side chain to polythiophene
- 11:15-11:30 **2CO06** J. Seo, T. C. Siu, I. T. Tran, S. Mau, A. Saran, J. Hernandez, N. Q. Nguyen, A. Gonzalez, T. A. Su (University of California, Riverside)
Radical dimerization of sterically hindered saturated silicon clusters
- 11:30-11:45 **2CO07** S.-M. Kang, J. K. Lee, H. Kweon, B.-S. Bae (KAIST)
Synthesis of low Dk/Df thermosetting phenyl functionalized siloxane polymer for high frequency transmission system
- 11:45-12:00 **2CO08** T. Hirai, T. Mure, H. Sakai, S. Fujii, Y. Nakamura (Osaka Institute of Technology)
Preparation of chiral silica using linear polysiloxane with preferred-handed helical conformation

Lunch

Chair: Huie Zhu

- 13:20-13:35 **2CO10** N. D. Vu,¹ A. Boulegue-Mondière,² N. Durand,² J. Raynaud,¹ V. Monteil¹
(¹CNRS-Université Lyon 1-CPE Lyon, ²Elkem Silicones)
Low-temperature chemical recycling of any silicone waste to produce chlorosilanes
- 13:35-13:50 **2CO11** D. C. Webster, D. Boucher, M. Safaripour (North Dakota State University)
Studies of miscibility of silicone oils in model silicone elastomers



Chair: Dean C. Webster

- 13:50-14:05 **2CO12** A. Camacho-Ramírez,¹ M. Meléndez-Zamudio,² G. Palestino,³ J. Cervantes,¹ A. Guerra-Contreras¹ (¹University of Guanajuato, ²McMaster University, ³Autonomous University of San Luis Potosí)
Encapsulation and controlled release of curcumin by silicone amphiphilic copolymers micelles
- 14:05-14:20 **2CO13** J. Wolf,^{1,2} P. M. Danner,^{1,2} J. von Szczepanski,^{1,2} D. M. Opris^{1,2} (¹EMPA, ²ETH Zurich)
End-functionalized high dielectric permittivity polysiloxanes for solvent-free processing

Coffee Break

Chair: Norihisa Fukaya

- 14:55-15:15 **2CI01** M. Ogawa (Vidyasirimedhi Institute of Science and Technology)
Surface modification of functional particle with silane coupling reagents
- 15:15-15:30 **2CO14** V. Tomina,¹ N. Stolyarchuk,¹ V. Kyshkarova,² M. Vaclavikova,² O. Semeshko,² I. Melnyk² (¹NAS of Ukraine, ²Institute of Geotechnics SAS)
Spherical silica-based adsorbents with functionalized surfaces for industrial water treatment

Chair: Ichiro Imae

- 15:30-15:45 **2CO15** Y. Zuo (University of Jinan)
Polysiloxane-based materials for bioimaging
- 15:45-16:00 **2CO16** M. Y. Wu, X. Y. Xu, Y. X. Guo, Y. H. Zhu, X. L. Cai, W. F. Yu, R. X. Shi, Q. Z. Zhu (Shandong University)
Linear-nonlinear rheological study of macro-nano Ag *in-situ* filled polydimethylsiloxane
- 16:00-16:20 **2CI02** Y. Liu,¹ Z. Zheng,¹ N. Yagafarov,¹ R. Akashi,¹ N. Adachi,¹ M. Tokuda,¹ M. Katano,¹ A. Endo,¹ T. Chairasert,¹ A. Ouali,² N. Takeda,¹ M. Unno¹ (¹Gunma University, ²Univ. Montpellier, CNRS, ENSCM)
Advancing Janus tricyclic ladder-/cyclic siloxanes synthesis



Tuesday May 14, 2024

Room D

Chair: Takashi Hamada

- 10:00-10:15 **2DO01** J. Cao, S. Feng (Shandong University)
Preparation and application of multifunctional silicone sponges
- 10:15-10:30 **2DO02** Y. Y. Hu, W. F. Yu, M. Y. Wu, X. Y. Xu, Y. X. Guo, Y. H. Zhu, X. L. Cai, R. X. Shi, Q. Z. Zhu (Shandong University)
Improved selective extraction of 3,3'-dichlorobenzidine by molecularly imprinted polysiloxane microspheres
- 10:30-10:45 **2DO03** T. Wu, F. Zhou, G. Lai, Q. Chen (Hangzhou Normal University)
Preparation and properties of a silicone material with antimicrobial and antistatic properties
- 10:45-11:00 **2DO04** K. Matsukawa,¹ M. Monda,² Y. Noguchi,² Y. Miyaji² (¹Kyoto Institute of Technology, ²Sakamoto Yakuhin Kogyo Co., Ltd.)
Flexible and surface functional coatings prepared by sol-gel hybrids with polyglycerol-silane coupling agents

Chair: Kimihiro Matsukawa

- 11:00-11:15 **2DO05** T. Gunji, C. Kamegai, H. Fujioka, K. Yamamoto (Tokyo University of Science)
Preparation and characterization of proton-conductive polysilsesquioxanes
- 11:15-11:30 **2DO06** Q. Zhu (Shandong University)
Design and synthesis of functional polysilsesquioxane materials
- 11:30-11:45 **2DO07** T. Hamada,^{1,2} Y. Nakanishi,^{2,3} K. Okada,^{2,3} S. Mineoi,^{2,3} J. Ohshita² (¹Nagoya University, ²Hiroshima University, ³Mazda Motor Corporation)
Polysilsesquioxane-based thermal insulating material

Lunch

Chair: Yoshiyuki Mizuhata

- 13:20-13:40 **2DI01** S. Ishida, S. Honda, D. Yanagisawa, T. Iwamoto (Tohoku University)
Oxidation chemistry of silicon-silicon multiple bonded compounds
- 13:40-13:55 **2DO08** M. Ludwig, S. Stigler, S. Inoue (Technische Universität München)
Alumanyl silanides: Reactivity of a polarized silicon aluminium bond with multiple bond character

Chair: Shintaro Ishida

- 13:55-14:10 **2DO09** K. Ota, R. Ohno, N. Nishimura, T. Matsuo (Kindai University)
Synthesis and reduction of aryl cyclotrisilylium ion



14:10-14:25 **2DO10** K. Uchida,¹ I. Uematsu,¹ T. Iwamoto,² E. Kwon,² S. Yoshida,² R. Kato,³ H. Fukui³ (¹Toshiba Corporation, ²Tohoku University, ³Kioxia Corporation)
Structures and reactions of explosive silanes and its hydrolyzed product

14:25-14:40 **2DO11** F. J. Kiefer, S. Inoue (Technische Universität München)
Activation of carbonyl compounds by silylated disilenes

Coffee Break

Chair: Masaaki Nakamoto

14:55-15:15 **2DI02** S. Khan (IISER Pune)
N-Heterocyclic silylene supported copper(I) aryl complexes: Multitasking Cu(I) synthon

15:15-15:30 **2DO12** Q. Li, X. Li, H. Sun (Shandong University)
Synthesis of [PSi(silylene)P]-pincer cobalt complexes and their catalytic activity for alkene hydrosilylation reactions

Chair: Norio Nakata

15:30-15:45 **2DO13** K. Mashima, H. Tsurugi (Osaka University)
Organosilicon compounds as unique salt-free reducing reagents of metal compounds

15:45-16:00 **2DO14** Q. Fan, H. Sun, X. Li (Shandong University)
Effects of silylene ligands on performance of unsaturated bond hydrosilylation catalyzed by cobalt complexes

16:00-16:15 **2DO15** K. Tomer, J. Rump, P. Palui, A. C. Filippou (University of Bonn)
Rh-Si triple bonds: The bis(silylidyne) complex $[\text{Rh}(\text{SiTbb})_2(\text{PMe}_3)_2]^+$



Wednesday May 15, 2024

Room A

Chair: Tsukasa Matsuo

9:00-9:45

3AP01 T. Kato (Université de Toulouse, CNRS)
Highly unsaturated cationic Si(II)-complexes: Applications and perspectives

Chair: Jan Tillmann

10:00-10:30

3AK01 M. A. Brook, M. E. Noman, C. Fu, E. Donahue-Boyle, K. E. Silverthorne, A. Li (McMaster University)
Silicone elastomers at end of life: Improving circularity

10:30-10:50

3AI01 A. Sarkar, D. Dasgupta, T. Dalavoy, A. Kandikkal, K. Mukherjee, B. Falk, S. Nair, K. M. Lewis (Momentive Performance Materials Inc.)
Unexpected swelling of a fatty acid modified silicone gel in water caused by cooperativity of hydrogen bonding

Chair: Masafumi Unno

10:50-11:10

3AI02 J. Tillmann (Wacker Chemie AG)
Direct process for synthesis of methylchlorosilanes (MCS) is not enough to meet the demand of building blocks for the supply chain of a modern silicone producer

11:10-11:30

3AI03 K. M. Lewis, L. M. S. Negi, R. Hebbar, T. Dalavoy, R. Farhan, V. Rohith, D. Dasgupta, A. Sarkar (Momentive Performance Materials, Inc.)
Controlling the distribution of alkyl side chains on siloxane backbones to enhance cooperativity, non-covalent interactions, and mechanical properties

Chair: Masashi Kunitake

11:30-11:45

3AO01 H. Zhu,^{1,2} Y. Yoshida,² M. Mitsuishi² (¹Shanghai Optoelectronic Innovation Center, ²Tohoku University)
Novel polysiloxanes derived from metal-free catalysis

11:45-12:00

3AO02 T. Miyata, Y. Inoue, M. Togawa, A. Kawamura (Kansai University)
Amphiphilic liquid crystalline polysiloxane self-assemblies



Wednesday May 15, 2024

Room B

Chair: Christoph Marschner

10:00-10:20 **3BI01** T. Sasamori, Y. Pan, H. Ueno (University of Tsukuba)
Generation of bis(ferrocenyl)silylenes

10:20-10:40 **3BI02** F. Lips (Universität Münster)
Synthesis and reactivity of amino-substituted silicon ring and cluster compounds

Chair: Takahiro Sasamori

10:40-10:55 **3BO01** T. Kuwabara,¹ S. Ito,² K. Kobayashi,¹ Y. Ishii² (¹Ochanomizu University,
²Chuo University)

Hyperconjugative antiaromaticity of dianionic dibenzosilepins

10:55-11:10 **3BO02** B. Peerless, S. Wei, Y. Lohse, J. Rienmüller, S. Dehnen (Karlsruhe Institute of
Technology)

Insight into the redox behavior of anionic pseudo-tetrahedral p-block clusters

11:10-11:30 **3BI03** H. Hashimoto (Tohoku University)

Neutral silylyne complexes with $M\equiv Si$ triple bonds: cooperativity in the reactions
with small molecules

11:30-12:00 **3BK01** A. C. Filippou, K. Tomer, T. Deckstein, P. Palui, J. Rump (University of Bonn)
Ditetrylynes as Ylidyne Transfer Reagents in Transition Metal Chemistry



Wednesday May 15, 2024

Room C

Chair: Dengxu Wang

- 10:00-10:20 **3CI01** I. Shin,¹ Y.-Z. Yan,^{1,2} C.-S. Ha¹ (¹Pusan National University, ²Hainan University)
Polysilsesquioxane as a nanofiller for polymer base hybrid nanomaterials
- 10:20-10:35 **3CO02** J. Castets,¹ L. Roach,¹ E. Morvan,² D. Montero,³ M. Treguer-Delapierre,¹ G. L. Drisko¹ (¹CNRS, ²CNRS, INSERM, ³Sorbonne Université)
Engineering pore structure in silica thin films via precursor reactivity

Chair: Chang-Sik Ha

- 10:35-10:50 **3CO03** D. Wang, S. Feng, H. Liu (Shandong University)
Cyclosiloxane-linked fluorescent porous polymers for multifunctional chemical sensors
- 10:50-11:05 **3CO04** T. Hayashi, K. Kuroda, A. Shimojima (Waseda University)
Incorporation of cage germoxanes into siloxane-based materials for tuning their pore characteristics
- 11:05-11:20 **3CO05** M. Pérez, A. Medina, B. Ruiz, J. Guerra (Universidad de Guanajuato)
Synthesis of nanozeolites and their evaluation as a remineralizing agent in restorative dentistry



Wednesday May 15, 2024

Room D

Chair: Chuan He

- 10:00-10:20 **3DI01** R. Shintani (Osaka University)
Copper-catalyzed silylfunctionalization of alkynes
- 10:20-10:35 **3DO01** N. Nishina,¹ M. Hamamura,¹ K. Kimoto,¹ T. Bürgi² (¹Shizuoka University, ²University of Geneva)
Super-efficient hydrosilylation of alkynes catalyzed by gold clusters
- 10:35-10:50 **3DO02** S. Ito, K. Sekine, D. Akaishi (Tokyo Institute of Technology)
Copper-catalyzed enantioselective hydrosilylation of *gem*-difluorocyclopropenes
- 10:50-11:05 **3DO03** A. Vivien,¹ L. Veyre,¹ R. Mirgalet,² C. Camp,¹ C. Thieuleux¹ (¹Université de Lyon, ²Elkem Silicones)
Original non-noble metal nanoparticles and structurally simple complexes as promising catalysts for olefin hydrosilylation reactions

Chair: Ryo Shintani

- 11:05-11:20 **3DO04** M. Morisue, W. Nakamura, M. Nakamura, N. Ohono (Kyoto Institute of Technology)
Hiyama-type Sonogashira cross-coupling reaction driven by siloxane formation
- 11:20-11:35 **3DO05** Y. Naganawa,¹ H. Kameo,² Y. Nakajima^{1,3} (¹AIST, ²Osaka Metropolitan University, ³Tokyo Institute of Technology)
Selective synthesis of monochlorosilanes via palladium-catalyzed cross-coupling of polychlorosilanes with alkylaluminum reagents



Thursday May 16, 2024

Room A

Chair: Keiji Kabeta

9:00-9:45 **4AP01** B. Arkles,^{1,2} A. E. Kaloyeros² (¹Temple University, ²Kalark Nanostructure Sciences, Inc.)
Near-zero thickness silicon-based thin film chemistry and processes

Chair: Hideyuki Nakano

10:00-10:30 **4AK01** M. Wagner, M. Bamberg, B. Köstler (Goethe-Universität Frankfurt)
News from silafullerane and Si,Ge-heteroadamantane clusters

10:30-10:50 **4AI01** G. L. Drisko,¹ M. Parker,¹ M. L. De Marco,¹ C. Cibaka-Ndaya,¹ J. G.-C. Veinot,² I. L. Roiban,³ M. Gonidec,¹ P. Rosa¹ (¹Univ. Bordeaux, CNRS, ²University of Alberta, ³Univ. Lyon)
The chemistry behind creating optically resonant nanoparticles

Chair: Kazuo Tanaka

10:50-11:10 **4AI02** Y. T. Park (Keimyung University)
Synthesis and electrochemical properties of silole-containing materials for lithium-ion batteries

11:10-11:30 **4AI03** M. L. Tang,¹ K. Wang,¹ N. Nguyen,² J. Brennan,³ R. Frontiera,³ T. Su² (¹University of Utah, ²University of California, Riverside, ³University of Minnesota)
Silicon nanocrystals for photon upconversion: tuning the electronic coupling with molecular triplet acceptors

Lunch

Chair: Yoichiro Kuninobu

13:20-13:50 **4AK02** L. Fensterbank (Collège de France)
Organosilicon derivatives for radical chemistry and organometallic catalysis

13:50-14:05 **4AO01** J. Shimokawa, K. Hitoshio, H. Saito, H. Yorimitsu (Kyoto University)
Unveiling the potential of dioxasilepanyl: a seven-membered dialkoxysilyl group and its distinctive synthetic utility

Chair: Jun Shimokawa

14:05-14:20 **4AO02** A. V. Arzumanyan (Russian Academy of Sciences)
Catalytic approaches for synthesis of functional organosilicon compounds

14:20-14:40 **4AI04** Y. Kuninobu (Kyushu University)
Synthesis of silicon-containing π -conjugated molecules based on C–H and Si–H transformations

Coffee Break



Chair: Katsuhiko Tomooka

- 14:55-15:10 **4AO03** T. Kawashima,¹ H. Arai² (¹Gunma University, ²University of Miyazaki)
Reactions of silyl cations generated from 4- and 5-hydrosilyl-1-methyl-1*H*-indoles with alkynes
- 15:10-15:30 **4AI05** C. He (Southern University of Science and Technology)
Catalytic asymmetric dehydrogenative coupling toward Si-stereogenic silanes

Chair: Hajime Ito

- 15:30-16:00 **4AK03** K. Tomooka (Kyushu University)
Chemistry of chiral silicon molecules
- 16:00-16:15 **4AO04** I. K. Goncharova, A.V. Arzumanyan (Russian Academy of Sciences)
[M]-/Organo-catalyzed aerobic Si-H- and C-H-functionalization as the green way for the preparation of functionalized organosilicon compounds

Chair: Michinori Suginome

- 16:30-17:15 **4AP02** T. Hiyama (Chuo University)
Silicon-based cross coupling reaction



Thursday May 16, 2024

Room B

Chair: Ryan J. Trovitch

- 10:00-10:15 **4BO01** S. Marl, K. Klier, A. Rüppel, R.-U. Giesen, H.-P. Heim (University of Kassel)
Determination of the cross-linking system of high consistency silicone elastomers using TGA and FTIR
- 10:15-10:35 **4BI01** A. Shimojima (Waseda University)
Design of novel silicone-based elastomers utilizing silica-based nanoparticles

Chair: Atsushi Shimojima

- 10:35-10:55 **4BI02** R. J. Trovitch (Arizona State University)
Promise and limitations of silane diamine and siloxane diamine copolymers
- 10:55-11:10 **4BO02** D. A. Bellido-Aguilar, M. Safaripour, K. VanDonselaar, L.-S. C. Ndunagum, M. Nazem Salimi, D. C. Webster, A. B. Croll (North Dakota State University)
The adhesion of silicone elastomers to glass and ice
- 11:10-11:25 **4BO03** K. Kanamori, R. Ueoka, R. Miyamoto (Kyoto University)
Silicone-based aerogels that show mechanical flexibility

Lunch

Chair: Yujia Liu

- 13:20-13:35 **4BO04** D. Kawaguchi, H. Lu (The University of Tokyo)
Surface reconstruction of a cross-linked poly(dimethylsiloxane) film associated with CO₂ exposure
- 13:35-13:50 **4BO05** M. Kunitake, A. Mori, A. Pathak, S. Watanabe (Kumamoto University)
Recycling of necklace-shaped polydimethylsiloxanes based on reversible dimerization of anthracene units
- 13:50-14:05 **4BO06** J. Noguchi, K. Takashima, K. Kubo, S. Kume, T. Mizuta (Hiroshima University)
Depolymerization reaction of silicone grease catalyzed by phosphido-bridged binuclear Pd(I) complex

Chair: Daisuke Kawaguchi

- 14:05-14:20 **4BO07** K. Kitazawa, Y. Tabata (Shin-Etsu Chemical Co., Ltd.)
Novel addition curing system to build cross-linked organopolysiloxane utilizing cyclotrimerization of alkynes
- 14:20-14:35 **4BO08** T. Otake, O. Tamura (Momentive Performance Materials Japan LLC)
Silicone optical bonding for automotive display

Coffee Break



Chair: Tsutomu Mizuta

- 14:55-15:15 **4BI03** N. W. Kinzel,¹ M. Cypryk,² J. Kurjata,² M. Kwiatkowska,² G. Mielniczak,² U. Mizerska,² K. Piórecka,² S. Rubinsztajn² (¹Wacker Chemie AG, ²PAS)
Cationic Cp*Ge(II) species as alkoxy-sil(ox)ane coupling catalysts
- 15:15-15:30 **4BO09** S. Milenin,^{1,2} K. Bezlepina,^{1,2} I. Belikova,^{1,3} V. Aristova,^{1,3} K. Klokova,^{1,2} K. Bakanov,^{1,2} S. Ardabevskaia,^{1,2} F. Drozdov,^{1,2} D. Migulin,¹ A. Muzafarov^{1,4} (¹Tula State Lev Tolstoy Pedagogical University, ²Enikolopov Institute of Synthetic Polymeric Materials of Russian Academy of Sciences, ³Mendeleev University of Chemical Technology of Russia, ⁴RAS)
CuAAC strategy for the preparation of functional organosilicon monomers and polymers

Chair: Niklas Kinzel

- 15:30-15:45 **4BO10** F. V. Drozdov, A.I. Ryzhkov, P. D. Shkinev, S. A. Milenin, S. N. Ardabievskaya, K. A. Bezlepina, G. V. Cherkaev, A. M. Muzafarov (Russian Academy of Sciences)
Functional siloxanes - new approaches to synthesis and prospects for their application
- 15:45-16:00 **4BO11** A. Khmel'nitskaia, A. Kalinina, S. Ponomarenko, A. Muzafarov (Enikolopov Institute of Synthetic Polymeric Materials)
Synthesis of vinyl-containing PDMS in an active medium



Thursday May 16, 2024

Room C

Chair: Kazushi Mashima

- 10:00-10:15 **4CO01** M. Scheer, A. E. Seitz, M. Eckhardt, M. Piesch, S. Reichl, C. Riesinger (University of Regensburg)
Pathways to Si-containing group 15 element cages and cycles
- 10:15-10:30 **4CO02** Y. Suga, Y. Sunada (The University of Tokyo)
Carbon–heteroatom double bonds cleavage by iron disilyl complexes
- 10:30-10:45 **4CO03** N. S. Willeit, W. Klein, P. Coburger, E. Fritz-Langhals, T. F. Fässler (Technical University of Munich)
Functionalized [Ge₉Ni⁰] clusters as homogeneous single-site catalysts

Chair: Manfred Scheer

- 10:45-11:00 **4CO04** K. Nagata, H. Omura, H. Tobita, H. Hashimoto (Tohoku University)
Photoinduced one-pot synthesis of a chromium germylyne complex and its formation mechanism
- 11:00-11:15 **4CO05** C. Fontanilla,¹ K. Nagata,¹ Y. Shimizu,² S. Mori,² H. Hashimoto¹ (¹Tohoku University, ²Ibaraki University)
Molybdenum–germanium triple–bonded complex as catalyst for hydroboration of carbonyl substrates
- 11:15-11:30 **4CO06** G. I. Nikonov (Brock University)
Si(0) complex with ambiphilic reactivity

Lunch

Chair: Dmitry Bravo-Zhivotovskii

- 13:20-13:35 **4CO07** Y. Tu, Y. Inagaki, W. Setaka (Tokyo Metropolitan University)
Simultaneous synthesis and characterization of disilabicycloalkanes and tetrasilatricycloalkanes
- 13:35-13:50 **4CO08** T. Asakawa, K. Sugamata, M. Minoura (Rikkyo University)
Synthesis and properties of a linear 2-germapropadiene

Chair: Alexander Hinz

- 13:50-14:05 **4CO09** C.-H. Liu, T. Müller (Carl von Ossietzky University Oldenburg)
Silole and germole anions substituted with stabilized silylenes
- 14:05-14:20 **4CO10** M. Murai (Nagoya University)
Si, Ge, and Sn-bridged π -conjugated carbocations: Azulene-fusing strategy for designing near-infrared dyes



4CO11 D. Bravo-Zhivotovskii, Y. Goldshtein, Y. Glagovsky, Y. Apeloig (Technion-Israel Institute of Technology)

Elimination of lithium silanolate from heavy enolates as an efficient route to $\text{Li}(\text{R})\text{E}=\text{C}(\text{R}'_2)$ (E=Si, Ge) reagents

Coffee Break

Chair: Maxim Bermeshev

14:55-15:15

4CI01 K. Hanaoka (Keio University)

Development of far-red to near-infrared Si-rhodamines and their application to fluorescence probes

15:15-15:30

4CO12 M. Haas, M. Drusgala, T. Lainer, G. Glotz, G. Gescheidt (Graz University of Technology)

Synthesis and photochemical investigation of novel acyl-metalloids

Chair: Masahito Murai

15:30-15:45

4CO13 K. M. Frankiewicz, T. F. Fässler (Technical University of Munich)

Anything but static - unexpected dynamic behaviour of uncharged mixed silicon germanium *Zintl* type clusters

15:45-16:00

4CO14 P. Lezhnin, M. Guseva, D. Alentiev, E. Bermesheva, M. Bermeshev (RAS)

Bis-silylation of norbornadiene as a versatile and simple approach to the preparation of Si-substituted norbornene-type monomers



Thursday May 16, 2024

Room D

Chair: Louis Gabriel Fensterbank

- 10:00-10:20 **4DI01** D. Zhao (Nankai University)
Synthesis and applications of silicon-containing small molecules
- 10:20-10:35 **4DO01** D. Hayashi, T. Tsuda, R. Shintani (Osaka University)
Palladium-catalyzed skeletal rearrangement of silylaryl triflates via C–Pd/C–Si bond exchange
- 10:35-10:50 **4DO02** M. Majumdar (Indian Institute of Science Education and Research)
Reductively disilylated N-heterocycles as versatile reagent in material syntheses and organic transformations

Chair: Dongbing Zhao

- 10:50-11:05 **4DO03** K. Igawa,¹ A. Kuroo,³ D. Yoshihiro,³ T. Kakigi,³ Y. Abe,³ K. Tomooka²
(¹Kumamoto University, ^{2,3}Kyushu University)
Synthetic application of silacyclopentenols as versatile chiral-pool for chiral silacycles
- 11:05-11:20 **4DO04** J. Walkowiak, A. Franczyk, K. Stefanowska, T. Sokolnicki (Adam Mickiewicz University)
Sustainable and highly selective approaches to saturated and unsaturated organosilicon compounds
- 11:20-11:35 **4DO05** Y. Kawasaki,¹ K. Igawa,² K. Tomooka¹ (¹Kyushu University, ²Kumamoto University)
Synthesis of silylalkene and its ozone oxidation

Lunch

Chair: Eka Lutfi Septiani

- 13:20-13:40 **4DI02** H. Nakano (Kindai University)
Silicon and germanium nanosheets for nanodevices
- 13:40-13:55 **4DO06** P. D. Lickiss,¹ S. Tian,¹ M. Abbas,¹ R. P. Davies,¹ A. J. P. White¹, P. Horton²
(¹Imperial College, ²University of Southampton)
Metal-organic framework construction using Si and Ge linkers

Chair: Paul Lickiss

- 13:55-14:10 **4DO07** J. G. C. Veinot, K. O'Connor, A. Rubletz (University of Alberta)
Friend or foe: Unraveling the SiO evolution reaction and how it impacts silicon quantum formation
- 14:10-14:25 **4DO08** E. L. Septiani, T. Hirano, T. Ogi (Hiroshima University)
Silica coating on soft-magnetic metal particles prepared by one-step aerosol process



14:25-14:40

4DO09 K. L. A. Cao, T. Ogi (Hiroshima University)Innovative synthesis of carbon-coated SiO_x particles as anode materials for lithium-ion batteries

Coffee Break

Chair: Jonathan Veinot

14:55-15:10

4DO10 M. A. Parker,¹ M. L. De Marco,¹ A. Ghoridi,² D. Portehault,² P. Rosa,¹ M. Gonidec,¹ G. L. Drisko¹ (¹Univ. Bordeaux, ²Sorbonne Université)

Redox reaction between a silicon Zintl phase and coordination complex to form silicon particles of tunable size

15:10-15:25

4DO11 M. I. Aguirre Cardenas, T. C. Siu, A. E. Pimentel, M. O. Hight, M. G. Shimono, S. Thai, V. Carta, T. A. Su (University of California, Riverside)

Synthesis of silicon-germanium and germanium adamantanes

15:25-15:40

4DO12 C. Yom, N. Garcia, C. Trochez, Q. Johnson, B. P. S. Chauhan (William Paterson University of New Jersey)

Pt-nanoparticle catalyzed ring-opening polymerization of strained cyclic silanes



Friday May 17, 2024

Room A

Chair: Norihiro Tokitoh

9:00-9:45

5AP01 K. M. Baines (Western University)
From Kipping to Kim and lessons learned along the way

9:45-10:00

Closing Ceremony