

ECRICE 2024 – 16 European Conference on Research in Chemical Education

5 September						
9.00-19.00 Welcome Desk: Information and Registration						
Time-table	Activity					
9.00-9.20	Opening session					
9.20-10.00	Keynote 1 Moderator: João Paulo Leal Silviya Markic Ludwigsburg University of Education <i>Diversity and Inclusion in Chemistry Education</i>					
10.00-10.20	Coffee break / poster session					
10.20-12.00	Workshop					
	W1 - How to Publish in Chemistry Teacher International (Room 112)		W2 - AI. How can we use it to teach and learn? (Room 107)	W3 - 3D Printing and LASER cutting models to learn Chemistry at Secondary School. Periodic table and electrons, and shape of molecules and ions pollutants of air and water. (Room 115)		
12.00-12.40	Keynote 2 Moderator: Adelino Galvão Dragica Trivic University of Belgrade <i>Chemistry and Cultural Heritage Integration in a Sustainable World</i>					
12.40-14.00	Lunch					
14.00-16.00	Room 110	Room 107	Room 111	Room 112		
4 Parallel sessions 2 Workshop	Moderator: Ron Blonder OP1- The influence of authentic advanced lab experiences on students' NOS understanding Iris Shinar OP5- Laboratory Work for 1st year undergraduates – are we making the most of the opportunities? Odilla Finlayson OP9- Immersive Technology for Teaching Undergraduate Analytical Chemistry in the Laboratory Denise Rooney OP13- Virtual Laboratories: A Blended and Sustainable Pedagogic Approach to Teaching and Learning of Practical Chemistry Frances Heaney OP17- The Arsenalor – Using Coca-Cola to Analyse Arsenic in Rice Johannes Passler OP21- Environmental Education Challenges: Understanding Bio-Geo-Chemical Cycles Among Slovenian Pre-Service Teachers Luka Ribič	Moderator: Isabel Ribau OP2- Fostering Critical Thinking in Science Education: Definitions, Assessments, and Implications for Sustainable Decision-Making Luc B. Albrecht OP6- Measuring Success in Chemistry Practical Work: A Comprehensive Review Dominika Koperová OP10- Promoting Sustainability in Chemistry through Systems Thinking for Student Teachers Krenare Ibraj OP14- STEM-Lab electrochemistry activity through a contextualized approach Cidália André OP18 Important Moments among Chemistry Teachers in a Collaborative and Dynamic Learning Environment Shifty Avargil OP22- A Case Study on Integrating Sustainability and Project-Based Learning in Chemistry Teacher Education Outi Haatainen	Moderator: Teresa Santos Silva OP3- A pedagogical strategy centred on water analysis in the community for a sustainable world: incorporating different elements of teamwork. OP7- Upper secondary students and teachers' experience with a teaching unit on organic synthesis with emphasis on green chemistry Svein Tveit OP11- Material Stewardship: Framing Education about Chemistry's Mission in Sustainability Stephen Matlin OP15- From Knowledge to Hope: Assessing High School Students' Knowledge of Climate Change, Mitigation, and Adaptation in the Context of Constructive Hope Nail Kortam OP19- Integrating Systems Thinking Approaches in Chemical Education for Sustainable Development: Exploring the Status Quo Elisabeth Hofer OP23- Embedding Systems Thinking into Sustainable Chemistry Course for Pre-Service Teachers. Emmi Vuorio	Moderator: Adelino Galvão OP4: To stay or not to stay in reality: Insights from Cognitive Load Measurements via Electroencephalography and Heart Rate Variability OP8- Exploring the Role of Non-textual Components in Chemistry Learning Lucie Hamerská OP12- Exploring Sustainable Chemistry Discourse in Serbian Chemistry Textbooks Dušica D. Rodić OP16- The Evaluation of History of Chemistry Chapter in textbooks in Turkey İlknur şahin OP20- The Adoption of Green Chemistry in Brazilian Higher Education Gildo Giroto Junior OP24- Teachers' role in developing students' agency for SDGs Ayshi Sindiani- Bsoul	Workshop W4 - Computer Lab Assignments with tools for Visualizing Chemical Phenomena (Room 204) W5 - Sustainable Chemistry in the School Laboratory (LAB)	
	16.00-17.40	Room 110	Room 107	Room 111	Room 112	
	4 Parallel sessions 2 Workshop	Moderator: Teresa Santos Silva OP25-Impact of Team-Based Learning on Student Engagement and Learning Outcomes in Physical Chemistry Heili Kasuk OP29- Promoting classroom emotional climate for meaningful science learning: Findings from an ADDIE approach Tapashi Binte Mahmud Chowdhury OP33- Science Lessons from the eternal ice: Glaciers as a Gateway to an education for sustainable development Philipp Spitzer OP37- Engaging students in the exploration of Antibiotic Coordination Frameworks (ACFs) using sustainable methods Patricia Rijo OP41- A Role-Playing Tabletop Game on Laboratory Techniques and Chemical Reactivity: Gamifying Organic Chemistry Education João Avó	Moderator : Isabel Ribau OP26- The Norms of Chemistry and How Students Figure Them Jonas Niemann OP30- Computational Methods of Varying Complexity in High School Chemistry Fredrik L. Holmelin OP34- Pedagogical Content Knowledge and the implementation of a Multistrategic Didactic Unit on the theme of Green and Sustainable Chemistry: first approximations Gildo Giroto Junior OP38- Nanotechnology Education as a Gateway for Promoting Sustainability Ram Abu Much OP42- Unlocking Knowledge: Can Nanochemistry Escape Rooms Promote Learning? Shelley Rap	Moderator : Madeleine Schultz OP27 First Hungarian Results of the IUPAC Teacher Survey on Green and Sustainable Chemistry Practical Activities. Murányi Zoltán OP31 Green and sustainable practical activities in Serbian secondary schools: The analysis of open-ended IUPAC teacher survey questions Tamara Rončević OP35- To do or not to do practical activities: Turkish chemistry teachers' experiences and views on practical activities and green chemistry reported on IUPAC global survey Sevil AKAYGUN OP39- Practical (green) chemistry in Czech schools: A myth or reality? Martin Rusek OP43-Environmental literacy of Slovenian chemistry teachers in the context of hydrosphere pollution. Luka Vinko	Moderator : Adelino Galvão OP28- Enhancing Diversity and Inclusion in Science Teacher Education: Insights from a Diagnostic Study. Laura Naumann OP32- Universal Design for Learning - Building a University Culture of Inclusion Denise Rooney OP36- Sima Lozanić's secondary school chemistry textbooks as artifacts: changes in the Periodic table in late 19th and early 20th century editions Vesna D. Milanovic Mastrapovi OP40- Drawing Cartoon Strips as a Visualization Tool in Pre-service Chemistry Education Jouni Välsäari OP44- The Effect of In-Service Education on Chemistry Teachers' Understanding of Nature of Science Suat CELIK	Workshop W6 - Computational Thinking and Modelling in Science Education (Room 204) W7 - Química para os mais novos: THE CHALLENGE (LAB)
		17.40-18.00	Coffee break/poster session			
		18.00-19.40	Symposium 1: Empowering Agency: Research, Development, and Implementation in Chemistry and SDGs Education			
			Organizer: Ron Blonder Chair: Rachel Mamluk-Naaman Speakers: Debora Marchak, Inna Ag, Shelley Rap and Rachel Mamluk-Naaman Discussant: Ron Blonder			
19.40-20.10	Welcome Reception					