

Monday, 15 July 2024

Time/Date	Orchid Ballroom A	Orchid Ballroom B	Jomtien 2	Jomtien 3	Jomtien 8
	Registration 08.00-16.00				
9.00-10.40	<p align="center">Symposium A The 12th International Symposium on Microscale Chemistry (I2ISMIC)</p> <p>Opening remarks and awarding the outstanding contribution to microscale chemistry awardees. <i>Prof. Supawan Tantayanon</i></p> <p>K04: Distance learning of experimental chemistry <i>Dr. Jorge G. Ibanez, Mexico (35 mins)</i></p> <p>Special lectures by the awardees</p> <p>I17: Re-Designing the colorimeter for chemistry laboratory Teaching <i>Prof. Fortunato Sevilla, Philippines (30 mins)</i></p> <p>I18: Chemistry practicals: adding the wow factor <i>Mrs. Marie du Toit, South Africa (30 mins)</i></p> <p>Chair: Prof. Supawan Tantayanon (Thailand) Co-Chair: Dr. Jorge G. Ibanez (Mexico)</p>	<p align="center">T5-CC Chemistry and Chemical Science Education for Environmental and Social Sustainability</p> <p>CC-O-002: Environmental Chemistry Experiment: The Removal of Dye and Heavy Metals using Recycled Silica Gel <i>Mr. Lam Hoang Nguyen, Viet Nam (20 mins)</i></p> <p>CC-O-003: Mechanical, Thermal, Structural Characterization and Degradation Behavior of Rice Husk Based Microcrystalline Cellulose Fabricated Biodegradable Polymer (Poly-Butylene Adipate co-Terephthalate) Composites <i>Dr. Jyoti Giri, Nepal (20 mins)</i></p> <p>CC-O-010: Enhancing Chemistry Education for Sustainability in Singapore <i>Mr. Kien Huay Goh, Singapore (20 mins)</i></p> <p>I15: Enhancing Scientific Literacy and Advancing SDGs isn't easy - but possible <i>Prof. Claus Bolte, Germany (30 mins)</i></p> <p>Chairs: Assoc. Prof. Charee Falkhamta, Kasetsart University Prof. Voravee Hoven, Chulalongkorn University</p>	<p align="center">T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>I05: How teaching deepened my understanding of chemistry <i>Assoc. Prof. Junming Ho, Australia (30 mins)</i></p> <p>I29: Recent advances in laboratory education research <i>Assoc. Prof. Hendra Agustian, Denmark (30 mins)</i></p> <p>Chair: Dr. Seamus Delaney, School of Education, Deakin University Assoc. Prof. Taweetham Limpanuparb, Mahidol University</p>	<p align="center">T3-EE Emerging Educational Trends in Chemistry in the 21st Century</p> <p>EE-O-001: Recent Developments in Chemistry Education Research <i>Sibel Erduran, UK (20 mins)</i></p> <p>EE-O-003: Should we create messy practice assignments for better problem-solving performance in chemistry classrooms? <i>Dr. Ozcan Gulacar USA (20 mins)</i></p> <p>EE-O-004: CHEMmunicate: A chemical structure drawing game for building scientific communications skills and enhancing engagement of first year students <i>Dr. Cristina Navarro Reguero, UK (20 mins)</i></p> <p>EE-O-008: Analysis of the influence of elements of chemical computational thinking on mathematical and scientific computational thinking <i>Mrs. Ein-Ya Wen, Taiwan (20 mins)</i></p> <p>Chair: Prof. Santiago Sandi-Urena, Pomona College/University of Costa Rica Dr. Rachel Mamlok-Naaman, Weizmann Institute of Science</p>	
10.40-11.00	Break				
11.00-12.00	<p align="center">Symposium A The 12th International Symposium on Microscale Chemistry (I2ISMIC)</p> <p>SA-O-001: The application and development of the micro-Hoffman Voltmeter using digital technology <i>Mr. Hus-Mao Liao, Taiwan (20 mins)</i></p> <p>SA-O-003: Overcoming Resistance to Innovation <i>Mr. Robert Worley, United Kingdom (20 mins)</i></p> <p>SA-O-004: Outreach and optimization of the chemistry education in Bulgaria using the microchemistry approach <i>Mr. Hasko Yunev Stamenov, Bulgaria (20 mins)</i></p> <p>SA-O-005: Teacher's personal development - Chemical safety, microscale chemistry and chemistry education in Finland <i>Mr. Ari Anttonen Myllyvirta, Finland (20 mins)</i></p> <p>SA-O-009: Making microscale chemistry work for pupils, teachers and technicians in secondary schools <i>Mr. Matthew Smith, United Kingdom (20 mins)</i></p> <p>Chair: Prof. Supawan Tantayanon (Thailand) Co-Chair: Dr. Jorge G. Ibanez (Mexico)</p>	<p align="center">T5-CC Chemistry and Chemical Science Education for Environmental and Social Sustainability</p> <p>K01: Empowering Student Agency for SDGs: Research, Development, and Dissemination (Part A) <i>Prof. Ron Blonder, Israel (35 mins)</i></p> <p>I11: Empowering Student Agency for SDGs: Research, Development, and Dissemination (Part B) <i>Dr. Shelley Rap, Israel (30 mins)</i></p> <p>I37: Integrating Simple Impact-Based Green Chemistry Metrics into the Undergraduate Curriculum <i>Asst. Prof. Amanda Bongers, Canada (30 mins)</i></p> <p>Chair: Asst. Prof. Hendra Agustian, Department of Science Education, University of Copenhagen Miss Pattanasorn Hennech</p>	<p align="center">T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>RC-O-003: Teaching without a textbook: Two courses for non-majors <i>Assoc. Prof. David Allen Katz, USA (20 mins)</i></p> <p>RC-O-006: Integrating a service-learning component in an organic chemistry laboratory course of a small liberal arts college <i>Dr. Patricia Phan Bugayong, USA (20 mins)</i></p> <p>RC-O-008: UNDERSTANDING and Investigating Teaching Pedagogy in Upper Year Science Laboratory Course in a Post-Pandemic Era <i>Asst. Prof. Dr. Neushan W. Saini, Canada (20 mins)</i></p> <p>Chair: Dr. Michelle Brooks, American Chemical Society Miss Orapan Apirakran.</p>	<p align="center">T3-EE Emerging Educational Trends in Chemistry in the 21st Century</p> <p>EE-O-009: Examining secondary school students' construction and critique of scientific argument <i>Shingo Uchinokura, Japan (20 mins)</i></p> <p>EE-O-012: Constructivist exploration: Understanding amine nucleophile strengths in nucleophilic substitution reactions with squaric acid <i>Asst. Prof. Dr. Peera Acharasathan, Thailand (20 mins)</i></p> <p>EE-O-013: Implementing of engineering aspects in chemistry lessons using a nanoscience student lab <i>Mr. Tim Goebel, Germany (20 mins)</i></p> <p>EE-O-014: Navigating the crossroads between chemistry and mathematics - how much is actually "just maths"? <i>Assoc. Prof. Felix M. Kro, Sweden (20 mins)</i></p> <p>Chair: Prof. Uday Maltra, Indian Institute of Science, Bangalore Dr. Debora Marchak, Weizmann Institute of Science</p>	<p align="center">T7-ED Ethics, Diversity, Equity and Inclusion in Chemistry Education</p> <p>ED-O-002: Promoting Diversity, Equity, and Inclusion by Infusing High Impact Organic Synthesis Research into Undergraduate Curriculum at WSSU <i>Prof. Fenghai Guo, USA (20 mins)</i></p> <p>ED-O-004: Diversity and inclusion in science education: A case study <i>Dr. Rachel Mamlok-Naaman, Israel (20 mins)</i></p> <p>ED-O-006: Success in Their Hands: How Students Use Token Systems to Get What They Need <i>Prof. Renee Link, USA (20 mins)</i></p> <p>ED-O-007: Chemistry classroom and laboratory learning modules for visually impaired high school and undergraduate students <i>Prof. Rajeev B Dabke, USA (20 mins)</i></p> <p>Chairs: Prof. Mary Garson, The University of Queensland Assoc. Prof. Charee Falkhamta, Kasetsart University</p>
12.00-12.40					
12.40-14.00	Lunch				
14.00-14.40	<p align="center">Symposium A The 12th International Symposium on Microscale Chemistry (I2ISMIC)</p> <p>SA-O-011: Re-designing the colorimeter for chemistry laboratory teaching <i>Prof. Fortunato Sevilla, Philippines (20 mins)</i></p> <p>SA-O-012: Exponential: That's the way pH is. <i>Mrs. Martha Elena Berguengoa, Mexico (20 mins)</i></p> <p>SA-O-013: New aspects of microscale chemistry: Microscale chemistry for inclusive education <i>Prof. Kazuko Ogino, Japan (20 mins)</i></p> <p>SA-O-014: An SSC Activity in Chemical Kinetics: Implementation and Feedback <i>Assoc. Prof. Odysse Natividad Montoya Molo, Philippines (20 mins)</i></p> <p>SA-O-008: Enhancing STEM learning strategies in rural schools of the Ecuadorian Andes <i>Mrs. Jeanette Carrera Cevallos, Ecuador (20 mins) VDO</i></p> <p>Chair: Prof. Supawan Tantayanon (Thailand) Co-Chair: Dr. Jorge G. Ibanez (Mexico)</p>	<p align="center">T5-CC Chemistry and Chemical Science Education for Environmental and Social Sustainability</p> <p>CC-O-011: Student Centered Environmental Lab <i>Mrs. Thendler Wirt, Myanmar (20 mins)</i></p> <p>CC-O-013: An exploratory study on cultivating students' systemic thinking ability based on "The Rubik's Cube of Thinking" <i>Mr. Xuyun Hong, China (20 mins)</i></p> <p>CC-O-017: Introducing the Small-Scale Chemistry Approach to the Sri Lankan Secondary Education System for Environmental and Social Sustainability <i>Dr. Anthoni Durage Asoka De Silva, Sri Lanka (20 mins)</i></p> <p>CC-O-024: The impact of project-based learning on chemistry students' choices of tertiary education <i>Mr. Sakai Weeraratnam, Australia (20 mins)</i></p> <p>Chair: Dr. Christine M Straul Langhinias, Sandia National Laboratories Assoc. Prof. Charee Falkhamta, Kasetsart University</p>	<p align="center">T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>RC-O-011: Electrochemistry "mystery box": from observations to inferences in the laboratory <i>Prof. Dr. Carla Morais, Portugal (20 mins)</i></p> <p>RC-O-012: Raman spectroscopy: A simple, non-destructive spectroscopic technique for accessing molecular insight <i>Prof. Dr. Satyen Saha, India (20 mins)</i></p> <p>RC-O-014: Evaluating the Effectiveness of Hands-on vs. Virtual Chemistry Labs: A Case Study on the Law of Conservation of Mass <i>Mrs. Dan Yang, China (20 mins)</i></p> <p>RC-O-015: Contextualizing History in Chemistry Lab: Revisiting Werner's Experiments <i>Dr. Sasthish Chathanahalli Gangadharappa, India (20 mins)</i></p> <p>Chair: Dr. Pumidech Puthongkhom, Chulalongkorn University Dr. Song Xue, Zhejiang Normal University</p>	<p align="center">T3-EE Emerging Educational Trends in Chemistry in the 21st Century</p> <p>EE-O-015: Enhancing Chemistry Education: The Impact of Bilingual Instruction and Approaches for Freshman at National Taiwan Normal University <i>Assoc. Prof. Dr. Yihan Liu, Taiwan (20 mins)</i></p> <p>EE-O-016: A Systematic Review of Context-Based Learning Implementation in Science Education <i>Mrs. Metrowee Pinastuti, Indonesia (20 mins)</i></p> <p>EE-O-017: Teaching computational chemistry for undergraduates: Curricular aspects <i>Assoc. Prof. Inbal Tuvi-Arad, Israel (20 mins)</i></p> <p>I22: A "Systems Thinking" approach in understanding Organic Reaction Mechanisms <i>Prof. Uday Maltra, India (30 mins)</i></p> <p>Chairs: Prof. Santiago Sandi-Urena, Pomona College/University of Costa Rica Dr. Debora Marchak, Weizmann Institute of Science</p>	<p align="center">T7-ED Ethics, Diversity, Equity and Inclusion in Chemistry Education</p> <p>K05: Moving ahead on gender equity: An IUPAC perspective <i>Prof. Mary Garson, Australia (35 mins)</i></p> <p>I21: Overcoming Resistance to Innovation in Practical Chemistry <i>Robert Worley, UK (30 mins)</i></p> <p>ED-O-001: Students' perception of task effort and emotional cost in general chemistry <i>Dr. Gutzelte A. Rocabado, USA (20 mins)</i></p> <p>Chair: Dr. Rachel Mamlok-Naaman, Weizmann Institute of Science Assoc. Prof. Anna Garden, University of Otago</p>
14.40-15.40					
15.40-16.00	Break				
16.00-17.00	<p align="center">ICCE2024 Opening Ceremony @Head of State Chamber</p>				
17.00-17.40	<p align="center">Plenary Lecture P1: Chemistry Education Today for our 2050 World <i>Prof. Peter G. Mahaffy, Canada</i></p> <p align="center">Chair: Assoc. Prof. Taweetham Limpanuparb, Mahidol University @Head of State Chamber</p>				
17.40-18.20	<p align="center">Plenary Lecture P2: Nurturing Multiple Intelligences: Challenges and Opportunities in Thai Education <i>Dr. Krissanapong Kirtikara, Thailand</i></p> <p align="center">Chair: Assoc. Prof. Supakorn Boonyuen, Thammasat University @Head of State Chamber</p>				
18.20-21.00	<p align="center">Welcome Reception @Royal Summit Chamber</p>				

Tuesday, 16 July 2024

Time/Date	Orchid Ballroom A	Orchid Ballroom B	Jomtien 2	Jomtien 3	Jomtien 8	Jomtien 10	Grand Deck	
	Registration 8.00-16.00							
9.00-10.40	<p>Symposium A The 12th International Symposium on Microscale Chemistry (12ISMIC)</p> <p>Memorial Lectures To pay tribute to exemplary pioneers in the field of microscale or small-scale chemistry for their remarkable career-long contributions</p> <p>The John Bradley Memorial Lecture John Bradley: World pioneer in Microscale Chemistry Ms. Anne de Tol</p> <p>The Peter Schwarz Memorial Lecture Peter Schwarz: Do more with less Reinhold Wessly</p> <p>The Victor Oberndorf Memorial Lecture Victor Oberndorf: The creative genius at work Reinhold Wessly</p> <p>Chair: Prof. Subawan Tarlayanton (Thailand) Co-Chair: Dr. Jorge G. Ibanez (Mexico)</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>T3-IC-010: Building the Next Generation of Open Textbooks Prof. Debrah Scott Larson, USA (30 mins)</p> <p>T3-IC-011: Spatial Learning in the Digital Chemistry Lab Dr. Paul Hettl, France (30 mins)</p> <p>T3-IC-012: From Plastic Models to Virtual Reality Headsets: Enhancing Molecular Structure Education for Undergraduate Students Dr. Chakana Pimpai, Thailand (20 mins)</p> <p>Chair: Asst. Prof. Henda Agustian, Department of Science Education, University of Cooptegan Dr. Boobarin Sawatton</p>		<p>Symposium D Advancing Chemical Safety and Security Education</p> <p>Welcome and Opening remarks T3-IC-013: Chemical Security Education at Universiti Sains Malaysia: Its Challenges and Lesson Learned Assoc. Prof. Abdulaziz Sani, Malaysia (20 mins)</p> <p>SD-O-013: Organizational And Management Of Chemicals in Turkish Academic Institutions: Findings And Proposed Solutions Prof. Dr. Nebim SÖZÜKOÇMAK, Turkey (20 mins)</p> <p>Panel Discussion with speakers Chair: Dr. Christine Straud Langhinis, USA</p>	<p>T4-CS Chemistry and Science Teacher Education and Continuous Professional Development</p> <p>(Late start 9.30)</p> <p>CS-O-001: Personalized system of instruction for the foundational knowledge of organic chemistry Dr. Joseph C. Tai, USA (20 mins)</p> <p>CS-O-006: Advancing culturally relevant chemistry instruction: An asset-based pedagogical framework for college chemistry instructors Ms. Sadiea Cooper, USA (20 mins)</p> <p>CS-O-014: Professional Learning for Teaching Chemistry in Lower Secondary Science through Demonstration Class Ms. Siew Lee Ting, Singapore (20 mins)</p> <p>Chair: Prof. Santiago Sanz-Urgoiti, Pontificia Comillas University of Costa Rica Miss Orapan Apavakarn</p>	<p>Symposium B Promoting students' modeling competence via modeling-based instruction and assessment</p> <p>K06: Developing Modeling Competence: How to Design? How to Measure? Prof. Mei-Hung Chiu, Taiwan (30 mins)</p> <p>K06: The Challenge of Integrating Chemical Concepts and Ideas Prof. Vicente Talampuer, United States (30 mins)</p> <p>SB-O-003: Designing a Diagnostic Instrument to Evaluate Elementary School Students' Analogical Modeling Competence on the Particle Model of Matter Through Multiple Analogies Prof. Ying-Hui Lin, Taiwan (20 mins)</p> <p>SB-O-016: Supporting Scientific Explanation with Model-based Inquiry: Gases Topic-Avogadro's law Ms. Jaisangpong Pichai, Thailand (20 mins)</p> <p>Chair: Prof. Mei-Hung Chiu (Taiwan) Co-Chair: Prof. Vicente Talampuer (USA)</p>		
10.40-11.00	Break							
11.00-12.00	<p>Symposium A The 12th International Symposium on Microscale Chemistry (12ISMIC)</p> <p>SA-O-020: Using microscale experiments to support pedagogic practice amongst early career teachers Mr. Rob James Campbell, United Kingdom (20 mins)</p> <p>SA-O-022: Microscale bringing improved classroom management and industry like school practical chemistry Mrs Fiona Roberts, United Kingdom (20 mins)</p> <p>SA-O-023: Microscale Experiments in Chemistry Education: Exploring the Perceptions of Science Teachers in Vietnam Ms. Tuan Minh Nguyen, Viet Nam (20 mins)</p> <p>SA-O-024: Practice on green and microscale gas experiments Ms. Yu, China (20 mins)</p> <p>Chair: Prof. Subawan Tarlayanton (Thailand) Co-Chair: Dr. Jorge G. Ibanez (Mexico)</p>		<p>Workshop G How to Publish in CTTI</p>	<p>Symposium D Advancing Chemical Safety and Security Education</p> <p>D1: Educational training programme on chemical preparedness and response for East African countries Dr. Ladislava Navrátilová, Czech Republic (30 mins) VDO</p> <p>SD-O-029: Enhancing Chemical Waste Management in Kurdistan Region: A Comprehensive Approach and Curriculum Implementation in University Laboratories Prof. Dawid Ibrahim, Iraq (20 mins)</p> <p>SD-O-033: Addressing challenges of chemical safety and security in Nigeria: an SDGs perspective Ms. Linda Afolabi, Nigeria (20 mins)</p> <p>Panel Discussion with speakers for CSS in Industry Chair: Dr. Christine Straud Langhinis, USA</p>	<p>T4-CS Chemistry and Science Teacher Education and Continuous Professional Development</p> <p>T4-CS-001: Small-Scale Chemistry driven STEM Learning Activities for Sustainable Development Assoc. Prof. Chitrae Falakanta, Kasselbaat University (20 mins)</p> <p>T4-CS-007: Enhancing learning in chemistry: engaging lessons and modern pedagogy to promote learning in Finland Johanna Kumpulainen, Finland (20 mins)</p> <p>K10: Reasoning in unsustainable times: Implications for chemistry and science teacher education and continuous professional development Dr. Sanna Aho, Canada (30 mins)</p> <p>Chair: Dr. Suranjan Anantachandhi, Karmaveer Bhausaheb Kulkarni Science Academy Dr. Boobarin Sawatton</p>	<p>Symposium B Promoting students' modeling competence via modeling-based instruction and assessment</p> <p>SB-O-007: Analyzing the Frequency and Themes of the Term 'Model' Across Elementary School Science Textbooks for University-Level Chemistry Textbooks in Taiwan Prof. Chin-Ching Chou, Taiwan (20 mins)</p> <p>SB-O-002: Designing Modeling-Based Instruction with a Hypothetical Learning Progression to Track the Evolution of Sixth-Grade Students' Particle Model of Matter Ms. Chiu-Hsin Wang, Taiwan (20 mins)</p> <p>SB-O-004: Unraveling Elementary School Teachers' Mental Models: Utilizing the Particle Model of Matter to Examine Water's Three States and Constructing Analogical Models for Their Students Ms. Chen-Yi Chen, Taiwan (20 mins)</p> <p>SB-O-006: Exploring Elementary Students' Evolution of Mental Models and an Examined Teacher's Responses: Formative Assessment of Analogical Modeling in Understanding Matter across Microscopic and Macroscopic Perspectives Ms. Si-Chun Lai, Taiwan (20 mins)</p> <p>Chair: Prof. Mei-Hung Chiu (Taiwan) Co-Chair: Prof. Vicente Talampuer (USA)</p>		
12.00-12.40								
12.40-14.00	Lunch							
14.00-14.40	<p>Symposium E Systems Thinking in Chemistry for Sustainability</p> <p>STCS Symposium Introduction K07: From Concept Maps to SODMES: Connecting Chemistry to Sustainability Prof. Thomas A. Holme, USA (35 mins)</p> <p>SE-O-005: Using a systems-thinking approach in the development of student activities showing the combined power of green chemistry and the U.N. Sustainable Development Goals Prof. Margaret E. Scott, Canada (20 mins)</p> <p>SE-O-008: Cultivating students' diverse perspectives into the curricular design of systems thinking in chemistry education activities Ms. Aida R. Sobchik, Canada (20 mins)</p> <p>Panel discussion with session presenters: Fostering students' systems thinking capacity in a sustainable manner</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-016: The quest for authentic assessment of chemistry in the age of generative artificial intelligence Gai Hui, Australia (20 mins)</p> <p>IC-O-018: Using student-generated multiple-choice questions and the chemistry achievement of science high school students Ms. Karina Villar, Philippines (20 mins)</p> <p>IC-O-014: Radiotherapy enhancement by 3d-4p 3th 4p for treatment human colorectal cancer cells Prof. Basim Abdulhassan Almyah, Malaysia (20 mins)</p> <p>IC-O-011: Designing a digital, multiplayer board game to support undergraduates learning experience in Organic Chemistry Ms. Patsy Quevenner, Germany (20 mins)</p> <p>IC-O-017: Using Machine Learning to Evaluate Chemistry Teachers' Discourse Practices: The Case of Electrochemistry Dr. Song Xue, China (20 mins)</p> <p>Chair: Asst. Prof. Dr. Sawarwa Pungswatd</p>	<p>T3-PR Policy, Reform, and Quality Assurance in Chemistry Education</p> <p>P3: The Development of Standards & Guidelines for Undergraduate Chemistry Education Dr. Nicholas Brock, United States (30 mins)</p> <p>P2: The use of generative artificial intelligence, convergent (STEM) education policies and challenges for the future of STEM education in South Korea Prof. Hyun-Ju Park, Republic of Korea (20 mins)</p> <p>PR-O-002: Embedding green and sustainable chemistry in undergraduate study programs Ms. Patsy Quevenner, Germany (20 mins)</p> <p>Chair: Assoc. Prof. Tawetham Limpaporn, Mahidol University Dr. Supacha Wirojapongthong</p>	<p>T4-CS Chemistry and Science Teacher Education and Continuous Professional Development</p> <p>CS-O-007: Reinforcing Assessment Skills of Science Teachers through Project E-S TOMATA (Enhanced-Science Teachers Observing, Measuring, Assessing, Testing and Analysis of learners' products) Philippines (20 mins) Ms. Rosalita Compline Reyes</p> <p>CS-O-008: Development of the competencies to use Small-scale Chemistry in teaching Chemistry for high school teachers in Ho Chi Minh City, Viet Nam Ms. Vinh Thuan Le, Viet Nam (20 mins)</p> <p>CS-O-010: Learner mental representations of the particulate nature of gases in the Philippines Assoc. Prof. Cynthia Limbaco, Taiwan, Philippines (20 mins)</p> <p>CS-O-012: Designing teacher capacity program for integrative chemistry pedagogy: A Comprehensive exploration of active learning methods Dr. meera j dashapure, India (20 mins)</p> <p>CS-O-013: Attaining program outcome through alternate teaching methodology Dr. Samta Matha, India (20 mins)</p> <p>Chair: Assoc. Prof. Chitrae Falakanta, Kasselbaat University Prof. Voravee Hovee, Chulalongkorn University</p>	<p>Symposium B Promoting students' modeling competence via modeling-based instruction and assessment</p> <p>SB-O-007: Analyzing the Frequency and Themes of the Term 'Model' Across Elementary School Science Textbooks for University-Level Chemistry Textbooks in Taiwan Prof. Chin-Ching Chou, Taiwan (20 mins)</p> <p>SB-O-002: Designing Modeling-Based Instruction with a Hypothetical Learning Progression to Track the Evolution of Sixth-Grade Students' Particle Model of Matter Ms. Chiu-Hsin Wang, Taiwan (20 mins)</p> <p>SB-O-004: Unraveling Elementary School Teachers' Mental Models: Utilizing the Particle Model of Matter to Examine Water's Three States and Constructing Analogical Models for Their Students Ms. Chen-Yi Chen, Taiwan (20 mins)</p> <p>SB-O-006: Exploring Elementary Students' Evolution of Mental Models and an Examined Teacher's Responses: Formative Assessment of Analogical Modeling in Understanding Matter across Microscopic and Macroscopic Perspectives Ms. Si-Chun Lai, Taiwan (20 mins)</p> <p>Chair: Prof. Mei-Hung Chiu (Taiwan) Co-Chair: Prof. Vicente Talampuer (USA)</p>	<p>Special Event 1 Meet the 2024 CCE Award Winners - insights and reflections on their journeys</p>	<p>Workshop A Microscale/Small-Scale Chemistry</p>	
14.40-15.40								
15.40-16.00	Break							
16.00-17.00	<p>Symposium E Systems Thinking in Chemistry for Sustainability</p> <p>Systems thinking, sustainability and the chemical industry Suzanne deakin (20 mins)</p> <p>Towards net-zero: prospective LCA applied to fragrance manufacture Ulla Lethinen, Finland (20 mins)</p> <p>Delivering on a low emissions future for petrochemicals - challenges, opportunities, and actions needed Bob McQuinn, Ireland (20 mins)</p> <p>Systems, resilience and collaborative teams Bernard West, Ireland (20 mins)</p> <p>Panel discussion with session presenters</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-018: The use of portable titration kits as a tool to study direct and indirect titration technique for high school titration teaching Ms. Wirojapongthong, Thailand (20 mins)</p> <p>IC-O-016: Using generative AI to promote critical questioning and better concept understanding Prof. Robert Buck, Australia (20 mins)</p> <p>IC-O-011: Circular Chemistry to enable a Circular Economy Assoc. Prof. Chris Buckley, The Netherlands (30 mins) VDO</p> <p>Chair: Dr. Fun Man Fung, National University of Singapore Dr. Supacha Wirojapongthong</p>	<p>T3-PR Policy, Reform, and Quality Assurance in Chemistry Education</p> <p>P3: Ensuring Quality Assurance and Driving Policy Reform in Education: The Vital Role of Green and Sustainable Chemistry Prof. Huiyuan Pan, Australia (20 mins)</p> <p>P2: Recent Reform of Chemistry Laboratory Teaching in China Prof. Shuyang Zhang, P. R. China (30 mins) VDO</p> <p>Chair: Assoc. Prof. Panchaea Rompong Wichaidit, Mae Nalinin Gosawang</p>	<p>T4-CS Chemistry and Science Teacher Education and Continuous Professional Development</p> <p>CS-O-016: Exploring chemistry teachers' assessment knowledge through a rubric for self-designed food and sustainability-related activities Prof. Yuhui Jiao, China (20 mins)</p> <p>CS-O-017: My personal Pedagogical Content Knowledge (PCK) for teaching electron configurations in the complexity of chemistry classroom Ms. Suparat Kanyasri, Thailand (20 mins)</p> <p>Chair: Assoc. Prof. Chitrae Falakanta, Kasselbaat University IPST</p>	<p>Symposium B Promoting students' modeling competence via modeling-based instruction and assessment</p> <p>SB-O-007: Analyzing the Frequency and Themes of the Term 'Model' Across Elementary School Science Textbooks for University-Level Chemistry Textbooks in Taiwan Prof. Chin-Ching Chou, Taiwan (20 mins)</p> <p>SB-O-002: Designing Modeling-Based Instruction with a Hypothetical Learning Progression to Track the Evolution of Sixth-Grade Students' Particle Model of Matter Ms. Chiu-Hsin Wang, Taiwan (20 mins)</p> <p>SB-O-004: Unraveling Elementary School Teachers' Mental Models: Utilizing the Particle Model of Matter to Examine Water's Three States and Constructing Analogical Models for Their Students Ms. Chen-Yi Chen, Taiwan (20 mins)</p> <p>SB-O-006: Exploring Elementary Students' Evolution of Mental Models and an Examined Teacher's Responses: Formative Assessment of Analogical Modeling in Understanding Matter across Microscopic and Macroscopic Perspectives Ms. Si-Chun Lai, Taiwan (20 mins)</p> <p>Chair: Prof. Mei-Hung Chiu (Taiwan) Co-Chair: Prof. Vicente Talampuer (USA)</p>	<p>Workshop A Microscale/Small-Scale Chemistry</p>		
17.00-17.40								
17.40-18.20	<p>Plenary Lecture (17.20-18.00) P3: Chemical Sciences for SDGs: gender, diversity, equity and inclusion effects in the least developed countries - Prof. J. Catherine Ngila, Kenya Chair: Dr. Debra Marchak, Weizmann Institute of Science @Head of State Chamber</p>							
18.20-21.00	<p>Opening Ceremony of poster presentation session</p> <p>Poster Presentation Section 1 (18.15-19.30)</p> <p>Poster Presentation Section 2 (19.30-21.45)</p> <p>(snack & refreshments will be provided) @Royal Summit Chamber</p>							

Wednesday, 17 July 2024

Time/Date	Orchid Ballroom A	Orchid Ballroom B	Jomtien 3
	Registration 08.00-14.00		
9.00-10.40	<p style="text-align: center;">Symposium E Systems Thinking in Chemistry for Sustainability</p> <p><i>K03: Chemistry education for sustainable development</i> <i>Prof. Glenn A. Hurst, UK (35 mins)</i></p> <p><i>SE-O-006: An inquiry based activity: The life cycle analysis of solar panels with a combined lens of U.N. Sustainable Development Goals and green chemistry</i> <i>Prof. Dr. Meghna Dilip, USA (20 mins)</i></p> <p><i>SE-O-012: Incorporation of Systems Thinking into the Chemistry Curriculum</i> <i>Assoc. Prof. Dr. Ellen Note Mitchell, USA (20 mins)</i></p> <p><i>SE-O-013: Advancing chemistry education by integrating systems thinking into building Physical Chemistry knowledge frameworks</i> <i>Prof. Yuan-Chung Cheng, Taiwan (20 mins)</i></p>		<p style="text-align: center;">Symposium D Advancing Chemical Safety and Security Education</p> <p><i>SD-O-023: THROUGH the Lens of Virtual Reality – The Future of Laboratory Safety and Security Inspection Training in National University of Singapore</i> <i>Dr. Andrew Ng, Singapore (20 mins)</i></p> <p><i>SD-O-025: Securing Tomorrow: A Developing Curriculum in Chemical Security Risk Assessment: A Pilot Study Across Kurdistan Region's Academic Sector</i> <i>Ms. Duniya Saleh, Iraq (20 mins)</i></p> <p><i>SD-O-036: Introducing chemical security and safety in universities through awareness of chemical weapons with new OPCW interactive learning resources</i> <i>Ms. Ashley Elgersma, Canada (20 mins)</i></p> <p style="text-align: center;">Panel Discussion with speakers</p> <p>Chair: Dr. Christine Straut Langlais, USA</p>
10.40-11.00	Break		
11.00-12.00	<p style="text-align: center;">Symposium E Systems Thinking in Chemistry for Sustainability</p> <p><i>I26: Teaching Certificate Program in View of the Systems Thinking Platform</i> <i>Rachel Mamlok-Naamán (30 mins)</i></p> <p><i>SE-O-009: An educational framework for teaching chemistry using a systems thinking approach</i> <i>Prof. Vicente Talanquer, USA (20 mins)</i></p> <p><i>SE-O-011: Inspiring chemistry instructors to think holistically rather than reductively</i> <i>Dr. David A. Laviska, USA (20 mins)</i></p> <p>End of symposium panel discussion with session presenters - Educating the educators - next steps? Graduate outcomes to influence industry?</p>	<p style="text-align: center;">T4-CS Chemistry and Science Teacher Education and Continuous Professional Development</p> <p><i>CS-O-021: A Trend Analysis of Project-based Learning in Chemistry Experiment: A Bibliometric Analysis</i> <i>Ms. Ika Hasanah, Indonesia (20 mins)</i></p> <p><i>CS-O-022: Case Teaching: Promoting the Understanding and Application of Pre-service Chemistry Teachers' Teaching Knowledge</i> <i>Ms. Yuezhu Sun, China (20 mins)</i></p> <p><i>CS-O-023: Developing students' mental models of grade-10 non-science program students in chemical bonding</i> <i>Mr. Potisak Potisen, Thailand (20 mins)</i></p> <p><i>CS-O-024: Chemistry teachers' pedagogical content knowledge for teaching modeling practices through the lens of epistemology of models</i> <i>Mr. Anupong Praitsri, Thailand (20 mins)</i></p> <p><i>CS-O-030: Crosscutting concept in fundamental chemistry in Thailand</i> <i>Mr. Parinya Mutchu, Thailand (20 mins)</i></p> <p>Chair: Dr. Shelley Rap, Weizmann Institute of Science Assoc. Prof. Dr. Saowarux Fuangswasdi</p>	<p style="text-align: center;">Symposium D Advancing Chemical Safety and Security Education</p> <p><i>I16: Animating Chemical Security: Engaging Undergraduates and Post-Graduates through Visual Storytelling</i> <i>Dr. Fakhri Elabbas, Libya (30 mins)</i></p> <p><i>SD-O-019: Gender Stereotypes and Enhancing of Chemical Security in Technical and Vocational Education in Libya: Case Study</i> <i>Dr. Ayad Abdalla, Libya (20 mins)</i></p> <p><i>SD-O-005: Chemical Security in Technical and Vocational Education in Libya - An overview</i> <i>Prof. Dr. Nabil Bader, Libya (20 mins)</i></p> <p><i>SD-O-024: Evaluation of chemical security curriculum development in Libyan Universities</i> <i>Dr. Mostafa Aboarrarhem, Libya (20 mins)</i></p> <p style="text-align: center;">Panel Discussion with Libyan Speakers</p> <p>Chair: Dr. Christine Straut Langlais, USA</p>
12.00-12.40			
12.40-14.00	Lunch		
14.00-14.40	Excursion		
14.40-15.40			
15.40-16.00			
16.00-17.00			
17.00-17.40			
17.40-18.20			
18.20-21.00			

Thursday, 18 July 2024

Time/Date	Orchid Ballroom A	Orchid Ballroom B	Jomtien 2	Jomtien 3	Jomtien 8	Jomtien 10
	Registration 08.00-16.00					
9.00-10.40	<p>Workshop D Enhancing Chemical Safety and Security for the Chemical Weapons Convention</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-020: Learning Styles Theory: Could Students' Learning Preferences Make STEM Subjects Easier to Learn? <i>Dr. Julio Garay, USA (20 mins)</i></p> <p>IC-O-024: Analyzing student engagement with conflicting visualizations of acid-base reactions: evolution of research into teaching practice <i>Prof. Resa M Kelly, USA (20 mins)</i></p> <p>IC-O-025: Exploring Interactive Animations to Facilitate Understanding of Mechanisms in Organic Chemistry <i>Mr. Wilton José Djalindo Da Nascimento Nascimento, Brazil (20 mins)</i></p> <p>IC-O-028: Chemical Automation: an innovative course for the age of smart chemistry <i>Assoc. Prof. Dr. Changyu Lin, China (20 mins)</i></p> <p>IC-O-029: MIT App Inventor for a voice-controlled portable DNA extraction system <i>Dr. Hoang Khang Bui, Korea (20 mins)</i></p> <p>Chair: Prof. Santiago Sardi-Urena, Pomona College/University of Costa Rica</p>	<p>T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>I03: Simple Synthesis of Nanoparticles at Home <i>Assoc. Prof. Ekasith Somsok, Thailand (30 mins)</i></p> <p>RC-O-016: Engaging chemistry teachers with inquiry/investigatory based experimental modules for undergraduate chemistry laboratory education <i>Dr. Indran Das Sen, India (20 mins)</i></p> <p>RC-O-018: Assessing the relationship between practical activities and students' problem-solving skills in stoichiometry <i>Prof. Helen Patricia Drummond, South Africa (20 mins)</i></p> <p>Chair: Dr. Fun Man Fung, National University of Singapore Assoc. Prof. Paltcharee Rompayom Wichaidi</p>	<p>T1-CE Chemistry Education in Informal Education and Life-long Learning Context</p> <p>(Late start)</p> <p>CE-O-003: Transforming Chemistry Education: The Power of Imagery, Storytelling, and Industry <i>Mrs. Rajasree Swaminathan, USA (20 mins)</i></p> <p>K02: Science Education as a Key to Sustainable Development: A Reflection on Princess Maha Chakri Sirindhorn's Education Development Projects <i>Assoc. Prof. Khunying Sompote Promsook, Thailand (35 mins)</i></p> <p>Chair: Dr. Debora Marchak, Weizmann Institute of Science Assoc. Prof. Saiongy Sowsapua</p>	<p>Symposium F Green and sustainable chemistry in the chemistry curriculum: Advances</p> <p>K09: Green Chemistry Education: Building Community and Empowering Educators and Leaders to Create Change <i>Dr. Amy S Cannon, USA (35 mins)</i></p> <p>SF-O-019: Green chemistry in the curriculum: What's next? <i>Dr. David A. Laviska, ACS G0 (20 mins)</i></p> <p>I30: Journey of 'Green Chemistry and Sustainability' graduate program in Thailand <i>Prof. Voravee Horvati, Thailand (30 mins)</i></p> <p>Discussion: Dr. Amy Cannon, USA; Dr. David Laviska, ACS G0, USA, and Prof. Mageswary Karupudewan, Malaysia</p>	<p>Symposium C Connecting Competency-based Chemistry Education and the Challenge of Sustainable Development</p> <p>I20: Transforming Chemistry Education for a Sustainable Future: Empowering Teachers and Learners through Interactive Technologies <i>Asst. Prof. Nivart Srivastava, Thailand (30 mins)</i></p> <p>SC-O-003: Leveraging a Case-based Learning Intervention to Boost Pre-service Teachers' Chemistry Competencies Self-Efficacy <i>Asst. Prof. Anggiani Ratnaningsih Eka Nugraheni, Indonesia (20 mins)</i></p> <p>SC-O-008: A survey study examining the perspectives of Thai teachers on teaching chemistry at the secondary level with a focus on green chemistry and sustainability <i>Duangpruthai Sidsang, Thailand (20 mins)</i></p> <p>SC-O-010: Effectiveness of Technological Pedagogical Content Knowledge-focused Coursework in Enhancing Pre-service Teachers' Confidence of Technological Integration in School Science <i>Ms. Wacharaporn Khaokharn, Thailand (20 mins)</i></p> <p>Chair: Asst. Prof. Dr. Nivart Srivastava, Faculty of Education, Khon Kaen University</p>
10.40-11.00		Break				
11.00-12.00	<p>Workshop D Enhancing Chemical Safety and Security for the Chemical Weapons Convention</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-031: Characterizing students' performance on science assessment via IER Topic <i>Mr. Mao-ren Zeng, Taiwan (20 mins)</i></p> <p>IC-O-033: Optimizing the composition of ionic liquids based adsorbent by Entropy-TOPSIS method for desulfurization of model diesel <i>Mr. Subhaji Kundu, India (20 mins)</i></p> <p>IC-O-041: Assessing Pre-Service Chemistry Teachers' Technological Pedagogical Content Knowledge Through Designing Teaching Activities Between Taiwan and Turkey <i>Mr. Chihang Chang, Taiwan (20 mins)</i></p> <p>Chair: Assoc. Prof. Sakiti Supason, Faculty of Science, Ubon Ratchathani University Miss Orapan Aprakarn</p>	<p>T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>RC-O-019: Redesigning a chemistry laboratory as a blended learning course for prospective primary school teachers <i>Ms. Natalie Aline, Germany (20 mins)</i></p> <p>RC-O-020: Exploring conceptual understanding in organic qualitative analysis <i>Dr. Gomathi Shrivastava, India (20 mins)</i></p> <p>RC-O-022: Chemistry laboratory teaching in the context of a large classroom size: A case study <i>Mr. Biplob Kumar Deb, Bangladesh (20 mins)</i></p> <p>Chair: Assoc. Prof. Ekasith Somsok, Mahidol University Miss Natsin Gassawong</p>	<p>T1-CE Chemistry Education in Informal Education and Life-long Learning Context</p> <p>I04: Introducing Non-Formal Modes of Learning to the High School Chemistry Classroom <i>Dr. Debora Marchak, Israel (30 mins)</i></p> <p>I14: From Kindergarten to Kivnet - Outreach and Education within the MacChemil Institute for Advanced Materials and Nanotechnology <i>Assoc. Prof. Anna Gardner, New Zealand (30 mins)</i></p> <p>Chair: Dr. Michele Brooks, American Chemical Society Mr. Jirawat Salavany Miss Khantitua Keedipol</p>	<p>Symposium F Green and sustainable chemistry in the chemistry curriculum: Advances</p> <p>SF-O-004: Measuring Students' Green Chemistry Knowledge: A Tale of Two Instruments <i>Alexey Leontyev, USA (20 mins)</i></p> <p>SF-O-011: Role of the Periodic Table of the Elements of Green and Sustainable Chemistry: Advancing SDGs in Chemistry Education <i>Prof. Gino Corvini Junior, Brazil (20 mins)</i></p> <p>SF-O-002: Exploration of biorefinery synthesis through inquiry learning with immobilized lipase <i>Dr. Duangkhae Sukum, Thailand (20 mins)</i></p>	<p>Symposium C Connecting Competency-based Chemistry Education and the Challenge of Sustainable Development</p> <p>SC-O-004: Impacts of Game-based Practices on Students' States of Matter Achievements <i>Ms. Ngoc-Trinh Nguyen, Viet Nam (20 mins)</i></p> <p>SC-O-007: Enhancing Engagement and Perception in Chemistry Education: Integrating Technology-Assisted Self-Regulated Learning Strategies in Senior Secondary Curriculum <i>Dr. Chulim Lae, Taiwan (20 mins)</i></p> <p>Chair: Dr. Anggiani Ratnaningsih Eka Nugraheni, Department of Chemistry Education, Universitas Negeri Yogyakarta</p>
12.00-12.40		<p>Plenary 4 (12.00-12.40) P4: The OPCW: Ridding the world from chemical weapons <i>Dr. Peter J. Hutschliss, USA</i></p> <p>Chair: Assoc. Prof. Ekasith Somsok, Mahidol University @Head of State Chamber</p>				
12.40-14.00	Lunch					
14.00-14.40	<p>Workshop D Enhancing Chemical Safety and Security for the Chemical Weapons Convention</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-035: Enhancing Chemical Education through 3D Printing <i>Dr. Mai Yan Yuan, Hong Kong SAR/PRC (20 mins)</i></p> <p>IC-O-036: Small Scale Huge Effects <i>Mr. Ye Sifu, Myanmar (20 mins)</i></p> <p>I08: Collaborative learning in immersive Virtual Reality: The design to support students' understanding of the molecular world <i>Assoc. Prof. Mikyong Won, Australia (30 mins)</i></p> <p>I38: Accelerate Innovation through Research on AWS <i>Mr. Shun Ueda, Singapore (20 mins)</i></p> <p>Chair: Assoc. Prof. Sakiti Supason, Faculty of Science, Ubon Ratchathani University Miss Sitinat Boonpo Miss Woraphol Nansu</p>	<p>T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>RC-O-025: Engaging teachers with CER literature and designing laboratory experiments: the study circle approach <i>Prof. Dr. Lakshmy Ravishanker, India (20 mins)</i></p> <p>RC-O-026: Sustainability and systems thinking: Greening the lab class practical by practical <i>Dr. Thomas A. Logothetis, UK (20 mins)</i></p> <p>RC-O-030: Flipped chemistry laboratory <i>Mr. Hani-Ram Dewkota, Nepal (20 mins)</i></p> <p>Chair: Assoc. Prof. Ekasith Somsok, Mahidol University Miss Pattamporn Hemwech</p>	<p>T1-CE Chemistry Education in Informal Education and Life-long Learning Context</p> <p>I32: From science research and technology to learning perspectives: Applying the Circular Economy model in out-of-school settings <i>Prof. Stefan Schwager, Germany (30 mins)</i></p> <p>CE-O-008: What a 4-5 yr. Child Can do in a School Chemistry Lab (a Case Study) <i>Dr. Denis Zhulin, Russian Federation (20 mins)</i></p> <p>CE-O-010: Facets of collaborative regulation of learning and chemical thinking during participation in a collaborative dynamic learning experience <i>Ms. Noam Amir, Israel (20 mins)</i></p> <p>CE-O-012: Students' Chemistry Learning Experience Using Chemical Representations Connected to the Context of Everyday Life <i>Ms. Elinia Azmi Siregar, Indonesia (20 mins)</i></p> <p>Chair: Dr. Debora Marchak, Weizmann Institute of Science Assoc. Prof. Chaitree Fakhama, Kasselart University</p>	<p>Symposium F Green and sustainable chemistry in the chemistry curriculum: Advances</p> <p>SF-O-018: Bridging Theory and Practice: Integrating Green Sustainable Chemistry in Pre-Service Teacher Education using circular economy and systems thinking approaches <i>Prof. Mageswary Karupudewan, Malaysia (20 mins)</i></p> <p>SF-O-014: STEAM-AR-Stoichiometry: Carbon Footprint in Learning Stoichiometry for Pre-University Students <i>Ms. Kai En Law, Malaysia (20 mins)</i></p> <p>SF-O-015: The development of the Organic Chemistry Metacognitive Instruction Framework by merging think-aloud and science writing heuristics in green and sustainable chemistry context. <i>Mr. Byron MC Michael Kadum, Malaysia (20 mins)</i></p>	<p>Symposium C Connecting Competency-based Chemistry Education and the Challenge of Sustainable Development</p> <p>SC-O-006: Implementation of Student Worksheets in Chemistry Learning: A Case Study about Rare Earth Elements in Socio-scientific Issue at Secondary Islamic School <i>Ms. Ayu Ningtias Laraswati, Indonesia (20 mins)</i></p> <p>SC-O-008: Sustainability of Coffee Development Based on The Diversity Pattern of Physicochemical Composition on Three Coffee Pulp Species with Various Harvesting Methods by Clustering and PCA Analysis: A Proposal for Competency-based Middle School Science <i>Dr. Yudhita Masully, Indonesia (20 mins)</i></p> <p>SC-O-009: Enhancing Chemistry Competencies through Nano-Scale Science and Technology: An Empirical Study of Eight-Grade Students in Thailand <i>Ms. Pimpaka Lekphet, Thailand (20 mins)</i></p> <p>Chair: Assoc. Prof. Dr. Edwenna Elinore S. Paderna, College of Education in the Philippines-Diliman</p>
14.40-15.40		Break				
15.40-16.00	<p>Workshop D Enhancing Chemical Safety and Security for the Chemical Weapons Convention</p>	<p>T3-IC Innovative technology for chemistry education</p> <p>IC-O-044: Impact of fill-in-the-blanks concept maps on low prior-knowledge students learning chemistry at university <i>Assoc. Prof. Dr. Yu-Chuan Yang, Taiwan (20 mins)</i></p> <p>IC-O-045: Nano Escape: Elevating Nano Education through Hybrid Chemical Escape Rooms <i>Dr. Shaleh Raj, Israel (20 mins)</i></p> <p>I25: Smartphone-assisted small-scale chemistry experiments to promote high school students' conceptual understanding in chemistry concepts <i>Assoc. Prof. Sakiti Supason, Thailand (30 mins)</i></p> <p>Chair: Assoc. Prof. Chaitree Fakhama, Kasselart University Miss Sitinat Boonpo Mr. Woraphol Nansu</p>	<p>T2-RC Reshaping Chemistry Laboratory Teaching</p> <p>RC-O-036: Enhancing conceptual connections with project-based laboratory learning for organic chemistry students at a small university (VQO) <i>Dr. Nupur T. Parikh, USA (20 mins)</i></p> <p>RC-O-037: University facilities' opinions on undergraduate students' readiness to work in chemistry laboratories <i>Mr. Michael Giuseppe Sheffield Caterese, Australia (20 mins)</i></p> <p>Chair: Assoc. Prof. Ekasith Somsok, Mahidol University Miss Pattamporn Hemwech</p>	<p>T1-CE Chemistry Education in Informal Education and Life-long Learning Context</p> <p>I34: A chemistry outreach program underpinned by sustainable development goals <i>Dr. David Stephen Warren, New Zealand (20 mins)</i></p> <p>CE-O-013: Translation Between Multiple Modes of Representations in Writing-to-learn Activities for Transition Elements <i>Dr. Nilavathi AP Balasundaram, Malaysia (20 mins)</i></p> <p>CE-O-016: Competitive activities in chemistry: a tool for education and outreach <i>Dr. Michal Hajek, Slovakia (20 mins)</i></p> <p>Chairs: Dr. Debora Marchak, Weizmann Institute of Science Miss Supan Anuchai Miss Intanon Sukkasam</p>	<p>Symposium F Green and sustainable chemistry in the chemistry curriculum: Advances</p> <p>SF-O-006: School teachers implementing innovation through green and sustainable chemistry practical activities - an IUPAC global survey <i>Dr. Seamus Delaney, Norway (20 mins)</i></p> <p>SF-O-008: Chemistry teachers' experiences and views on practical activities and green chemistry revealed by IUPAC global survey - Turkey, Nepal and Indonesia <i>Assoc. Prof. Sevil Akaygun, Turkey (20 mins)</i></p> <p>SF-O-007: What do teachers tell us about implementing green and sustainable chemistry practical activities - Comparing Vietnam and Thailand with the global perspective <i>Mr. Thanh Quan Huynh, Viet Nam (20 mins)</i></p> <p>Discussion</p>	<p>Symposium C Connecting Competency-based Chemistry Education and the Challenge of Sustainable Development</p> <p>SC-O-001: Empowering Change: Young Ambassador for Chemistry Initiatives in Promoting Chemistry's Role in Attaining Sustainable Development Goals at RMCE 2023 <i>Asst. Prof. Dr. Yvonne Shuen Lann Choo, Malaysia</i></p> <p>SC-O-002: Investigating Students' Perceived Performance and Relevance of Chemistry Learning Competencies to Sustainable Development <i>Ms. Hazel Joyce Mercado Ramirez, Philippines</i></p> <p>Chair: Dr. Anggiani Ratnaningsih Eka Nugraheni, Department of Chemistry Education, Universitas Negeri Yogyakarta</p>
17.00-17.40		Special Event 2 Panel Discussion on Power of Chemistry Education for Advancing SDGs Moderator: Dr. Amy Cannon To celebrate the 10th Anniversary of Implementing The Small Scale Chemistry Teaching in Thailand (Dow Chemistry Classroom) @Orchid Ballroom B (17.20-19.00)				
17.40-18.20	Conference Banquet @Head of State Chamber (19.00-21.00)					
18.20-21.00	Conference Banquet @Head of State Chamber (19.00-21.00)					

Friday, 19 July 2024

Time/Date	Orchid Ballroom A	Orchid Ballroom B	Jomtien 2	Jomtien 3
	Registration 08.00-14.00			
9.00-10.40	Workshop E Getting systems thinking into your classroom and connecting to sustainability	Workshop F Green Chemistry and the U.N. Sustainable Development Goals: Harnessing Their Combined Power	T8-EE Emerging Educational Trends in Chemistry in the 21st Century	T5-CC Chemistry and Chemical Science Education for Environmental and Social Sustainability
			<p>I06: Cross-institutional study. Propositional instruction and competence in chemical symbolic language in college students <i>Prof. Santiago Sandi-Urena, USA/Costa Rica (30 mins)</i></p> <p>I12: Building a Path to Success <i>Prof. Renee Cole, USA (30 mins)</i></p> <p>EE-O-018: Deciding how to teach first-year chemistry: What are our students doing? <i>Mr. Mick Moylan, Australia (20 mins)</i></p> <p>EE-O-020: Chemistry students' knowledge and attitudes of generative artificial intelligence <i>Dr. Alexandra Yeung, Australia (20 mins)</i></p> <p>EE-O-026: Reductionist mereology instruction: Does it influence chemical identity thinking and chemistry-based health literacy of health science students? <i>Dr. Jonathan Mazon Barcelo, Philippines (20 mins)</i></p> <p>Chair: Dr. Solange Wagner Locatelli, Federal University of ABC Prof Christopher Thompson, Monash University</p>	<p>CC-O-027: Chemistry pedagogy to embed environmental sustainability knowledge among secondary school students <i>Dr. Sureshkumar Manthiriyappan, India (20 mins)</i></p> <p>CC-O-028: Application of Project-Based Learning by Making Edible Coatings in Chemistry Learning to Improve Students' Creative Thinking Skills: A Systematic Literature Review <i>Ms. Ivana Fauziah Sesfa'o, Indonesia (20 mins)</i></p> <p>CC-O-033: Development of CGO/LSF n-p type heterostructure as a bi-functional electrocatalyst for alkaline water-splitting at room temperature <i>Mr. Subhadip Das, India (20 mins)</i></p> <p>CC-O-054: The Representation of South African School Chemistry Textbooks for Green Chemistry <i>Prof. Umesh Ramnarain, South Africa (20 mins)</i></p> <p>Chair: Dr. Christine M Straut Langlinais, Sandia National Laboratories Dr Witawas Handee, Silpakorn University</p>
10.40-11.00	Break			Break
11.00-12.00	Workshop E Getting systems thinking into your classroom and connecting to sustainability	Workshop F Green Chemistry and the U.N. Sustainable Development Goals: Harnessing Their Combined Power	T8-EE Emerging Educational Trends in Chemistry in the 21st Century	
			<p>I33: Student-generated diagrams to learn chemistry through metavisualization: limits and possibilities <i>Dr. Solange Wagner Locatelli, Brazil (30 mins)</i></p> <p>I36: Using Detective Conan to Promote Popularization of Chemical Science: An Innovative Mode and Practice <i>Prof. Hai Xu, China (30 mins)</i></p> <p>Chair: Prof. Renee Cole, University of Iowa Mr. Sakol Warintaraporn, Monash University/Kamnoetvidya Science Academy</p>	
12.00-12.40	Closing Ceremony (12.00-13.00) @Head of State Chamber			
12.40-14.00	Lunch (13.00-14.00)			