

## CARB

Division of  
Carbohydrate ChemistryT. L. Lowary, *Program Chair*

## SUNDAY MORNING

## Section A

Salt Palace Convention Center  
155 E**Claude S. Hudson Award in Carbohydrate Chemistry: Symposium in Honor of Peter H. Seeberger** Cosponsored by ORGNT. L. Lowary, *Organizer, Presiding*

9:00 Introductory Remarks.

9:05 **1.** A *Candida albicans* conjugate vaccine. **D. R. Bundle**, C. Nycholat, S. Dziadek, T. Lipinski, X. Wu, S. Cherlaparambil, R. P. Rennie, Y. Yasui, H. Xin, J. E. Cutler9:45 **2.** Chemical synthesis and immunological properties of synthetic vaccine candidates and immune modulators. **G. J. Boons**

10:25 Intermission.

10:45 **3.** Direct glycosylation with anomeric hydroxy sugars by activation with phthalic anhydride and Ti<sub>2</sub>O and its application to oligosaccharide synthesis. **K. S. Kim**, B.-Y. Lee, J. Y. Baek, D. B. Fulse11:25 **4. Award Address** (Claude S. Hudson Award in Carbohydrate Chemistry, sponsored by National Starch and Chemical Company). From automated oligosaccharide synthesis to vaccines and diagnostics. **P. H. Seeberger**

## SUNDAY AFTERNOON

## Section A

Salt Palace Convention Center  
155 E**Claude S. Hudson Award in Carbohydrate Chemistry: Symposium in Honor of Peter H. Seeberger** Cosponsored by ORGNT. L. Lowary, *Organizer*D. R. Bundle, *Presiding*1:30 **5.** Probing oligofuranoside-protein recognition. **T. L. Lowary**2:10 **6.** Posttranslational glycosylation: Challenges and opportunities. **C.-H. Wong**

2:50 Intermission.

3:10 **7.** Sugar and proteins: Strategies in synthetic biology. **B. G. Davis**3:50 **8.** Lipoteichoic acid: Synthesis and some biological properties. **R. R. Schmidt**, C. Pedersen, Y. Qiao, I. Figueroa-Perez

## MONDAY MORNING

## Section A

Salt Palace Convention Center  
155 E**Carbohydrate Sensors: Recent Developments and Applications**S. Iyer, *Organizer, Presiding*

8:25 Introductory Remarks.

8:30 **9.** Ratiometric lectin microarray technology. **L. K. Mahal**9:00 **10.** A reusable sugar biosensor using Ru(II)-carbohydrate dendrimer-protein interactions on gold surfaces. **P. H. Seeberger**, R. Kikkeri9:30 **11.** Manipulating FRET with polymeric vesicles: "Turn-on" fluorescence sensor for bacterial toxin. **Q. Cheng**

10:00 Intermission.

10:15 **12.** Boronolactins and fluorescent boronolactins as potential research tools and diagnostics. **B. Wang**10:45 **13.** Magnetic glyco-nanoparticles, a unique tool for pathogen detection, decontamination and differentiation. **X. Huang**, K. El-boubbou11:15 **14.** Label-free optical biosensors to probe pathogen adhesion: Glycoarray surface characterization and platform development. **M. Dhayal**, T. Owen, J. W. Chamberlain, H. Q. Nguyen, R. Egnatchik, M. J. Hochberg, **D. M. Ratner**11:45 **15.** Multivalent synthetic glycoconjugates for probing carbohydrate-carbohydrate and carbohydrate-protein interactions. **A. Basu**

## MONDAY AFTERNOON

## Section A

Salt Palace Convention Center  
155 E**Carbohydrate Sensors: Recent Developments and Applications**S. Iyer, *Organizer, Presiding*1:45 **16.** Detection of intact influenza virus. **J. Schmidt**2:15 **17.** Multivalent carbohydrates: Ligands for sensors. **C.-L. Schengrund**, **M. C. Blome**, K. A. Petro2:45 **18.** Receptor mimics distinguish between Shiga toxin serotypes. **A. A. Weiss**

3:15 Intermission.

3:30 **19.** Seasonal influenza virus isolates vary in binding specificity to sialylated glycans. **G. Air**, S. Gulati, M. Tappert, D. F. Smith, R. Cummings4:00 **20.** Structural basis of carbohydrate receptor recognition by Simian Virus 40. **U. Neu**, K. Woellner, G. Gauglitz, T. Stehle4:30 **21.** Surface plasmon resonance and protein-carbohydrate interactions. **M. Fais**, C. Schofield, D. A. Russell, **R. Field**

5:00 Concluding Remarks.

## MONDAY EVENING

## Section A

Salt Palace Convention Center  
Hall 5

Sci-Mix

T. L. Lowary, *Organizer*

8:00-10:00

42-43, 46-47, 49, 52, 55-57, 59-63, 66-68, 70, 72-73, 75. See subsequent listings.

## TUESDAY MORNING

## Section A

Salt Palace Convention Center  
155 E**Synthetic Carbohydrate Receptors: Design and Applications**D. G. Hall, *Organizer, Presiding*

8:55 Introductory Remarks.

9:00 **22.** Pyrrolic tripodal host molecules: A family of effective receptors for monosaccharides. **S. Roelens**9:40 **23.** Cyclohexane-centered tripodal receptors for carbohydrate recognition in protic and aprotic solvents. **B. L. Miller**

10:20 Intermission.

10:40 **24.** Poly(meta-ethynylpyridine)s: Artificial polymers recognizing saccharides to form helical structures. **H. Abe**, M. Inouye11:20 **25.** "Synthetic lectins": Recognition of carbohydrates in aqueous solution through noncovalent interactions. **A. P. Davis**, E. Klein, Y. Ferrand, N. P. Barwell

## Section B

Salt Palace Convention Center  
155 C**Carbohydrate Based Drugs**Z. J. Witzcak, *Organizer, Presiding*

8:30 Introductory Remarks.

8:40 **26.** A chemoenzymatic approach for carbohydrate-based drug discovery. **X. Chen**9:10 **27.** Exploratory sugar chemistry for the discovery of new biomolecules. **A. Pilar Rauter**9:40 **28.** Targeting nucleic acids with aminosugars. **D. P. Arya**, N. N. Shaw, S. Kumar

10:10 Intermission.

10:20 **29.** Protein-septanose interactions: Lessons from a model system. **M. W. Pecuh**10:50 **30.** 1-Amino-1-deoxy-D-fructose derivatives interact with antitumor modalities in vitro and in vivo. **V. V. Mossine**, T. P. Mawhinney11:20 **31.** Targeting tumor metabolism with simple monosaccharide analogs. **W. Priebe**, I. Fokt, T. Madden, C. Conrad

11:50 Concluding Remarks.

## TUESDAY AFTERNOON

## Section A

Salt Palace Convention Center  
155 E**Synthetic Carbohydrate Receptors: Design and Applications**D. G. Hall, *Organizer, Presiding*

2:00 Introductory Remarks.

2:05 **32.** Sweetness and light: Continuous glucose sensing with a fluorescent thin-film hydrogel. **B. Singaram**2:45 **33.** Optical detection of carbohydrates. **R. M. Strongin**

3:25 Intermission.

3:45 **34.** Peptide borono-lectins: Novel probes for glycomics research. **K. Bicker**, Y. Zou, P. R. Thompson, **J. J. Lavigne**4:25 **35.** Using boronic acid-diol/alcohol interactions for the selections of DNA aptamers capable of differentiating glycosylation variations in glycoproteins. **B. Wang**

## Section B

Salt Palace Convention Center  
155 C**Carbohydrate Based Drugs**Z. J. Witzcak, *Organizer*W. Priebe, *Presiding*1:00 **36.** Synthesis of neoglycoconjugates containing 4-amino-4-deoxy-L-arabinose LPS core units. **B. Mueller**, M. Blaukopf, **P. Kosma**1:30 **37.** Carbohydrates as the building blocks for diversity-oriented synthesis of bioactive compounds. **C.-W. T. Chang**2:00 **38.** Functionalized (1-5)-S-C-thiodisaccharides as new generation of specific galectin-3 inhibitors. **Z. J. Witzcak**, D. Lorchak, N. Nguyen

2:30 Intermission.

2:40 **39.** Conformational and NMR studies of (1,5)-5-C-thiodisaccharide. **H. Castejon**, C. Bernecker, J. Huff, Z. J. Witzcak3:10 **40.** Derivation of new therapeutics from the diversification of heparin structure. **R. J. Kerns**3:40 **41.** Sugar/peptide nanoconstructions as antitumor therapeutics and vaccine platforms. **J. B. Barchi Jr.**, A. Sundgren, R. P. Briñas, K. Rittenhouse-Olson, J. Heimburg, A. Houghton, P. Sahoo, S. Morey

4:10 Concluding Remarks.

The official technical program for the 237th National Meeting is available online at [oasys2.confex.com/acs/237nm/techprogram/](http://oasys2.confex.com/acs/237nm/techprogram/).

## TUESDAY EVENING

## Section A

Salt Palace Convention Center  
Hall 5**General Posters**T. L. Lowary, *Organizer*

7:00-9:00

42. SAR study for the carbohydrate segment of the antiproliferative factor from interstitial cystitis patients. **P. Kaczmarek**, S. K. Keay, K. R. Koch, C.-O. Zhang, L. Guo, C. J. Michejda, H. Shahjee, J. J. Barchi Jr.43. A linchpin carbocyclization approach for the synthesis of carbasugars and carbanucleosides. **L. M. H. Leung**, **B. Linclau**44. Application of click chemistry in major groove functionalization of DNA. **N. K. Andersen**, L. Spacilova, P. Nielsen45. Artificial oxidases by secondary side modification of cyclodextrins. **T. H. Fenger**, M. Bols46. Assembly of proteoglycans: A puzzle resolved? **V. M. Tran**, B. Kuberan47. Cyclodextrins artificial enzymes. **M. Petrillo**, M. Bols48. Enantiomeric separation of some flavanones by chiral electrokinetic chromatography using shinorhizobial linear octasaccharides. **C. Kwon**, S. S. M. Abu, **H. Kim**, S. Jung49. Finite speed diffusion effects in diabetes sensing. **S. R. Kal**50. First principles study of the ground state and optical properties of carbohydrates adsorbed on Ag(111) surface. **A. V. Gavrilenko**, C. S. McKinney, C. E. Bonner Jr., V. I. Gavrilenko51. Flame retardancy of filled polypropylene nanocomposites. **P. Patra**, S. Deodhar, C. A. Wilkie52. Synthetic multivalent glycoconjugates for detection of Shiga and Ricin toxins. **S. S. Mahajan**, S. S. Iyer53. Using peptide borono lectins (PBLs) to sense glycoproteins expressed during carcinogenesis. **K. Bicker**, Y. Zou, J. Sun, P. R. Thompson, J. J. Lavigne54. Interactions of thymine and deoxythymidine with some biological anions (CN<sup>-</sup>, Cl<sup>-</sup>, F<sup>-</sup>) in the gas phase. **M. Shakorianfar**, A. Fattahi55. Mechanism of glycosaminoglycan biosynthesis. **X. Victor**, M. Ethirajan, T. K. N. Nguyen, V. M. Tran, B. Kuberan56. Modification of 2-deoxystreptamine for RNA recognition. **S. E. Roberts**57. Resolving conflicting data on expression of the Tn antigen and implications for clinical trials with cancer vaccines. **Q. Li**, M. R. Anver, D. O. Butcher, J. C. Gildersleeve58. Synthetic glycans for the detection and capture of shiga toxins. **A. A. Kulkarni**, S. S. Iyer59. Preparation of ribavirin analogs by copper- and ruthenium-catalyzed azide-alkyne 1,3-dipolar cycloaddition. **L. A. Agrofoglio**, U. Pradere, V. Roy, T. R. McBrayer, R. F. Schinazi60. Selective adenosine-monophosphate uptake by water-compatible molecularly imprinted polymer. **L. A. Agrofoglio**, F. Breton, R. Delépée, D. Jegourel, D. Deville-Bonne61. Simple chemical transformation of lignocellulosic biomass into fuels and chemicals. **J. B. Binder**, R. T. Raines62. Synthesis of 2-deoxy- $\beta$ -galactosylcaramide. **M. S. Thakur**, A. Howell63. Stereoselective synthesis of arabinogalactan fragments. **J. Park**, G. J. Boons64. Synthesis and antimycobacterial activity of  $\beta$ -D-arabino glycosyl triazoles, sulfones and sulfamides. **B. L. Wilkinson**, B. Ayers, I. A. Smellie, H. Long, E. Sim, A. J. Fairbanks65. Structural analysis on osmoregulated periplasmic glucans of *Pseudomonas syringae*. E. Cho, U. Jeon, **H. Kim**, S. Jung66. Structure-binding relationship studies of 1,8-naphthyridine based macrocyclic receptors with carbohydrates in aqueous media. **A. Addo-Mensah**, P. Cudic

67. Tetrahydrofuran effect in the synthesis of sialosides. C. De Meo, **D. Mueller**, M. Farris, N. Ginder, B. Gulley, U. Priyadarshani, M. Woods
68. Heterogeneous synthesis of novel hemi-cellulosic derivatives containing cationic groups and anionic groups. **J. Ren**, F. Peng, C. Liu, R. Sun
69. Computational study on the interaction of cytosine and its nucleosides with some biological anions. **Z. Aliakbar Tehrani**, A. Fattahi
70. Isolation, purification and characterization of water-soluble polysaccharide from *Anemarrhena Sphodroides* Bge. **H. Yu**, M. Yang, Y. Zhao, Z. Ruan
71. Change of micrograph and molecular structure of micronized potato starch in biodegradation process. **F. Hu**, L. Chen, Y.-K. He
72. Studies on digestibility and biodegradation of modified high amylose cornstarch as microcapsule wall material. **F. Hu**, Q.-B. Wen, L. Qiu
73. Study of dyeing poly(lactic acid) fiber with a novel alkyl disperse dyestuff. **S.-K. Liao**
74. Crosslinking of electrospun hydroxypropyl cellulose nanofibers and their application in drug release. Y. Tian, **R. Liu**, J. Tan, D. Wang, W. Liu, L. Ma, W. Liu, K. Zheng, Y. Li, Y. Huang
75. Preparation and controlled-release property of new polymer/layered silicate nanocomposites. **X. Wang**

### WEDNESDAY MORNING

#### Section A

Salt Palace Convention Center  
155 E

**Symposium in Honor of Morris Robins**  
Cosponsored by MEDI

P. D. Cook, *Presiding*

M. Peterson, *Organizer, Presiding*

- 8:15 Introductory Remarks.
- 8:20 **76.** Nucleoside drug discovery: What is its future? **P. D. Cook**
- 9:00 **77.** Novel base-modified nucleosides, nucleotides and nucleic acids. **M. Hoces**
- 9:40 Intermission.
- 10:00 **78.** Path to antiviral therapy for chronic hepatitis B viral infection. **D. L. J. Tyrrell**
- 10:40 **79.** Clevidine (L-MAU): A unique antiviral agent for the treatment of chronic hepatitis B virus infection. **C. K. Chu**
- 11:20 **80.** The synthesis and biological activity of some nucleoside analog inhibitors of Hepatitis C virus RNA polymerase (NS5B). **M. MacCoss**

### WEDNESDAY AFTERNOON

#### Section A

Salt Palace Convention Center  
155 E

**Symposium in Honor of Morris Robins**  
Cosponsored by MEDI

M. Peterson, *Organizer*

A. D. Broom and V. Samano, *Presiding*

- 1:30 **81.** Synthesis and antiviral profiles of nucleoside analogs. **D. C. Liotta**, R. F. Schinazi
- 2:10 **82.** Natural amino acids as leaving group for DNA synthesis using HIV-RT. **P. Herdewijn**
- 2:50 Intermission.
- 3:20 **83.** S-Adenosylhomocysteine vs. S-ribosylhomocysteine (LuxS): Similarities and differences between two enzymes. **S. F. Wnuk**, A. J. Sobczak, V. Malladi, P. R. Sacasa, J.-P. Pitteloud

**Please refrain from using cellular telephones and cameras during technical sessions.**

- 4:00 **84.** Antiproliferative and protein kinase binding activities of some N6,5'-bis-ureido 5'-amino-5'-deoxyadenosine derivatives. **M. A. Peterson**
- 4:40 Concluding Remarks. **M. J. Robins.**

#### Section B

Salt Palace Convention Center  
155 C

#### General Papers

T. L. Lowary, *Organizer*

P. R. Andreada, *Presiding*

- 1:20 **85.** Unprecedented stabilization of acyclic keto tautomers of fructosamine derivatives in crystalline state and solutions. V. V. Mossine, D. L. Chance, C. L. Barnes, R. Glaser, T. P. Mawhinney
- 1:40 **86.** Cyclodextrins used as solubility enhancer and chiral selector for phenolic compounds through inclusion complexes. **H. Kim**, S. Jung
- 2:00 **87.** High-yielding biocatalytic process for the production of 2-O-( $\alpha$ -D-glucopyranosyl)-sn-glycerol, a natural osmolyte and useful moisturizing ingredient. **T. Sawangwan**, C. Goedl, M. Mueller, A. Schwarz, B. Nidetzky
- 2:20 **88.** Microbial carbohydrate-doped multilayered carbon nanotubes based on a glassy carbon electrode for monitoring rutin, quercetin and their mixture for selective detection in an aqueous electrolyte. **J.-H. Jin**, S. Jung
- 2:40 **89.** Optical rotatory correlations in the 100th year of the Hudson rules. **D. Horton**, H. S. El Khadem
- 3:00 Intermission.
- 3:20 **90.** Zwitterionic polysaccharide (PS A1) as an immune elicitor for vaccine development. **P. R. Andreada**
- 3:40 **91.** Potent dual action composites. **M. D. Leonida**, S. Chauhan, N. Philips
- 4:00 **92.** Synthesis of cellulosic block- and multigraft copolymers via the combination of ATRP and click reaction. **R. Liu**, Q. Li, Y. Huang
- 4:20 **93.** Molecular structure of chitosan nanoparticles in solution. **R. D. Lins**, E. F. Franca, L. C. G. Freitas
- 4:40 **94.** Effect of metal cationization on guanosine and deoxyguanosine configurations: Changes on sugar puckering and strength of the n-glycosidic bond. **M. A. Ahmadi**, **A. Fattahi**

### THURSDAY MORNING

#### Section A

Salt Palace Convention Center  
155 E

#### General Papers

T. L. Lowary, *Organizer*

K. J. Jensen, *Presiding*

- 8:30 **95.** Cellular heparanomics: A robust approach to define HS-protein interactions. **P. Babu**, V. M. Tran, B. Kuberan
- 8:50 **96.** A new paradigm to define the structural basis for heparan sulfate-FGF interactions during zebrafish development. **T. K. N. Nguyen**, V. M. Tran, E. Veien, R. I. Dorsky, C.-B. Chien, B. Kuberan
- 9:10 **97.** Chemoselective capture of glycans for analysis on gold nanoparticles. **K. J. Jensen**
- 9:30 **98.** Effect of linker length in carbohydrate-lectin interactions. **D. M. Lewallen**, D. Siler, S. S. Iyer
- 9:50 **99.** Synthesis of gold and silver nanoparticles stabilized with glycosaminoglycans having distinctive biological activities. **M. M. Kemp**, **A. Kumar**, S. Mousa, P. Ajayan, N. Kubotera, S. Mousa, R. J. Linhardt
- 10:10 Intermission.
- 10:30 **100.** Functional carbohydrate substrates for influenza detection. **D. B. Kimball**, J. Schmidt, R. Michalczyk, R. R. Kale, S. Iyer
- 10:50 **101.** Production of 3-deoxy-d-mannooctulosonic acid (KDO) by fermentation for plant lectin binding studies. **G. Camci-Unal**, N. L. Pohl

- 11:10 **102.** Functionalization of single walled carbon nanotubes with carbohydrates. **S. Y. Hong**, G. Tobias, B. Ballesteros, M. L. H. Green, B. G. Davis
- 11:30 **103.** Carbohydrate screening platform for fractionation, identification and quantification of bioactive oligosaccharides in complex food mixtures. **T. M. Slaghek**, W. D. van Dongen, J. W. Timmermans, L. Coulier, R. C. Montijn, B. J. Keijser
- 11:50 **104.** Formation of carbohydrates at the hydrogenation of fullerite. **S. Y. Zaginaichenko III**, D. V. Schur III

### THURSDAY AFTERNOON

#### Section A

Salt Palace Convention Center  
155 E

#### General Papers

T. L. Lowary, *Organizer*

L. A. Agrofoglio, *Presiding*

- 1:20 **105.** Solution phase automated synthesis of hyaluronan oligomers. **L. Liu**, N. L. Pohl
- 1:40 **106.** Enantioselective synthesis of tetrafluorinated carbohydrates. V. Foucher, **B. Linclau**
- 2:00 **107.** Acyclo nucleoside phosphonates targeting an antipox activity. H. Kumamoto, J. Broggi, U. Pradere, V. Roy, S. Berteina-Raboin, S. P. Nolan, **L. A. Agrofoglio**
- 2:20 **108.** Automated solution-phase synthesis of cellulitis-associated group A streptococcus and Staphylococcus aureus oligosaccharides. **H. D. Spangler**, N. L. Pohl
- 2:40 **109.** Automated solution-phase synthesis of beta-mannosides. **S.-L. Tang**, N. L. Pohl
- 3:00 Intermission.
- 3:20 **110.** Synthesis of three classes of aryl N-glycosides by solvent control cycloaddition of glycosyl azides and naphthoquinone. **J. Zhang**, C. W. T. Chang
- 3:40 **111.** Automated solution phase synthesis of KDO-containing sugars from plant pathogens. **S. B. Tsabedze**, N. L. Pohl
- 4:00 **112.** Automated iterative solution-phase synthesis of beta-glucan fragment libraries. **S. M. Brokman**, N. L. Pohl
- 4:20 **113.** Synthesis of (+)-1,2,3-triazolo-4'-hydroxymethyl carbanucleosides. **L. A. Agrofoglio**, N. Joubert, S. Diez-Gonzalez, J. Broggi, S. Berteina-Raboin, S. P. Nolan

## CATL

### Division of Catalysis Science and Technology (probationary)

**B. Zhou**, *Program Chair*

### SUNDAY MORNING

#### Section A

Marriott Downtown  
Salon H

**Chemistry for Catalyst Synthesis**  
Cosponsored by COLL and I&EC

S. Soled, *Organizer*

- 8:30 Introductory Remarks.
- 8:35 **1.** Design of catalysts on the nanometer scale. **F. Schuith**
- 9:20 **2.** A simple, rational method to prepare supported metal catalysts. **J. R. Regalbuto**
- 10:05 Intermission.
- 10:20 **3.** Effect of catalyst preparation solvent on the activity/selectivity and physical properties of a Co/Ru/lanthana/alumina Fischer-Tropsch catalyst. **R. P. S. Peguin**, K. Cook, W. C. Hecker, C. H. Bartholomew

- 10:45 **4.** Novel route to fabricating carbon supported PtSn bimetallic nanocatalysts. **J. B. Wilking**, L. F. Allard, **J. Liu**
- 11:10 **5.** Platinum nanocrystals smaller than 10 nm with size and shape control: A study of ethylene and pyrrole hydrogenation. **C.-K. Tsung**, J. N. Kuhn, W. Huang, G. Somorjai, P. Yang

**Refining and Petrochemicals Using Renewable Feedstocks**  
**Transforming Oil Refining into Biorefining**  
Sponsored by PETR, Cosponsored by CATL (probationary)

### SUNDAY AFTERNOON

#### Section A

Marriott Downtown  
Salon H

**Chemistry for Catalyst Synthesis**  
Cosponsored by COLL and I&EC

S. Soled, *Organizer*

- 1:30 Introductory Remarks.
- 1:35 **6.** Novel molecularly-organized catalysts for selective oxidation and reforming. **M. Tada**
- 2:20 **7.** Synthesis of supported metal and metal oxide catalysts. **K. P. de Jong**
- 3:05 Intermission.
- 3:20 **8.** Designing cooperative catalysts: Cosalen catalysts for epoxide ring-opening. X. Zheng, C. S. Gill, K. Venkatasubbaiah, S. Jain, T. Takatani, C. D. Sherrill, R. J. Davis, M. Weck, **C. W. Jones**
- 4:05 **9.** Surface functionalization of silica for improved stability of nanosized Au particles. **A. Staker**, A. Sanchez, L. R. Houk, A. K. Datye
- 4:30 **10.** Design and synthesis of accessible gold surfaces using calixarene-capped nanoparticles. **J.-M. Ha**, A. Solovyov, A. Katz
- 4:55 Concluding Remarks.

#### Section B

Marriott Downtown  
Salon F

**Nanotechnology in Catalysis VI**  
Cosponsored by COLL, FUEL, I&EC, PETR, and NANO

**B. Zhou**, J. G. Chen, and P. S. Weiss, *Organizers*

C. H. F. Peden, *Presiding*

- 1:30 **11.** Reactivity studies on oxide supported metal nanoparticles. **H.-J. Freund**
- 2:15 **12.** CO oxidation over noble metals: From single crystals to nanoparticles. **D. W. Goodman**
- 3:00 **13.** Active sites and reaction intermediates in CO oxidation, propene epoxidation, and formic acid dehydrogenation on Au-based catalysts. **M. Ojeda**, **E. Iglesia**
- 3:30 **14.** Ultrastable Au/Al<sub>2</sub>O<sub>3</sub> catalyst and its application in aerobic solvent-free benzyl alcohol oxidation. **Z. Li**, R. M. Richards, C. Kuebel
- 3:50 **15.** Catalysis on single gold nanocrystals. **P. Mulvaney**
- 4:10 **16.** Single molecule imaging of chemical reactions in a liquid-cell STM: Alkene oxidation and alkyne-azide clicking. **J. A. Elemans**, D. den Boer, B. Hulsken, R. van Hameren, A. Rowan, R. Nolte, S. Speller

**Refining and Petrochemicals Using Renewable Feedstocks**  
**New Platform Chemicals and Chemical Building Blocks for Petrochemicals**  
Sponsored by PETR, Cosponsored by CATL (probationary)

‡ Cooperative Cosponsorship