

Section B

Marriott City Center
Capitol A

Green Chemistry Education: Is it an Advantage in Industry?

R. E. Engler, *Organizer*

B. W. Cue Jr., *Organizer, Presiding*

- 1:30 Introductory Remarks.
1:35 **1251.** Green chemistry education: A necessity in industry. A. S. Cannon, J. E. Pyers IV
2:05 **1252.** Elements of sustainability. A. Wallin
2:35 Intermission.
2:45 **1253.** Why GSK needs people trained in green chemistry. D. Constable, C. Jimenez-Gonzalez, R. K. Henderson
3:15 **1254.** Impact of the green chemistry summer school on industrial career paths. J. L. Young, R. Peoples III
3:45 Intermission.
3:55 **1255.** Incorporating green chemistry concepts into the chemical engineering curriculum. C. L. Kitchens
4:25 **1256.** Green chemistry education: An essential component of MBA training and business innovation. A. Larson

Section C

Marriott City Center
Olympus A

Advances in Teaching Inorganic Chemistry Cosponsored by INOR[†]

K. A. Walters, *Organizer, Presiding*

- 1:30 Introductory Remarks.
1:40 **1257.** VIPER: A resource and community for teaching inorganic chemistry. L. A. Watson, H. J. Eppley, M. J. Geselbracht, A. R. Johnson, B. A. Reisner, J. L. Stewart, B. S. Williams, E. Benatan, E. R. Jamieson
2:00 **1258.** How closer online ties to colleagues can change an inorganic chemistry course: The long spiky tail of VIPER. B. S. Williams
2:20 **1259.** The Chemmies: A multimedia inorganic chemistry project in a general chemistry course for majors. N. A. Yakelis
2:40 Intermission.
2:50 **1260.** Using online homework in an advanced inorganic chemistry course: A good idea? J. S. Overby
3:10 **1261.** Just what do you put in a one-semester inorganic class anyway? K. A. Walters
3:30 Panel Discussion.

Section D

Marriott City Center
Capitol C

Research in Chemical Education Active Learning

G. Bhattacharyya and D. I. Del Carlo, *Organizers*

L. S. Langdon, *Presiding*

- 1:30 Introductory Remarks.
1:35 **1262.** Which students do clickers help the most? J. MacArthur, L. L. Jones, M. R. Asirvatham
1:55 **1263.** A comparison of a traditional lecture demonstration method and a participatory science lecture demonstration method on students' content mastery in a large enrollment chemistry course for nonmajors. D. M. Majerich, J. S. Schmuckler
2:15 **1264.** Impact of an educational strategy based on multiple intelligences theory (MIT) on satisfaction, attitude toward science, and academic achievement of undergraduate chemistry students. S. Rivera-González
2:35 **1265.** Using an eBook, group-learning, and reporting to promote concept-construct in a general chemistry program. S. H. Szczepankiewicz, P. Sheridan, R. M. S. Gregorius

- 2:55 Intermission.
3:15 **1266.** Correlation between student success factors and rate of self selection into PLTL workgroups. B. B. Ratcliff, J. S. Carver
3:35 **1267.** Taking the lecture out of lecture hall: Teaching with learning assistants in an introductory chemistry course. R. A. Krystyniak, M. Buerkley, M. A. Dvorak
3:55 **1268.** Metacognition development in the cooperative problem based laboratory: Perspectives of first year teaching assistants. S. Sandi-Urena, M. M. Cooper, T. A. Gatlin, R. Stevens

WEDNESDAY EVENING

Undergraduate Research at the Frontiers of Inorganic Chemistry Sponsored by INOR, Cosponsored by CHED

THURSDAY MORNING

Section A

Marriott City Center
Capitol B

General Papers Strengthening Programs

D. S. Domin, *Organizer*

R. C. Bauer, *Presiding*

- 8:00 Introductory Remarks.
8:05 **1269.** Learning communities and core science education. M. C. Gelabert, W. deProphetis Driscoll, N. P. Richardson
8:25 **1270.** Cooperative efforts for sustainable development in the general chemistry program. E. E. Simanek
8:45 **1271.** The effects of collaborating learning techniques in organic chemistry. A. Azadnia
9:05 Intermission.
9:15 **1272.** Developing a new chemistry curriculum in the Netherlands. J. H. Apotheker
9:35 **1273.** New role of a chemistry TAP Team at a Bal/HCG university. B. B. Ratcliff, M. Richards-Babb
9:55 **1274.** Correlating teaching methodology and learning style quantitatively using student scores and qualitatively using student surveys in general chemistry. J. Lauer
10:15 **1275.** Chemistry-specific writing: Using move structures to help students follow conventional organizational patterns in journal-quality papers. M. S. Robinson, F. L. Stoller
10:35 Concluding Remarks.

Section B

Marriott City Center
Capitol A

General Papers Science Majors

D. S. Domin, *Organizer*

R. C. Bauer, *Presiding*

- 8:00 Introductory Remarks.
8:05 **1276.** Teaching environmental chemistry in a liberal arts setting. J. Beard
8:25 **1277.** Criminalistics II: A course in forensic DNA biology. K. M. Elkins, C. G. Tindall
8:45 **1278.** Chemistry and biology of brewing. An interdisciplinary course. P. D. Hooker
9:05 Intermission.
9:15 **1279.** Project-based learning in a chemistry majors instrumental chemical analysis laboratory. D. E. Mencer
9:35 **1280.** Low-cost electronic kits as instructional aids for introducing electro-analytical methods into the analytical and instrumental analysis courses. D. G. Sykes, R. Kreuter

† Cooperative Cosponsorship

- 9:55 **1281.** Silver nanoparticle synthesis in a robust one-pot room temperature reaction. A. Orbaek, M. N. Phillips, C. A. Nichol, M. E. R. McHale, A. R. Barron
10:15 **1282.** Musical chemistry: First music of the universe. M. M. Kumber
10:35 Concluding Remarks.

Section C

Marriott City Center
Olympus A

Process-Oriented Guided Inquiry Learning (POGIL) Laboratory and the Science Writing Heuristic

R. S. Moog, *Organizer*

F. J. Creegan, *Presiding*

- 8:00 Introductory Remarks.
8:05 **1283.** Putting POGIL into the laboratory. F. J. Creegan
8:25 **1284.** NMR, electronegativity, and periodic trends: A POGIL laboratory. M. A. Everest, J. M. Vargason
8:45 **1285.** Providing resources for instructors to teach using guided-inquiry in the laboratory. T. J. Greenbowe
9:05 Intermission.
9:15 **1286.** Impact of the science writing heuristic on student research. J. C. Kuruc
9:35 **1287.** Normal laboratory vs. the science writing heuristic. W. A. Wallace
9:55 **1288.** Students' ability to visualize chemical reactions in a POGIL-SWH laboratory course. R. A. Morgan Theall
10:15 Panel Discussion.

Section D

Marriott City Center
Capitol C

Research in Chemical Education Professional Development

G. Bhattacharyya, *Organizer*

D. I. Del Carlo, *Organizer, Presiding*

- 8:00 Introductory Remarks.
8:05 **1289.** Women graduate students' career choices in chemistry. M. L. Grunert, G. M. Bodner
8:25 **1290.** Professional identity in chemistry: Development and assessment. T. Fetters, B. Walls, G. Bhattacharyya
8:45 Intermission.
9:05 **1291.** "Maybe I choose to learn more." Findings from a research based laboratory case study. K. F. Green, L. J. Nikstad, G. Szeinberg, G. C. Weaver
9:25 **1292.** Ethics: Are my students prepared to make the right decision? P. M. Mayo
9:45 Discussion.

THURSDAY AFTERNOON

Section A

Marriott City Center
Capitol B

General Papers Analysis and Synthesis

D. S. Domin, *Organizer*

C. E. Ballard, *Presiding*

- 1:00 Introductory Remarks.
1:05 **1293.** Study of aza nucleophiles as catalysts of the Morita-Baylis-Hillman reaction. C. E. Ballard

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- 1:25 **1294.** Combustion analysis of solid-state glucose based rocket fuel. S. Holland, K. E. Garrison, J. C. Eason
1:45 **1295.** Toward affordable computational kinetics for combustion processes. F. Louis, S. Canneau, J.-F. Pauwels
2:05 Intermission.
2:15 **1296.** Withdrawn.
2:35 **1297.** Factors affecting stereoselectivity of fluorinated beta-lactam formation. L. T. Mathews, K. E. Garrison, J. C. Eason
2:55 **1298.** Synthesis of 8-(ethyl, 3-propenoate)-9-bromo-2-fluoro-6,7-dihydro-5H-benzocycloheptene. M. H. Silveira
3:15 Intermission.
3:35 **1299.** Synthetic and thermodynamic study of the propellant fuel, 3,6-bis(1H-1,2,3,4-tetrazol-5-ylamino)-1,2,4,5-tetrazine (BTATz). D. D. Swanson
3:55 **1300.** Study of the formation processes of collagen nanofibers via electrospinning. C. S. Flor
4:15 Concluding Remarks.

Section B

Marriott City Center
Capitol A

General Papers High School and Non-Science Majors

D. S. Domin, *Organizer*

E. A. Gardner, *Presiding*

- 1:00 Introductory Remarks.
1:05 **1301.** Project SEED: Strategies and successes. K. M. Elkins, E. S. Ball, R. J. Price II, D. L. Dillon, A. Noble, A. Hanson, S. M. Schelle
1:25 **1302.** Current state of safety in high school chemistry classrooms. M. Richards-Babb, J. Robertson-Honecker, J. Bishoff, K. D. Fisher
1:45 **1303.** Illustrating organic chemistry principles with drug and food additive molecules in a general/organic/biological chemistry course for health major students. R. Swisher
2:05 Intermission.
2:15 **1304.** Identification of thermodynamic systems: A laboratory practice that serves as a conceptual tool for nonchemists or chemical engineers. G. Camargo Vargas, A. Altamar, J. E. Tirano
2:35 **1305.** Teaching forensic chemistry to non-science majors. E. A. Gardner
2:55 **1306.** Color science laboratory exercises in art and theatre. M. C. Gelabert
3:15 Concluding Remarks.

CHAS

Division of Chemical Health & Safety

D. M. Decker, *Program Chair*

OTHER SYMPOSIA OF INTEREST:

Green and Sustainable Chemistry Education: Preparing Students for Challenging and Emerging Careers (see CHED, Wed)

Integrating Nanoscience into the College and High School Classroom (see CHED, Sun)

Naturally Nano (see CHED, Tue)

Green Chemistry (see YCC, Mon)

Small Chemical Businesses and Nanoscience (see SCHB, Tue)

SOCIAL EVENT:
Executive Committee Luncheon: Sun

MONDAY MORNING

Green Chemistry Sponsored by YCC, Cosponsored by CHAS, I&EC, CEI, INOR, and ORGN

MONDAY AFTERNOON

Section A

Sheraton
Executive Room A

Health and Safety Concerns of Polymeric Nanomaterials Cosponsored by POLY² and NANO

D. M. Decker and J. M. Pickel, *Organizers*

- 1:30** Introductory Remarks.
1:35 1. Untold promise and unknown risks: Science-based decision-making for nanotechnology. **E. J. Amis**
1:55 2. Perspectives on how the US Food and Drug Administration regulates nanotechnology in food contact articles, including food packaging materials and components of food processing equipment. **E. S. Furukawa**
2:15 3. An overview of rules, regulations, consensus standards, and professional organization activities aimed at ensuring the safety of nano R&D. **B. Stockmaier**
2:35 Intermission.
2:50 4. Risk communications for researchers and staff engaged in nanomaterials development. **B. Ogle**
3:10 5. Withdrawn.
3:30 6. Health and safety guidance from the University of California for nanomaterial use. **D. M. Decker**
3:50 7. Effectiveness of personal protective equipment (PPE) and engineering controls for nanomaterials. M. Hoover, **R. Shaffer Jr.**
4:10 Discussion.

MONDAY EVENING

Section A

Salt Palace Convention Center
Hall 5

Sci-Mix

D. M. Decker, *Organizer*

- 8:00–10:00**
8: I can't believe they did that. **F. Wood-Black**
9: Laboratory safety for chemistry students: A new textbook. **D. C. Finster**, R. H. Hill Jr.
10: Don't horse around with safety. **T. Black**, F. Wood-Black
11: Why chemists do "unwise" things: Learning lessons from our mistakes. **R. H. Hill Jr.**, D. C. Finster

TUESDAY MORNING

Section A

Sheraton
Executive Room A

Health and Safety Concerns of Polymeric Nanomaterials Cosponsored by POLY² and NANO

D. M. Decker and J. M. Pickel, *Organizers*

- 9:00** Introductory Remarks.
9:05 12. Polymers as nanomaterials. **J. M. Pickel**

The official technical program for the 237th National Meeting is available online at oasys2.confex.com/acs/237nm/techprogram/.

- 9:25** 13. Toxicology considerations of nanomaterials. **R. Ogle**
9:45 14. Development of methods for sampling of nanoparticles. **S. Hollenbeck**, J. Jankovich
10:05 Intermission.
10:20 15. Exploring the nanoworld: Analyzing environmental nanoparticle samples. **G. S. Casuccio**
10:40 16. Environmental exposure assessments for nanomaterials in the R&D environment. **T. Zontek**
11:00 17. Withdrawn.
11:20 Discussion.

TUESDAY AFTERNOON

Section A

Sheraton
Executive Room A

Hazardous Waste at Academic Laboratories: Final Rule Panel Discussion

D. M. Decker, *Organizer*

- 1:30** 18. Hazardous waste at academic laboratories: Final rule panel discussion. **D. M. Decker**, **N. Langerman**, **R. W. Phifer**

CINF**Division of Chemical Information**

R. Guha, *Program Chair*

SOCIAL EVENTS:
Harry's Party: Mon
Luncheon: Tue
Reception: Sun, Tue

SUNDAY MORNING

Section A

Salt Palace Convention Center
254 A

Just Enough, Just in Time: How Engineers use Information for Everyday Problem Solving

P. Kirkwood, *Organizer*

- 9:00** Introductory Remarks.
9:05 1. A career working with engineers and scientists: Lessons learned. **J. Siess**
9:35 2. Fulfilling specialized information needs of engineers. **D. Bittern**
10:05 3. Meeting the information needs of chemical engineering students. **A. D. Bolek**
10:35 Panel Discussion.

Section B

Salt Palace Convention Center
251 F

The Adoption and Use of the IUPAC InChI/InChIKey

S. R. Heller, *Organizer*

- 9:00** Introductory Remarks.
9:05 4. The history, evolution, and adoption of the IUPAC InChI/InChIKey. **S. R. Heller**, S. E. Stein, D. V. Tchekhovskoi, I. V. Pletnev, A. D. McNaught
9:35 5. Going a mile InChI by InChI: Enabling online chemistry at ChemSpider. **A. J. Williams**
10:05 6. Development and use of a molecular structure ontology. H. E. Dayringer, L. Zhu, M. Nolte, C. L. Waller
10:35 Intermission.
10:50 7. Project prospect and the InChI. **C. R. Batchelor**

- 11:20** 8. InChI as a publishing application. **G. Whitley**, B. Berger

Plagiarism: What is it? What Can We Do About It? Sponsored by CHED, Cosponsored by CHAL, ETHC, and CINF

SUNDAY AFTERNOON

Section A

Salt Palace Convention Center
254 A

Finding a Common Vocabulary: Nanotechnology in Chemical Publication Cosponsored by NOM² and NANO

P. F. Rusch, S. Tegen, and P. Lewis, *Organizers*

- 1:30** Introductory Remarks.
1:35 9. A systematic nomenclature for codifying engineered nanostructures. **W. C. W. Chan**, D. Gentleman
2:05 10. Nanotech nomenclature in environmental sciences. **G. Coimbatore**
2:35 11. Nanotechnology at CAS: Size matters. **R. J. Schenck**
3:05 Intermission.
3:20 12. Patenting nanotechnology: Correlating size and language to describe nanotech inventions. **J. A. Lindeman**
3:50 13. What is nanotechnology? **P. Hartwell**
4:20 Panel Discussion.

Section B

Salt Palace Convention Center
251 F

The Adoption and Use of the IUPAC InChI/InChIKey

S. R. Heller, *Organizer*

- 2:00** 14. Use and utility of InChI in PubChem. **E. Bolton**
2:30 15. InChI keys as standard global identifiers in chemistry web services. **R. Hillard**, K. T. Taylor
3:00 Intermission.
3:15 16. Chemical journal publishing in an online world. **J. Wilde**
3:45 17. InChI/InChIKey vs. NCI/CADD Identifiers: A comparison. **M. Sitzmann**, I. V. Filippov, M. C. Nicklaus
4:15 InChI Panel Question & Answers.

Nontraditional Careers in Chemistry

Sponsored by YCC, Cosponsored by Chemical Information Careers Committee, CINF, CHAL, SOCED, CEPA, SCHB², and POLY

SUNDAY EVENING

Section A

Salt Palace Convention Center
Ballroom J

CINF Scholarship for Scientific Excellence

G. Grethe, *Organizer*

- 6:30–8:30**
18. Combining quantitative data and qualitative knowledge to score reaction energies. **C-A. Azencott**, M. A. Kayala, P. Baldi
19. Multiobjective approach to optimizing scoring functions for docking. **I. P. Mott**, P. Gedeck, V. J. Gillet
20. Reaction simulation expert system for synthetic organic chemistry. **J. H. Chen**, P. Baldi
21. Wavelet compression of GRID fields for similarity searching and virtual screening. **R. L. Martin**, E. J. Gardiner, V. J. Gillet, S. Senger
22. Where does the tetrazole ring belong? Insight to the binding pose of AT1 antagonists using homology modeling, molecular dynamics, and docking. **N. J. M. Macaluso**, R. C. Glen

MONDAY MORNING

Section A

Salt Palace Convention Center
254 A

Library Design, Search Methods and Applications of Fragment-based Drug Design

Library Design and Search Methods Cosponsored by COMP

R. Bienstock and A. Tropsha, *Organizers*

- 8:30** Introductory Remarks.
8:35 23. Fragment library design: What have we learned so far? **I. Chen**, R. E. Hubbard
9:05 24. De novo design using reaction vectors: Application to library design. **V. J. Gillet**, H. Patel, M. Bodkin, B. Chen
9:35 25. Virtual screening for fragment based drug discovery. **Q. Yuan**, C. Liu, F. Winer
10:05 Intermission.
10:20 26. Reagent-based fragment space for hit generation. **A. Rojnuckarin**, R. Palma, M. A. Ashwell
10:50 27. LoFT: Focused library design using feature tree similarity. **J. R. Fischer**, U. Lessel, M. Rarey

Section B

Salt Palace Convention Center
251 F

Are Chemical Information Professionals Ready for the Future?

E. Kajosalo and M. Lafferty, *Organizers*

- 8:30** Introductory Remarks.
8:40 28. Chemistry Librarians: What's on the horizon? How do we get there? **E. A. Brown**
9:10 29. Google generation and nontraditional chemistry information training. **N. N. Xiao**
9:40 30. Evaluating, recommending, ranking, linking: Traditional or new roles of chemical information professionals? **M. P. Brändle**, J. Sonnenstuhl, E. Zass
10:10 Intermission.
10:25 31. Learning spaces and library places. **A. B. Twiss-Brooks**
10:55 32. Addressing researchers' current awareness and personal information management needs. **M. Lafferty**

Nanomaterials Modeling and Informatics Nanotubes and Nanocomposites Sponsored by COMP, Cosponsored by CINF and NANO

Online Resources for Chemical Education Web 2.0 and Digital Objects Sponsored by CHED, Cosponsored by CINF

MONDAY AFTERNOON

Section A

Salt Palace Convention Center
254 A

Library Design, Search Methods and Applications of Fragment-based Drug Design Cosponsored by COMP

R. Bienstock and A. Tropsha, *Organizers*

- 1:30** Introductory Remarks.
1:35 33. Computational tools for fragment based drug design. **A. P. Johnson**, Z. Zsoldos, A. Valko, V. Valko
2:05 34. Design and application of fragment libraries for protein crystallography. **J. Badger**
2:35 Intermission.
2:45 35. Docking small fragments using MCSs minimization. **J. Koska**, E. Yan, L. S. Narasimhan, Q. Hu, J. Na, A. J. Maynard
3:15 36. The discovery of AT7519 and AT9283 using fragment based drug design. **V. Berdini**
3:45 Intermission.
4:10 Open Meeting. CINF Division.