

# SLOVENSKI KEMIJSKI DNEVI 2024

18. - 20. SEPTEMBER 2024

## PROGRAM PROGRAMME

# 30

LET  
YEARS

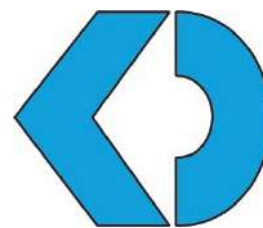
KONGRESNI CENTER  
GRAND HOTELA  
BERNARDIN, PORTOROŽ

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Slovensko kemijsko društvo  
Slovenian Chemical Society





Konferenca »Slovenski kemijski dnevi 2024«, osrednji letni dogodek Slovenskega kemijskega društva, bo potekala od 18. do 20. septembra 2024 v kongresnem centru Grand hotela Bernardin v Portorožu.

*The 30th Annual Meeting of the Slovenian Chemical Society will take place from 18-20 September 2024 at the Grand Hotel Bernardin Convention Center in Portorož-Portorose, Slovenia.*

## O konferenci

Konferenca »Slovenski kemijski dnevi 2024« (<https://skd2024.chem-soc.si/>) bo potekala kot tridnevni znanstveni dogodek, kjer bodo udeležencem na voljo plenarna in vabljenja predavanja, predavanja udeležencev in posterske predstavitve. Organizirano bo tudi tekmovanje za najboljše študentske znanstvene prispevke; nagrajenci bodo prejeli plakete in denarne nagrade. Nagrajene študentske prispevke bosta izbrali strokovni komisiji, ki bosta delo študentov, predstavljenih v obliki predavanj in posterjev, ocenili na podlagi kvalitete oddanih povzetkov in predstavitev. Konferenco bo spremljala tudi razstava najpomembnejših slovenskih proizvajalcev in ponudnikov laboratorijske ter procesne opreme.

Uradna jezika konference »Slovenski kemijski dnevi 2024« sta slovenščina in angleščina. Zaželeno je, da so prispevki udeležencev, zaradi vabljenih udeležencev iz tujine, pripravljeni in predstavljeni v angleškem jeziku. Simultano prevajanje predavanj ne bo zagotovljeno.

Udeleženci konference »Slovenski kemijski dnevi 2024« ste v sredo, 18. septembra 2024, ob 17:00 uri vljudno vabljeni na slovesnost, na kateri bodo podeljene nagrade za najboljša diplomska, magistrska in doktorska dela s področja trajnostne kemije v zadnjih dveh letih. Nagrajencem bodo vročene diplome in denarne nagrade, ki jih sponzorira podjetje AquafilSLO iz Ljubljane. Z veseljem vas obveščamo, da bomo na družabnem srečanju (sreda, 18. septembra 2024) podelili nagrade Slovenskega kemijskega društva.

## About the meeting

*The 30th Annual Meeting of the Slovenian Chemical Society (<https://skd2024.chem-soc.si/en/>) will be a three-day scientific event with plenary and keynote lectures, oral presentations and poster contributions. As an integral part of the conference, a student paper contest will also be organized; the winners will be awarded plaques and cash prizes. The best student papers (for both oral and poster presentations) will be selected by juries who will evaluate their work based on the oral and poster presentations and the quality of the abstracts submitted. The conference also includes the exhibition of the most important Slovenian manufacturers and suppliers of laboratory and process equipment.*

*The official languages of the 30th Annual Meeting of the Slovenian Chemical Society will be Slovenian and English. However, it is desirable that the contributions of the participants are prepared and presented in English due to the invited participants from abroad. No translation facilities will be provided.*

*Participants of the 30th Annual Meeting of the Slovenian Chemical Society are cordially invited to the award ceremony on Wednesday, 18 September 2024, at 17:00, where the awards for the best bachelor's, master's and doctoral theses in the field of sustainable chemistry from the past two years will be presented. The winners will receive diplomas and cash prizes sponsored by AquafilSLO from Ljubljana. We are pleased to inform you that we will present the awards of the Slovenian Chemical Society at the get-together party (Wednesday, 18 September 2024).*

## Organizacijski odbor / Organizing committee

znan. svet. dr. Albin Pintar (predsednik), prof. dr. Iztok Devetak, prof. dr. Jernej Iskra,  
prof. dr. Darja Lisjak, doc. dr. Matic Lozinšek, prof. dr. Zorka Novak Pintarič, dr. Alenka Ristić,  
prof. dr. Matjaž Valant, dr. Silvo Zupančič, Eva Mihalinec

## Prizorišče dogodka

Konferenca »Slovenski kemijski dnevi 2024« bo potekala od 18. do 20. septembra 2024 v kongresnem centru Grand hotela Bernardin v Portorožu (<https://www.sava-hotels-resorts.com/sl/st-bernardin-resort-portoroz/>).

## Venue

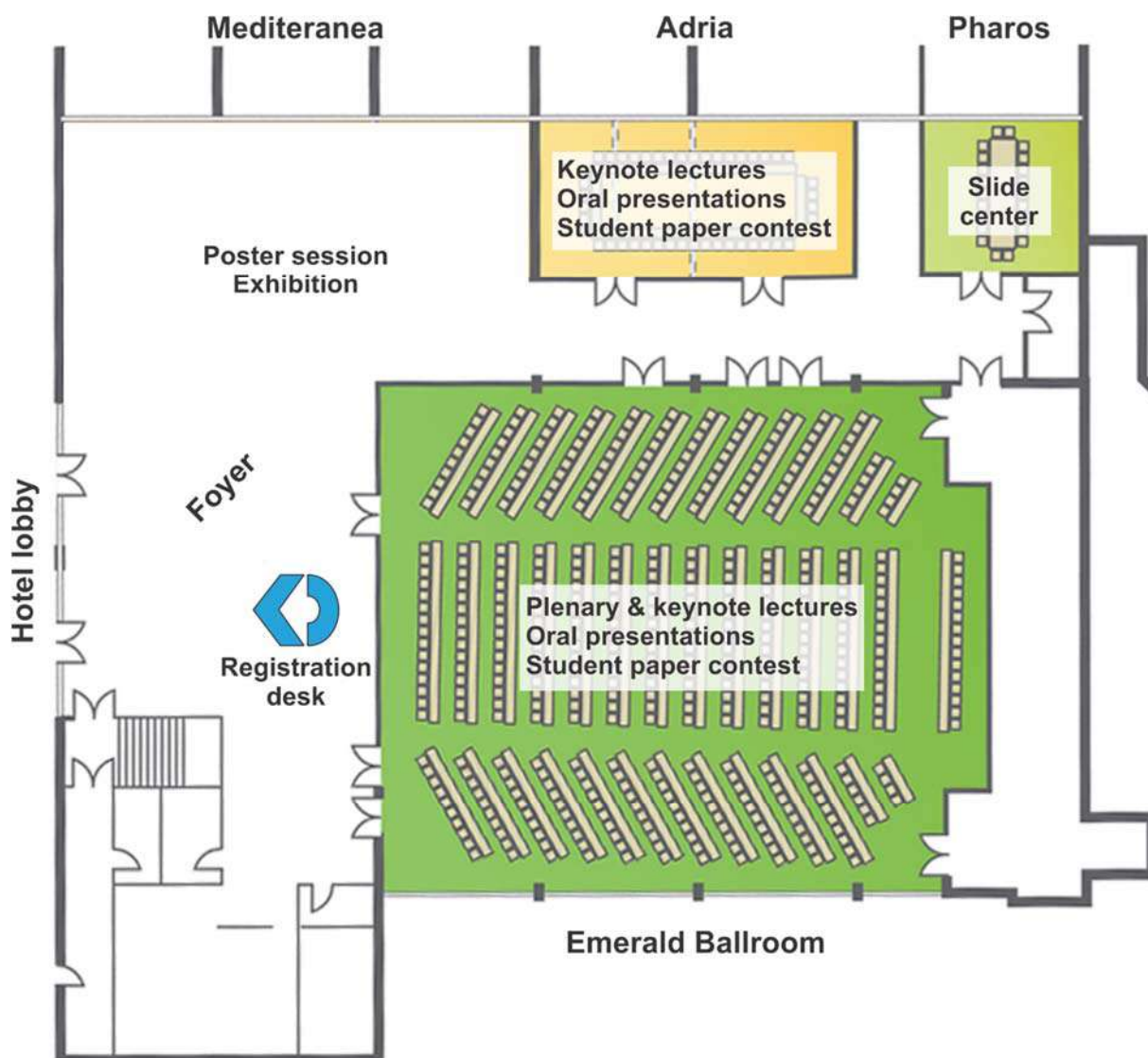
The 30th Annual Meeting of the Slovenian Chemical Society will take place from 18-20 September 2024 in the Grand Hotel Bernardin Convention Center, Portorož-Portorose, Slovenia (<https://www.sava-hotels-resorts.com/en/st-bernardin-resort-portoroz/>).

## Naslov / Address

Grand Hotel Bernardin, Obala 2, SI-6320 Portorož-Portorose, Slovenia  
Tel.: +386 5 695 10 00 | Fax: +386 5 674 64 15 | E-mail: [booking@sava.si](mailto:booking@sava.si)  
GPS: E 13° 34' 9", N 45° 31' 1"

## Prostorski načrt / Conference plan

Dvorana Emerald, 11. nadstropje / Emerald Ballroom, 11th floor





Udeleženci konference »Slovenski kemijski dnevi 2024« se bodo lahko udeležili predavanj in posterskih predstavitev v okviru mednarodne znanstvene konference »4th International Conference on Fundamentals and Applications of Cerium Dioxide in Catalysis (Ceria 2024)« (<https://ceria2024.chem-soc.si/>), ki bo potekala od 17. do 20. septembra 2024 v kongresnem centru Grand Hotel Bernardin.

*Participants of the 30th Annual Meeting of the Slovenian Chemical Society can attend the scientific sessions of the »4th International Conference on Fundamentals and Applications of Cerium Dioxide in Catalysis (Ceria 2024)« (<https://ceria2024.chem-soc.si/>), which will be held in parallel at the Grand Hotel Bernardin Convention Center from 17-20 September 2024.*



Če želite slediti programu konference »Slovenski kemijski dnevi 2024« na mobilnih napravah in si ustvariti svoj urnik spremljanja dogodka, vas vabimo, da uporabite mobilno aplikacijo »conference4me«, ki je na voljo brezplačno v trgovinah Google Play in AppStore.

*To follow the programme of the »30th Annual Meeting of the Slovenian Chemical Society« on mobile devices and schedule your agenda, you are invited to use the »conference4me« mobile app available for free in stores Google Play and AppStore.*

## KRATEK PROGRAM / PROGRAMME AT A GLANCE

sreda, 18. september 2024 / Wednesday, 18 September 2024

12:00	Registracija s pijačo dobrodošlice Registration & welcome drink	
14:00	Otvoritev Opening	
14:10	PL 1 Z. Časar <i>Chair: A.E. Cotman</i>	
15:05	Kratek odmor - Short break	
15:10	<i>Chair: A.E. Cotman</i> O 1 I. Kulašić	<i>Chair: M. Fanetti</i> KL 1 U. Lavrenčič Štangar
	O 2 S. Damiani	
15:50	O 3 J. Dernovšek	O 5 Š. Slapničar
	O 4 Ž. Oražem	O 6 T. Kotnik
16:30	Odmor za kavo Coffee break	
17:00	Podelitev nagrad za najboljša študijska dela s področja trajnostne kemije Award ceremony for the best study work in the field of sustainable chemistry	
17:40	<i>Chair: H. Prosen</i> KL 2 M. Finšgar	<i>Chair: D. Lisjak</i> O 9 K. Motaln
		O 10 J. Tručl
18:20	O 7 B. Repič	O 11 J. Marčec
	O 8 E. Gričar	O 12 A. Siher
19:00	Prosto Free time	
20:00	Podelitev nagrad Slovenskega kemijskega društva in družabno srečanje Award ceremony of the Slovenian Chemical Society and get-together party	



četrtek, 19. september 2024 / Thursday, 19 September 2024

8:00	Registracija Registration	
8:30	<b>PL 2</b> Y. Li <i>Chair: M. Valant</i>	
9:25	Kratek odmor - Short break	
9:30	<i>Chair: M. Valant</i> <b>O 13</b> M. Fanetti	<i>Chair: V. Cepus</i> <b>O 16</b> B. Herlah
	<b>O 14</b> D. Lisjak	<b>O 17</b> I. Džajić
	<b>O 15</b> P. Weinberger	<b>O 18</b> M. Rantaša
10:30	Odmor za kavo Coffee break	
11:00	<i>Chair: R.D. Jansen-van Vuuren</i> <b>KL 3</b> L. Peterlin Mašič	<i>Chair: M. Leitgeb</i> <b>O 23</b> A. Kravos
		<b>O 24</b> A. Pavlovič
11:40	<b>O 19</b> L. Jedlovčnik	<b>O 25</b> T. Kralj
	<b>O 20</b> J. Gregorc	<b>O 26</b> M. Caf
	<b>O 21</b> J. Mavri	<b>O 27</b> Ž. Boček
	<b>O 22</b> A. Zupanc	<b>O 28</b> L. Godec
13:00	Odmor za kosilo Lunch break	
14:30	<i>Chair: M. Kristl</i> <b>O 29</b> M. Lozinšek	<i>Chair: S. Zupančič</i> <b>KL 4</b> R. Wollrab
	<b>O 30</b> B. Belec	
15:10	<b>O 31</b> M. Virant	<b>O 35</b> N. Veronovski
	<b>O 32</b> A. Mavrič	<b>O 36</b> I. Shlyapnikov
	<b>O 33</b> K. Radan	<b>O 37</b> N. Vidmar
	<b>O 34</b> M. Dragomir	<b>O 38</b> V. Mislej
16:30	Poster sekcija z odmorom za kavo Poster session with coffee break	



**četrtek, 19. september 2024 / Thursday, 19 September 2024**

18:00	<b>O 39</b> A.E. Cotman <i>Chair: J. Kladnik</i>	<b>O 41</b> M. Huš <i>Chair: A. Kokalj</i>
	<b>O 40</b> S. Nemec	<b>O 42</b> M. Gabrič
		<b>O 43</b> T. Žibert
19:00	Prosto Free time	
20:00	Konferenčna večerja / Conference dinner	

**PL** – plenarno predavanje / plenary lecture (55 min)

**KL** – vabljen predavanje / keynote lecture (40 min)

**O** – sekcijsko predavanje / section lecture (20 min)

	Dvorana Emerald – <b>posterji in razstavni prostor</b> / Emerald Ballroom - <b>Posters and Exhibition</b>
	Dvorana Emerald <b>1</b> / Emerald Ballroom <b>1</b>
	Dvorana <b>Adria</b> / <b>Adria</b> Hall
	Družabno srečanje / Get-together party – Grand Hotel Bernardin, Emerald Ballroom 2 (18. 9.)  Konferenčna večerja / Conference dinner – Ploščad / Terrace International, ob hotelu Histrion / in front of Hotel Histrion (19. 9.)

**petek, 20. september 2024 / Friday, 20 September 2024**

8:30	<i>Chair: D. Pečar</i> <b>O 44</b> M. Grilc	<i>Chair: I. Devetak</i> <b>KL 5</b> S. Markič
	<b>O 45</b> J. Teržan	
9:10	<b>O 46</b> A. Sedminek	<b>O 50</b> V. Ferk Savec
	<b>O 47</b> B. Ljubec Božiček	<b>O 51</b> L. Ribič
	<b>O 48</b> E. Živalj	<b>O 52</b> K. Stanič
	<b>O 49</b> A. Zupanc	<b>O 53</b> L. Praprotnik Čurič
10:30	Odmor za kavo Coffee break	
11:00	<b>PL 3</b> E.J.M. Hensen <i>Chair: S. Bensaid</i>	
11:55	Kratek odmor - Short break	
12:00	<i>Chair: M. Dragomir</i> <b>O 54</b> A. Siljanovska	<i>Chair: I. Devetak</i> <b>O 57</b> T. Klemen
	<b>O 55</b> K. Drobež	<b>O 58</b> K. Mlinarec
	<b>O 56</b> N. Bhootpur	<b>O 59</b> L. Vinko
13:00	Odmor za kosilo Lunch break	
14:30	<i>Chair: P. Weinberger</i> <b>KL 6</b> E. Vesselli	<i>Chair: A. Zupanc</i> <b>O 62</b> G.G. Prinčič
		<b>O 63</b> V. Cepus
15:10	<b>O 60</b> A. Kokalj	<b>O 64</b> R. Jansen-van Vuuren
	<b>O 61</b> J. Volavšek	<b>O 65</b> M. Huskič
15:50	Kratek odmor - Short break	
16:00	Podelitev študentskih nagrad in zaključek Student awards and closing remarks	

## PROGRAM / PROGRAMME

sreda, 18. september 2024 / Wednesday, 18 September 2024

12:00 – 14:00	<b>Registration &amp; welcome drink</b> Foyer of the Grand Hotel Bernardin Convention Center (11th floor)
14:00 – 14:10	<b>Opening</b> Emerald Ballroom 1 (11th floor)
14:10 – 15:10	<b>Plenary session P1</b> <span style="float: right;"><b>Emerald Balroom 1</b></span> <b>Chairperson:</b> Andrej Emanuel Cotman
14:10 – 15:05	<b>Plenary lecture (PL 1):</b> <b>Boron in the synthesis of active pharmaceutical ingredients</b> <u>Zdenko Časar</u> <sup>1,2</sup> <sup>1</sup> <i>Lek d.d., Ljubljana, Slovenia</i> <sup>2</sup> <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i>
15:05 – 15:10	<b>Short break</b>
15:10 – 16:30	<b>Afternoon session A1</b> <span style="float: right;"><b>Emerald Balroom 1</b></span> <b>Chairperson:</b> Andrej Emanuel Cotman
15:10 – 15:30 SPC	<b>Section lecture (O 1):</b> <b>Novel visible-light-induced transformations of pyrazolo[1,2-<i>a</i>]pyrazolones</b> <u>Ines Kulašič</u> , Nejc Petek, Helena Brodnik, Jurij Svete, Uroš Grošelj, Bogdan Štefane <i>Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia</i>
15:30 – 15:50 SPC	<b>Section lecture (O 2):</b> <b>A fragment-based approach to the design and synthesis of novel Tripanothione Reductase inhibitors for Leishmaniasis</b> <u>Sara Damiani</u> <sup>1</sup> , Alessandra Salerno <sup>2</sup> , Elisa Uliassi <sup>3</sup> , Andrea Ilari <sup>4</sup> , Maria Laura Bolognesi <sup>3</sup> <sup>1</sup> <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i> <sup>2</sup> <i>School of Life Sciences, University of Dundee, United Kingdom</i> <sup>3</sup> <i>Department of Pharmacy and Biotechnology, Alma Mater Studiorum—University of Bologna, Italy</i> <sup>4</sup> <i>Institute of Molecular Biology and Pathology (CNR), c/o Department of Biochemical Sciences, Sapienza University of Rome, Italy</i>
15:50 – 16:10 SPC	<b>Section lecture (O 3):</b> <b>Triazolni C-končni zaviralci Hsp90: Od <math>\beta</math>-CF<sub>3</sub> benzilnih alkoholov do serije zaviralcev s protitumorom delovanjem</b> <u>Jaka Dernovšek</u> <sup>1</sup> , Nace Zidar <sup>1</sup> , Živa Zajec <sup>1</sup> , Tjaša Goričan <sup>2</sup> , Simona Golič Grdadolnik <sup>2</sup> , Caterina Sturtzel <sup>3</sup> , Sarah Grissenberger <sup>3</sup> , Martin Distel <sup>3</sup> , Andrej Emanuel Cotman <sup>1</sup> , Tihomir Tomašič <sup>1</sup> <sup>1</sup> <i>Fakulteta za farmacijo, Univerza v Ljubljani, Slovenija</i> <sup>2</sup> <i>Teoretični odsek, Kemijski inštitut, Ljubljana, Slovenija</i> <sup>3</sup> <i>St. Anna Children's Cancer Research Institute, Vienna, Austria</i>

16:10 – 16:30  
SPC

**Section lecture (O 4):  
Deuteration of selected heteroaromatic compounds using directed ortho-metalation approach**  
Žiga Oražem, Ross D. Jansen-van Vuuren, Damijana Urankar, Janez Košmrlj  
*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*

**15:10 – 16:30** **Afternoon session B1** **Adria Hall**  
**Chairperson:** Mattia Fanetti

15:10 – 15:50

**Keynote lecture (KL 1):  
Photocatalytic surfaces for environmental applications**  
Urška Lavrenčič Štangar<sup>1</sup>, Andraž Šuligoj<sup>1,2</sup>, Boštjan Žener<sup>1</sup>, Lev Match<sup>1</sup>, Ksenija Maver<sup>2</sup>, Romana Cerc Korošec<sup>1</sup>, Angelja Kjara Surca<sup>2</sup>, Andrijana Sever Škapin<sup>3</sup>, Nataša Novak Tušar<sup>2,4</sup>  
<sup>1</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*  
<sup>2</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>3</sup>*Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia*  
<sup>4</sup>*University of Nova Gorica, Slovenia*

15:50 – 16:10

**Section lecture (O 5):  
Influence of preparation methods on the properties of Au+TiO<sub>2</sub> catalysts**  
Špela Slapničar, Gregor Žerjav, Albin Pintar  
*Department of Inorganic Chemistry and Technology, National Institute of Chemistry, Ljubljana, Slovenia*

16:10 – 16:30  
SPC

**Section lecture (O 6):  
Innovative  $\pi$ -conjugated networks and heterojunctions thereof for heterogeneous photocatalysis applications**  
Tomaž Kotnik<sup>1,2</sup>, Albin Pintar<sup>1</sup>, Sebastijan Kovačič<sup>1,2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia*

**16:30 – 17:00** **Coffee break**

**17:00 – 17:40** **Award ceremony for the best study work in the field of sustainable chemistry**  
Emerald Ballroom 1

**17:40 – 19:00** **Afternoon session A2** **Emerald Ballroom 1**  
**Chairperson:** Helena Prosen

17:40 – 18:20

**Keynote lecture (KL 2):  
Innovative solutions for analytical challenges using ToF-SIMS and XPS**  
Matjaž Finšgar  
*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*

18:20 – 18:40 SPC	<p><b>Section lecture (O 7):</b>  <b>Electrochemical detection of imidacloprid with screen-printed carbon-based thick-film electrodes</b>  <u>Barbara Repič</u><sup>1,2</sup>, Maksimiljan Dekleva<sup>3</sup>, Helena Prosen<sup>3</sup>, Mitja Kolar<sup>3</sup>, Gregor Marolt<sup>3</sup>, Danjela Kuščer<sup>1,2</sup>  <sup>1</sup><i>Jožef Stefan Institute, Electronic Ceramics Department, Ljubljana, Slovenia</i>  <sup>2</sup><i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>  <sup>3</sup><i>Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia</i></p>
18:40 – 19:00	<p><b>Section lecture (O 8):</b>  <b>Effective electrochemical detection of hydrogen peroxide in alkaline media with flash graphene-based modified screen-printed electrodes</b>  <u>Emma Gričar</u>, Boštjan Genorio, Mitja Kolar  <i>Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia</i></p>
<b>17:40 – 19:00</b>	<p><b>Afternoon session B2</b> <span style="float: right;"><b>Adria Hall</b></span>  <b>Chairperson:</b> Darja Lisjak</p>
17:40 – 18:00 SPC	<p><b>Section lecture (O 9):</b>  <b>Crystal structures of fluoridopalladates(IV) explored by 3D electron diffraction</b>  <u>Klemen Motaln</u><sup>1,2</sup>, Kshitij Gurung<sup>3</sup>, Petr Brázda<sup>3</sup>, Lukáš Palatinus<sup>3</sup>, Matic Lozinšek<sup>1,2</sup>  <sup>1</sup><i>Jožef Stefan Institute, Ljubljana, Slovenia</i>  <sup>2</sup><i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>  <sup>3</sup><i>Institute of Physics, Academy of Sciences of the Czech Republic, Prague, Czech Republic</i></p>
18:00 – 18:20 SPC	<p><b>Section lecture (O 10):</b>  <b>Ferrofluids of magnetic nanoplatelets stabilised with ricinoleic acids in nonpolar solvents</b>  <u>Jošt Tručl</u><sup>1,2</sup>, Peter Medle Rupnik<sup>3</sup>, Alenka Mertelj<sup>3</sup>, Darja Lisjak<sup>1</sup>  <sup>1</sup><i>Department for Materials Synthesis, Jožef Stefan Institute, Ljubljana, Slovenia</i>  <sup>2</sup><i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>  <sup>3</sup><i>Department of Complex Matter, Jožef Stefan Institute, Ljubljana, Slovenia</i></p>
18:20 – 18:40 SPC	<p><b>Section lecture (O 11):</b>  <b>ZIF-90 and its composites as adsorption thermal battery materials</b>  <u>Jan Marčec</u><sup>1,2</sup>, Alenka Ristić<sup>1</sup>, Nataša Zabukovec Logar<sup>1,2</sup>  <sup>1</sup><i>National Institute of Chemistry, Ljubljana, Slovenia</i>  <sup>2</sup><i>University of Nova Gorica, Slovenia</i></p>
18:40 – 19:00 SPC	<p><b>Section lecture (O 12):</b>  <b>Morphological optimization of cobalt hydroxide for enhanced pseudocapacitive performance</b>  <u>Anja Siher</u><sup>1</sup>, Ksenija Maver<sup>2,3</sup>, Iztok Arčon<sup>1,4</sup>, Andraž Mavrič<sup>1</sup>  <sup>1</sup><i>University of Nova Gorica, Slovenia</i>  <sup>2</sup><i>National Institute of Chemistry, Ljubljana, Slovenia</i>  <sup>3</sup><i>University of Turin, Italy</i>  <sup>4</sup><i>Jožef Stefan Institute, Ljubljana, Slovenia</i></p>

**19:00 – 20:00**      **Free time**

**20:00 – 22:00**      **Award ceremony of the Slovenian Chemical Society and  
get-together party**  
Grand Hotel Bernardin, Emerald Ballroom 2

**Legend:** SPC – Student paper contest

## četrtek, 19. september 2024 / Thursday, 19 September 2024

8:00 – 8:30	<b>Registration</b> Foyer of the Grand Hotel Bernardin Convention Center (11th floor)	
8:30 – 9:30	<b>Plenary session P2</b> <b>Chairperson:</b> Matjaž Valant	<b>Emerald Ballroom 1</b>
8:30 – 9:25	<b>Plenary lecture (PL 2):</b> <b>Engineering Ta<sub>3</sub>N<sub>5</sub> thin film photoanodes for efficient solar water splitting</b> <u>Yanbo Li</u> <i>University of Electronic Science and Technology of China, Chengdu, China</i>	
9:25 – 9:30	<b>Short break</b>	
9:30 – 10:30	<b>Morning session A3</b> <b>Chairperson:</b> Matjaž Valant	<b>Emerald Ballroom 1</b>
9:30 – 9:50	<b>Section lecture (O 13):</b> <b>Instability at the interface between noble metals and Bi<sub>2</sub>Se<sub>3</sub>: The Pt case</b> <u>Mattia Fanetti</u> , Sandra Gardonio, Matjaž Valant <i>Materials Research Laboratory, University of Nova Gorica, Slovenia</i>	
9:50 – 10:10	<b>Section lecture (O 14):</b> <b>Hybridization of the barium hexaferrite nanoplatelets with phosphonic ligands via a condensation reaction</b> <u>Darja Lisjak</u> <sup>1</sup> , Ali Tufani <sup>1</sup> , Janez Kovač <sup>1</sup> , Alenka Mertelj <sup>1</sup> , Ivan Jerman <sup>2</sup> , Tomaš Landovsky <sup>3</sup> , Martin Cigl <sup>3</sup> , Vladimira Novotna <sup>3</sup> , Matic Poberžnik <sup>4,1</sup> , Gabriela Herrero Saboya <sup>4</sup> , Layla Martin Samos <sup>4</sup> <sup>1</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>2</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>3</sup> <i>Institute of Physics of the Czech Academy of Sciences, Prague, Czechia</i> <sup>4</sup> <i>CNR-IOM, Democritos National Simulation Center, Istituto Officina dei Materiali, c/o SiSSA, Trieste, Italy</i>	
10:10 – 10:30	<b>Section lecture (O 15):</b> <b>High performance salt ammoniates as thermochemical energy storage materials</b> Jakob Werner, Florian Selinger, Peter Ertl, <u>Peter Weinberger</u> <i>Institute of Applied Synthetic Chemistry, TU Wien, Austria</i>	

<b>9:30 – 10:30</b>	<b>Morning session B3</b> <b>Chairperson:</b> Valentin Cepus	<b>Adria Hall</b>
9:30 – 9:50 SPC	<b>Section lecture (O 16):</b> <b>Dynophore-derived discovery of nature-inspired substituted 3-(imidazol-2-yl) morpholines targeting topoisomerase II<math>\alpha</math></b> <u>Barbara Herlah</u> <sup>1,2</sup> , Matej Janežič <sup>1</sup> , Iza Ogris <sup>1,3</sup> , Simona Golič Grdadolnik <sup>1</sup> , Katja Kološa <sup>4</sup> , Sonja Žabkar <sup>4</sup> , Bojana Žegura <sup>4</sup> , Andrej Perdih <sup>1,2</sup> <sup>1</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i> <sup>3</sup> <i>University of Ljubljana, Faculty of Medicine, Slovenia</i> <sup>4</sup> <i>National institute of Biology, Department of Genetic Toxicology and Cancer Biology, Ljubljana, Slovenia</i>	
9:50 – 10:10 SPC	<b>Section lecture (O 17):</b> <b>The good, the bad, the pretty and the ugly - Influence of quaternary nitrogen heterocycle substituent placement on delivery of covalently bound cargo to mitochondria</b> <u>Ivan Džajić</u> , Natalija Trunkelj, Maša Kandušer, Andrej Emanuel Cotman, Lucija Peterlin Mašič <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i>	
10:10 – 10:30 SPC	<b>Section lecture (O 18):</b> <b>Chemical composition of e-liquids and their aerosols produced during inhalation</b> <u>Matjaž Rantaša</u> , David Majer, Matjaž Finšgar <i>University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia</i>	
<b>10:30 – 11:00</b>	<b>Coffee break</b>	
<b>11:00 – 13:00</b>	<b>Morning session A4</b> <b>Chairperson:</b> Ross David Jansen-van Vuuren	<b>Emerald Ballroom 1</b>
11:00 – 11:40	<b>Keynote lecture (KL 3):</b> <b>New chemical solutions to tackle bacterial resistance and resistant cancer cells</b> <u>Lucija Peterlin Mašič</u> <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i>	
11:40 – 12:00 SPC	<b>Section lecture (O 19):</b> <b>Directed ortho metalation-assisted deuteration of diazine derivatives</b> <u>Luka Jedlovčnik</u> , Jernej Birk, Žiga Oražem, Ross Jansen-van Vuuren, Damijana Urankar, Janez Košmrlj <i>University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia</i>	



- 12:00 – 12:20  
SPC
- Section lecture (O 20):**  
**Trifluoromethylthiolation of aromatic amino acids: Late-stage functionalization, modulation of hydrophobicity and selective post-oxidation**  
Jure Gregorc<sup>1,2</sup>, Nathalie Lensen<sup>2</sup>, Gregory Chaume<sup>2</sup>, Thierry Brigaud<sup>2</sup>, Jernej Iskra<sup>1</sup>  
<sup>1</sup>*Chair of Organic Chemistry, Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*CY Cergy Paris Université, BioCIS, Cergy Pontoise, France & Université Paris-Saclay, CNRS, BioCIS, Orsay, France*
- 12:20 – 12:40
- Section lecture (O 21):**  
**Microkinetics of local anesthetics: Clinical observations explained by Smoluchowski equation**  
Janez Maveri<sup>1</sup>, Vladimir Smrkolj<sup>1,3</sup>, Jakob Kralj<sup>1</sup>, Hana Kavčič<sup>2</sup>, Nejc Umek<sup>3</sup>, Neli Vintar<sup>1,2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Clinical Department for Anesthesiology and Surgical Intensive Therapy of University Medical Center Ljubljana, Slovenia*  
<sup>3</sup>*Institute of Anatomy, Faculty of Medicine, University of Ljubljana, Slovenia*
- 12:40 – 13:00
- Section lecture (O 22):**  
**Recycling of waste silver with recyclable waste carboxylic acids**  
Anže Zupanc<sup>1,2</sup>, Joseph Install<sup>1</sup>, Timo Weckman<sup>3</sup>, Marianna Kemell<sup>1</sup>, Karoliina Honkala<sup>3</sup>, Timo Repo<sup>1</sup>  
<sup>1</sup>*University of Helsinki, Finland*  
<sup>2</sup>*University of Ljubljana, Slovenia*  
<sup>3</sup>*University of Jyväskylä, Finland*

**11:00 – 13:00** **Morning session B4** **Adria Hall**  
**Chairperson: Maja Leitgeb**

- 11:00 – 11:20  
SPC
- Section lecture (O 23):**  
**Occurrence of contaminants of emerging concern in Slovenian sea and its pertaining rivers**  
Aleksander Kravos<sup>1</sup>, Teja Rupnik<sup>1</sup>, Martina Ivanova<sup>1</sup>, Oliver Bajt<sup>2</sup>, Helena Prosen<sup>1</sup>  
<sup>1</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*  
<sup>2</sup>*National Institute of Biology, Marine Biology Station Piran, Slovenia*
- 11:20 – 11:40  
SPC
- Section lecture (O 24):**  
**Aluminium presence can mitigate fluoride toxicity in macrophages**  
Anja Pavlovič<sup>1,2</sup>, Larisa Janžič<sup>3</sup>, Lucija Levstek<sup>3</sup>, Andreja Nataša Kopitar<sup>3</sup>, Maja Ponikvar-Svet<sup>1</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*  
<sup>3</sup>*Institute for Microbiology and Immunology, Faculty of Medicine, University of Ljubljana, Slovenia*

- 11:40 – 12:00  
SPC  
**Section lecture (O 25):  
Potential of *Ganoderma lucidum* heteropolysaccharides for heavy metals removal from water solutions**  
Tia Kralj<sup>1</sup>, Gregor Marolt<sup>1</sup>, Miha Slapničar<sup>1,2</sup>, Andrej Gregori<sup>1,3</sup>  
<sup>1</sup>*University of Ljubljana, Slovenia*  
<sup>2</sup>*BIC Ljubljana, Slovenia*  
<sup>3</sup>*MycoMedica Ltd., Kranjska Gora, Slovenia*
- 12:00 – 12:20  
SPC  
**Section lecture (O 26):  
Quaternary-amines functionalized anisotropic magnetic nanoparticles for non-selective biofilm removal**  
Maja Caf<sup>1,2</sup>, Nika Zaveršek<sup>1</sup>, Manca Černila<sup>1</sup>, Stane Pajk<sup>2</sup>, Parvaneh Esmailnejad-Ahranjani<sup>1</sup>, Aleš Berlec<sup>1,2</sup>, Jerica Sabotič<sup>1</sup>, Slavko Kralj<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Pharmacy, University of Ljubljana, Slovenia*
- 12:20 – 12:40  
SPC  
**Section lecture (O 27):  
Degradation of Reactive Red 120 with hydrogen peroxide and hydrodynamic cavitation**  
Žan Boček<sup>1</sup>, Matevž Dular<sup>1</sup>, Martin Petkovšek<sup>1</sup>, Alenka Šmid<sup>2</sup>, Andraž Zupanc<sup>1</sup>, Mojca Zupanc<sup>1</sup>  
<sup>1</sup>*Faculty of Mechanical Engineering, University of Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Pharmacy, University of Ljubljana, Slovenia*
- 12:40 – 13:00  
SPC  
**Section lecture (O 28):  
Determination of heavy metals in various food products and beverages available on the Slovenian market**  
Eva Erjavec, Gaja Kolšek, Lučka Godec, Matjaž Rantaša, David Majer, Matjaž Finšgar  
*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*

**13:00 – 14:30 Lunch break**

**14:30 – 16:30 Afternoon session A5 Emerald Ballroom 1**  
**Chairperson:** Matjaž Kristl

- 14:30 – 14:50  
**Section lecture (O 29):  
Crystal structures of reactive air-sensitive compounds by 3D electron diffraction on nm-sized crystallites**  
Matic Lozinšek<sup>1,2</sup>, Klemen Motaln<sup>1,2</sup>, Kshitij Gurung<sup>3</sup>, Petr Brázda<sup>3</sup>, Kristian Radan<sup>1</sup>, Mirela Dragomir<sup>1,2</sup>, Lukaš Palatinus<sup>3</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*  
<sup>3</sup>*Institute of Physics of the Czech Academy of Sciences, Prague, Czech Republic*

- 14:50 – 15:10  
**Section lecture (O 30):  
Synthesis and optical properties of Cr-doped Bi<sub>2</sub>Se<sub>3</sub> topological insulator nanoplatelets**  
Blaž Belec, Thanveere Thajudeen, Mattia Fanetti, Sandra Gardonio, Matjaž Valant  
*Materials Research Laboratory, University of Nova Gorica, Slovenia*

- 15:10 – 15:30 **Section lecture (O 31):**  
**Charge-density study of the pancake-bonded tetracyanoethylene radical anion dimer**  
Miha Virant<sup>1</sup>, Petar Štrbac<sup>2</sup>, Anna Krawczuk<sup>3</sup>, Valentina Milašinović<sup>1,3</sup>,  
 Petra Stanić<sup>2</sup>, Matic Lozinšek<sup>1</sup>, Krešimir Molčanov<sup>2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Ruđer Bošković Institute, Zagreb, Croatia*  
<sup>3</sup>*University of Göttingen, Germany*
- 15:30 – 15:50 **Section lecture (O 32):**  
**Metal oxide interlayers for improved efficiency of solar energy conversion devices**  
Andraž Mavrič<sup>1</sup>, Nadiia Pastukhova<sup>2</sup>, Yanbo Li<sup>3</sup>  
<sup>1</sup>*Materials Research Laboratory, University of Nova Gorica, Slovenia*  
<sup>2</sup>*Laboratory of Organic Matter Physics, University of Nova Gorica, Slovenia*  
<sup>3</sup>*Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China, Chengdu, China*
- 15:50 – 16:10 **Section lecture (O 33):**  
**Synthesis and structural investigation of the Xe–O-bonded cation [H<sub>2</sub>NC(F)OXeF]<sup>+</sup>**  
Kristian Radan, Valentina Milašinović, Miha Virant, Matic Lozinšek  
*Jožef Stefan Institute, Ljubljana, Slovenia*
- 16:10 – 16:30 **Section lecture (O 34):**  
**Expanding the chemistry of silver(II) using mechanochemistry**  
Mirela Dragomir<sup>1,2</sup>, Matic Belak Vivod<sup>1,2</sup>, Matic Lozinšek<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- 14:30 – 16:30 Afternoon session B5 Adria Hall**  
**Chairperson: Silvo Zupančič**
- 14:30 – 15:10 **Keynote lecture (KL 4):**  
**Sustainable transformation in the paint and coating industry: Kansai Helios' story**  
Radmila Wollrab  
*Kansai Helios Services, Domžale, Slovenia*
- 15:10 – 15:30 **Section lecture (O 35):**  
**Pigment quality as a function of controlled process conditions**  
Nika Veronovski, Dušanka Košir  
*Cinkarna Celje, d.d., Slovenia*
- 15:30 – 15:50 **Section lecture (O 36):**  
**e-CODUCT – fast-response electrically heated reactor technology for simultaneous H<sub>2</sub>S and CO<sub>2</sub> reduction**  
Igor Shlyapnikov<sup>1</sup>, David Bajec<sup>2</sup>, Matic Grom<sup>2</sup>, Miha Grilc<sup>1,2</sup>, Blaž Likozar<sup>2</sup>  
<sup>1</sup>*Center of Excellence for Low Carbon Technologies, Ljubljana, Slovenia;*  
<sup>2</sup>*National Institute of Chemistry, Ljubljana, Slovenia*

15:50 – 16:10	<p><b>Section lecture (O 37):</b>  <b>Bio-based ACE coatings, energy saving and sustainable coating solutions from Kansai Helios</b>  <u>Nejc Vidmar</u>, Miha Steinbücher, Nataša Čuk, Martin Ocepek, Ema Potočnik, Peter Venturini  <i>KANSAI HELIOS Slovenija d.o.o., Domžale, Slovenia</i></p>
16:10 – 16:30	<p><b>Section lecture (O 38):</b>  <b>Integrating municipal treatment plant operation, river quality, and circular economy: The critical role of municipal infrastructure management</b>  <u>Vesna Mislej</u><sup>1,2,3</sup>, Veronika Plut<sup>2,3</sup>, Jan Hočevar<sup>2,3</sup>, Sara Trabelsi<sup>4</sup>, Ines Baznik<sup>1</sup>, Mojca Vrbančič<sup>1</sup>, Ester Heath<sup>2,4,5</sup>, Jurij Trontelj<sup>6</sup>, Sašo Petan<sup>7</sup>  <sup>1</sup><i>JP VODOVOD KANALIZACIJA SNAGA d.o.o., Ljubljana, Slovenia</i>  <sup>2</sup><i>Slovenian Chemical Society, Section for the Environment, Ljubljana, Slovenia</i>  <sup>3</sup><i>University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia</i>  <sup>4</sup><i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>  <sup>5</sup><i>Jožef Stefan Institute, Ljubljana, Slovenia</i>  <sup>6</sup><i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i>  <sup>7</sup><i>Republic of Slovenia, Slovenian Environmental Agency, Ljubljana, Slovenia</i></p>
<b>16:30 – 18:00</b>	<b>Poster session with coffee break</b>
<b>18:00 – 19:00</b>	<p><b>Afternoon session A6</b> <span style="float: right;"><b>Emerald Ballroom 1</b></span>  <b>Chairperson:</b> Jerneja Kladnik</p>
18:00 – 18:20	<p><b>Section lecture (O 39):</b>  <b>Trifluoromethyl as carbonyl bioisostere: Synthetic challenges and applications</b>  <u>Andrej Emanuel Cotman</u>, Maša Sterle, Boštjan Adamlje, Lora Gržin, Manca Hribar, Sara Damiani  <i>University of Ljubljana, Faculty of Pharmacy, Slovenia</i></p>
18:20 – 18:40	<p><b>Section lecture (O 40):</b>  <b>Synthesis of multifunctional magnetic lipid nanocarriers for enhanced cell delivery and induction of ferroptosis</b>  <u>Sebastjan Nemec</u><sup>1</sup>, Eva Jarc Jovičič<sup>2</sup>, Mateja Erdani Kreft<sup>3</sup>, Slavko Kralj<sup>1,4</sup>, Toni Petan<sup>2</sup>, Darko Makovec<sup>1</sup>  <sup>1</sup><i>Department for Materials Synthesis, Jožef Stefan Institute, Ljubljana, Slovenia</i>  <sup>2</sup><i>Department for Molecular and Biomedical Sciences, Jožef Stefan Institute, Ljubljana, Slovenia</i>  <sup>3</sup><i>Institute of Cell Biology, Faculty of Medicine, University of Ljubljana, Slovenia</i>  <sup>4</sup><i>Department for Pharmaceutical Technology, Faculty of Pharmacy, University of Ljubljana, Slovenia</i></p>

<b>18:00 – 19:00</b>	<b>Afternoon session B6</b> <b>Chairperson:</b> Anton Kokalj	<b>Adria Hall</b>
18:00 – 18:20	<b>Section lecture (O 41):</b> <b>What's the matter? Entropy matters</b> <u>Matej Huš</u> <sup>1,2</sup> , Jurij Golobič <sup>1</sup> , Andraž Pavličič <sup>1</sup> , Ana Oberlintner <sup>1</sup> , Miha Grilc <sup>1</sup> , Anders Hellman <sup>2</sup> , Blaž Likozar <sup>1</sup> <sup>1</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>Chalmers tekniska högskola, Gothenburg, Sweden</i>	
18:20 – 18:40	<b>Section lecture (O 42):</b> <b>Impact of catalyst support on rhenium-catalyzed deoxydehydration of aldaric acid to adipic acid</b> <u>Maja Gabrič</u> <sup>1,3</sup> , Florian Maximilian Harth <sup>1</sup> , Janvit Teržan <sup>1,2</sup> , Brigita Hočevar <sup>1</sup> , Sašo Gyergyek <sup>2</sup> , Miha Grilc <sup>1,3</sup> , Blaž Likozar <sup>1</sup> <sup>1</sup> <i>Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>Department for Materials Synthesis, Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>3</sup> <i>University of Nova Gorica, Slovenia</i>	
18:40 – 19:00	<b>Section lecture (O 43):</b> <b>A first-principles based multi-scale model of photocatalytic ammonia synthesis</b> <u>Taja Žibert</u> <sup>1,2</sup> , Matej Huš <sup>1,2</sup> , Blaž Likozar <sup>1</sup> <sup>1</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>University of Nova Gorica, Slovenia</i>	
<b>19:00 – 20:00</b>	<b>Free time</b>	
<b>20:00 – 23:59</b>	<b>Conference dinner</b> Terrace International (in front of the Hotel Histrion)	

**Legend:** SPC – Student paper contest

petek, 20. september 2024 / Friday, 20 September 2024

8:30 – 10:30	Morning session A7 Chairperson: Darja Pečar	Emerald Ballroom 1
8:30 – 8:50	<b>Section lecture (O 44): Magnetically heated catalysis: It's hot and it's cold</b> <u>Miha Grilc</u> <sup>1</sup> , Jakov-Stjepan Pavelić <sup>1</sup> , Janvit Teržan <sup>1,2</sup> , Darko Makovec <sup>2</sup> , Blaž Likozar <sup>1</sup> , Sašo Gyergyek <sup>2</sup> <sup>1</sup> <i>Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>Department for Synthesis of Materials, Jožef Stefan Institute, Ljubljana, Slovenia</i>	
8:50 – 9:10	<b>Section lecture (O 45): Fuelling the final frontier: Magnetically heated CO<sub>2</sub> reduction reactors</b> <u>Janvit Teržan</u> <sup>1</sup> , Anej Blažič <sup>1</sup> , Anja Sedminek <sup>2</sup> , Žan Kovačič <sup>1</sup> , David Bajec <sup>1</sup> , Miha Grilc <sup>1</sup> , Andraž Teržan <sup>1</sup> , Sašo Gyergyek <sup>2</sup> , Blaž Likozar <sup>1</sup> <sup>1</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i>	
9:10 – 9:30 SPC	<b>Section lecture (O 46): Electrified dynamically responsive ammonia synthesis by magnetic heating of barium promoted Ru catalyst</b> <u>Anja Sedminek</u> <sup>1,2</sup> , Žiga Ponikvar <sup>1,2</sup> , Darko Makovec <sup>1</sup> , Janvit Teržan <sup>3</sup> , Anže Prašnikar <sup>3</sup> , Blaž Likozar <sup>3</sup> , Sašo Gyergyek <sup>1</sup> <sup>1</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>2</sup> <i>Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia</i> <sup>3</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i>	
9:30 – 9:50 SPC	<b>Section lecture (O 47): Novel synthesis and electrocatalytic application of (CoFeNiMnCr)<sub>3</sub>O<sub>4</sub> high-entropy oxide</b> <u>Barbara Ljubec Božiček</u> <sup>1,2</sup> , Jitka Hreščak <sup>1</sup> , Monika Kušter <sup>1,2</sup> , Janez Kovač <sup>1</sup> , Iztok Naglič <sup>3</sup> , Boštjan Markoli <sup>3</sup> , Barbara Šetina Batič <sup>4</sup> , Martin Šala <sup>5</sup> , Živa Marinko <sup>1</sup> , Miran Čeh <sup>1</sup> , Belisa Alcantara Marinho <sup>1</sup> <sup>1</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>2</sup> <i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i> <sup>3</sup> <i>Faculty of Natural Sciences and Engineering, University of Ljubljana, Slovenia</i> <sup>4</sup> <i>Institute of Metals and Technology, Ljubljana, Slovenia</i> <sup>5</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i>	
9:50 – 10:10 SPC	<b>Section lecture (O 48): Decomposition of chlorine(I) oxospecies: A key step in converting Cl<sub>2</sub> to HCl</b> <u>Edin Živalj</u> , Matjaž Valant <i>University of Nova Gorica, Slovenia</i>	

10:10 – 10:30  
SPC  
**Section lecture (O 49):**  
**Utilizing hydrodynamic cavitation for chitosan depolymerization**  
Andraž Zupanc<sup>1</sup>, Filipa Vicente<sup>2</sup>, Žan Boček<sup>1</sup>, Jernej Ortar<sup>1</sup>, Žak Sovec<sup>1</sup>,  
Blaž Stres<sup>2</sup>, Alenka Šmid<sup>3</sup>, Mojca Zupanc<sup>1</sup>, Ema Žagar<sup>2</sup>, Martin Petkovšek<sup>1</sup>  
<sup>1</sup>*Faculty of Mechanical Engineering, University of Ljubljana, Slovenia*  
<sup>2</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>3</sup>*Faculty of Pharmacy, University of Ljubljana, Slovenia*

**8:30 – 10:30** **Morning session B7** **Adria Hall**  
**Chairperson:** Iztok Devetak

8:30 – 9:10  
**Keynote lecture (KL 5):**  
**Influence of university level education on future chemistry teachers**  
Silvija Markić  
*Ludwig Maximilian University of Munich, Germany*

9:10 – 9:30  
**Section lecture (O 50):**  
**Kompetence za pospeševanje trajnostnih preobrazb in zelena kemija v izobraževanju**  
Vesna Ferik Savec, Katarina Mlinarec  
*Univerza v Ljubljani, Pedagoška fakulteta, Slovenija*

9:30 – 9:50  
**Section lecture (O 51):**  
**Slovenian lower secondary school students' understanding of problems related to microplastic**  
Luka Ribič, Iztok Devetak  
*University of Ljubljana, Faculty of Education, Slovenia*

9:50 – 10:10  
SPC  
**Section lecture (O 52):**  
**Branje in risanje grafov pri kemiji: Kakšni so izzivi za dijake?**  
Janja Majer, Katja Stanič  
*Univerza v Mariboru, Fakulteta za naravoslovje in matematiko, Slovenija*

10:10 – 10:30  
SPC  
**Section lecture (O 53):**  
**Ninth graders' perceptions about climate change**  
Luka Praprotnik Čurič<sup>1</sup>, Irena Hergan<sup>1</sup>, Miha Slapničar<sup>1,2</sup>  
<sup>1</sup>*University of Ljubljana, Faculty of Education, Slovenia*  
<sup>2</sup>*BEC Ljubljana, Slovenia*

**10:30 – 11:00** **Coffee break and poster viewing**

**11:00 – 12:00** **Plenary session P3** **Emerald Ballroom 1**  
**Chairperson:** Samir Bensaid

11:00 – 11:55  
**Plenary lecture (PL 3):**  
**Catalysis at interfaces: Atom-efficient metal/CeO<sub>2</sub> catalysts based on single atoms and clusters**  
Emiel J.M. Hensen  
*Department of Chemical Engineering and Chemistry, Eindhoven University of Technology, The Netherlands*

11:55 – 12:00  
**Short break**

<b>12:00 – 13:00</b>	<b>Morning session A8</b> <b>Chairperson:</b> Mirela Dragomir	<b>Emerald Ballroom 1</b>
12:00 – 12:20 SPC	<b>Section lecture (O 54):</b> <b>Cocrystals of triphenylarsine oxide with small molecule hydrogen-bond donors</b> <u>Ana Siljanovska</u> <sup>1</sup> , Miha Virant <sup>2</sup> , Krešimir Molčanov <sup>3</sup> , Matic Lozinšek <sup>2</sup> , Janez Cerkovnik <sup>1</sup> <sup>1</sup> <i>Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia</i> <sup>2</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>3</sup> <i>Department of Physical Chemistry, Rudjer Bošković Institute, Zagreb, Croatia</i>	
12:20 – 12:40 SPC	<b>Section lecture (O 55):</b> <b>The effect of catechol structure on the functionalization of barium hexaferrite nanoplatelets</b> <u>Katja Drobež</u> <sup>1,2</sup> , Darja Lisjak <sup>1</sup> <sup>1</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>2</sup> <i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>	
12:40 – 13:00 SPC	<b>Section lecture (O 56):</b> <b><i>In situ</i> graphitisation of cellulose nanofibers in ceramic matrices during the rapid radiation sintering</b> <u>Nikhil Bhootpur</u> <sup>1,2</sup> , Andraž Kocjan <sup>1</sup> <sup>1</sup> <i>Department for Nanostructured Materials, Jožef Stefan Institute, Ljubljana, Slovenia</i> <sup>2</sup> <i>Jožef Stefan International Postgraduate School, Ljubljana, Slovenia</i>	
<b>12:00 – 13:00</b>	<b>Morning session B8</b> <b>Chairperson:</b> Iztok Devetak	<b>Adria Hall</b>
12:00 – 12:20	<b>Section lecture (O 57):</b> <b>Možnosti razvoja ključnih kompetenc za pospeševanje trajnostnih preobrazb v okviru kemijskega izobraževanja v srednji šoli</b> <u>Taja Klemen</u> , Katarina Mlinarec, Špela Hrast, Vesna Ferč Savec <i>Univerza v Ljubljani, Pedagoška fakulteta, Slovenija</i>	
12:20 – 12:40	<b>Section lecture (O 58):</b> <b>Možnosti razvoja ključnih kompetenc za pospeševanje trajnostnih preobrazb v okviru kemijskega izobraževanja v osnovni šoli</b> <u>Katarina Mlinarec</u> , Taja Klemen, Špela Hrast, Vesna Ferč Savec <i>Univerza v Ljubljani, Pedagoška fakulteta, Slovenija</i>	
12:40 – 13:00	<b>Section lecture (O 59):</b> <b>Innovative approaches to teaching hydrosphere pollution: Impact on pre-service chemistry teachers' environmental literacy</b> <u>Luka Vinko</u> <sup>1</sup> , Mojca Bavcon Kralj <sup>2</sup> , Iztok Devetak <sup>1</sup> <sup>1</sup> <i>University of Ljubljana, Faculty of Education, Slovenia</i> <sup>2</sup> <i>University of Ljubljana, Faculty of Health Sciences, Slovenia</i>	
<b>13:00 – 14:30</b>	<b>Lunch break</b>	



<b>14:30 – 15:50</b>	<b>Afternoon session A9</b> <b>Chairperson:</b> Peter Weinberger	<b>Emerald Ballroom 1</b>
14:30 – 15:10	<b>Keynote lecture (KL 6):</b> <b>Ligation and molecular activation at 2D functional materials:</b> <b>Surface science and biomimetics</b> <u>Erik Vesselli</u> <i>Department of Physics, University of Trieste, Italy</i>	
15:10 – 15:30	<b>Section lecture (O 60):</b> <b>Considering the concept of synergism in (corrosion) chemistry</b> <u>Anton Kokalj</u> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i>	
15:30 – 15:50	<b>Section lecture (O 61):</b> <b>Analysis of structural disorder in water adsorbing microporous</b> <b>AlPO<sub>4</sub>-LTA</b> <u>Janez Volavšek</u> <sup>1</sup> , Suzana Mal <sup>1</sup> , Matjaž Mazaj <sup>1</sup> , Alenka Ristić <sup>1</sup> , Anže Hubman <sup>1</sup> , Franci Merzel <sup>1</sup> , Nataša Zabukovec Logar <sup>1,2</sup> , Andraž Krajnc <sup>1</sup> <sup>1</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i> <sup>2</sup> <i>University of Nova Gorica, Slovenia</i>	
<b>14:30 – 15:50</b>	<b>Afternoon session B9</b> <b>Chairperson:</b> Anže Zupanc	<b>Adria Hall</b>
14:30 – 14:50	<b>Section lecture (O 62):</b> <b>Advanced reagents for nucleophilic fluorination of organic</b> <b>compounds</b> <u>Griša Grigorij Prinčič</u> <sup>1</sup> , Blaž Omahen <sup>1</sup> , Jan Jelen <sup>2</sup> , Evelin Gruden <sup>2</sup> , Gašper Tavčar <sup>2</sup> , Jernej Iskra <sup>1</sup> <sup>1</sup> <i>Faculty of Chemistry and Chemical Technology, University of Ljubljana,</i> <i>Slovenia</i> <sup>2</sup> <i>Jožef Stefan Institute, Ljubljana, Slovenia</i>	
14:50 – 15:10	<b>Section lecture (O 63):</b> <b>Composition of input material for chemical recycling as determined</b> <b>with NIR spectroscopy and multivariate calibration</b> <u>Valentin Cepus</u> <sup>1</sup> , Ankur Abhijeet Bhide <sup>2</sup> <sup>1</sup> <i>University of Applied Sciences Merseburg, Germany</i> <sup>2</sup> <i>Martin Luther University Halle-Wittenberg, Halle, Germany</i>	
15:10 – 15:30	<b>Section lecture (O 64):</b> <b>Polymers of intrinsic microporosity containing [2.2]paracyclophane</b> <b>moieties</b> Anže Zupanc <sup>1,2</sup> , Marjan Jereb <sup>2</sup> , Mariolino Carta <sup>3</sup> , Stefan Bräse <sup>4</sup> , <u>Ross Jansen-van Vuuren</u> <sup>2</sup> <sup>1</sup> <i>Department of Chemistry, University of Helsinki, Finland</i> <sup>2</sup> <i>Faculty of Chemistry and Chemical Technology, University of Ljubljana,</i> <i>Slovenia</i> <sup>3</sup> <i>Faculty of Science and Engineering, Swansea University, United Kingdom</i> <sup>4</sup> <i>Institute of Biological and Chemical Systems - Functional Molecular</i> <i>Systems, Karlsruhe Institute of Technology, Germany</i>	

15:30 – 15:50	<b>Section lecture (O 65):</b> <b>Phenol/5-HMF resin</b> <u>Miroslav Huskić</u> <sup>1,2</sup> , Vesna Žepič-Bogataj <sup>2</sup> , Edita Jasiukaityte Grojzdek <sup>3</sup> , Irena Pulko <sup>1</sup> <sup>1</sup> <i>Faculty of Polymer Technology, Slovenj Gradec, Slovenia</i> <sup>2</sup> <i>TECOS, Celje, Slovenia</i> <sup>3</sup> <i>National Institute of Chemistry, Ljubljana, Slovenia</i>
15:50 – 16:00	<b>Short break</b>
16:00 – 16:30	<b>Student awards and closing remarks</b> Emerall Ballroom 1

**Legend:** SPC – Student paper contest



## POSTERSKE PREDSTAVITVE / POSTER SESSION

Foyer of the Grand Hotel Bernardin Convention Center (11th floor) - **Posters and exhibition**

Thursday, 19 September 2024, 16:30 – 18:00

- P001**  
SPC  
**Bioconjugation and covalent binding of native proteins using azide-alkyne cycloaddition**  
Nadja Suhorepec, Luka Ciber, Uroš Grošelj, Bogdan Štefane, Marko Novinec, Jurij Svete  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P002**  
SPC  
**Dialkyl phthalates as synthetic analogs of isobenzofuran-1,3-diones: Synthesis and further transformations**  
Dominik Fendre, Krištof Kranjc  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P003**  
SPC  
**Oxidation and subsequent functionalization of N-trifluoromethylthio sulfoximines**  
Žan Testen, Marjan Jereb  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P004**  
SPC  
**Synthesis of acryloyl substituted biaryls**  
Anita Zupanc, Bogdan Štefane  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P005**  
SPC  
**Lignin oxidation reactions and synthesis of lignin-derived nitro aromatic platform molecules**  
Jan Hočevar, Jernej Iskra  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P006**  
SPC  
**Usage of lignin from invasive Fallopia japonica to synthesize luminescent nanomaterials**  
Jan Hočevar<sup>1</sup>, Griša Grigorij Prinčič<sup>1</sup>, Karolina Elźbieciak-Piecka<sup>2</sup>, Lukasz Marciniak<sup>2</sup>, Jernej Iskra<sup>1</sup>, Jelena Papan Djaniš<sup>1,3</sup>  
<sup>1</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*Institute of Low Temperature and Structural Research, Polish Academy of Sciences, Wrocław, Poland*  
<sup>3</sup>*Vinča Institute of Nuclear Sciences, National Institute of the Republic of Serbia, University of Belgrade, Serbia*
- P007**  
SPC  
**Stereodivergentna sinteza fluoriranih aminopiperidonov kot mimetikov aminoglutarimida**  
Boštjan Adamlje, Manca Hribar, Andrej Emanuel Cotman  
*Univerza v Ljubljani, Fakulteta za farmacijo, Slovenija*

- P008**  
SPC  
**Poly(arylene iminophosphorane)s via the azide-phosphine Staudinger reaction: Redefined synthesis conditions**  
Tomaž Kotnik<sup>1,2</sup>, Antoine Debuigne<sup>3</sup>, Julien De Winter<sup>4</sup>, Matej Huš<sup>1</sup>, Albin Pintar<sup>1</sup>, Sebastijan Kovačič<sup>1,2</sup>  
<sup>1</sup>National Institute of Chemistry, Ljubljana, Slovenia  
<sup>2</sup>Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia  
<sup>3</sup>Center for Education and Research on Macromolecules, Chemistry Department, University of Liege, Belgium  
<sup>4</sup>Organic Synthesis and Mass Spectrometry Laboratory, University of Mons, Belgium
- P009**  
SPC  
**Synthesis of N-vinylcaprolactam-co-N,N-dimethylacrylamide polyHIPES using oil-in-oil systems**  
Špela Podgrajšek<sup>1</sup>, Sebastijan Kovačič<sup>2,3</sup>, Janja Majer Kovačič<sup>1</sup>  
<sup>1</sup>Faculty of Natural Sciences and Mathematics, University of Maribor, Slovenia  
<sup>2</sup>Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia  
<sup>3</sup>National Institute of Chemistry, Ljubljana, Slovenia
- P010**  
SPC  
**The influence of Hop (*Humulus Lupulus*) on the micellization of cationic surfactants with a quaternary alkyl-ammonium head**  
Tjaša Skarlovnik<sup>1</sup>, Urban Bren<sup>1,2,3</sup>, Gregor Hostnik<sup>1</sup>  
<sup>1</sup>University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia  
<sup>2</sup>University of Primorska, Faculty of Mathematics, Natural Sciences and Information Technologies, Koper, Slovenia  
<sup>3</sup>Institute for Environmental Protection and Sensors, Maribor, Slovenia
- P011**  
SPC  
**Tailoring NOD2 agonists: Minor structural alterations uncover diverse immune signatures**  
Špela Janež<sup>1</sup>, Eveline A. de Vlieger<sup>2</sup>, Bram Slütter<sup>2</sup>, Žiga Jakopin<sup>1</sup>  
<sup>1</sup>Faculty of Pharmacy, University of Ljubljana, Slovenia  
<sup>2</sup>Div. BioTherapeutics, Leiden Academic Centre for Drug Research, Leiden University, The Netherlands
- P012**  
SPC  
**Optimized novel bacterial topoisomerase inhibitors exhibit preserved potency and reduced toxicity in zebrafish model**  
Maša Zorman<sup>1,2</sup>, Nikola Minovski<sup>1</sup>, Marko Anderluh<sup>2</sup>, Irena Zdovc<sup>3</sup>, Lidija Šenerović<sup>4</sup>, Nataša Radaković<sup>4</sup>, Martina Hrast Rambaher<sup>2</sup>  
<sup>1</sup>Theory Department, Laboratory for Cheminformatics, National Institute of Chemistry, Ljubljana, Slovenia  
<sup>2</sup>Department of Pharmaceutical Chemistry, Faculty of Pharmacy, University of Ljubljana, Slovenia  
<sup>3</sup>Institute of Microbiology and Parasitology, Veterinary Faculty, University of Ljubljana, Slovenia  
<sup>4</sup>Laboratory for Microbial Molecular Genetics and Ecology, Institute of Molecular Genetics and Genetic Engineering, University of Belgrade, Serbia
- P013**  
SPC  
**Measurement of cell viability and antioxidant properties of extracts from Himalayan Balsam (*Impatiens glandulifera* Royle) on human endothelial cell line EA.hy926**  
Marcel Žafran<sup>1,2</sup>, Ana Gajić<sup>3</sup>, Lovro Žiberna<sup>3</sup>, Alen Albreht<sup>1</sup>  
<sup>1</sup>National Institute of Chemistry, Department of Analytical Chemistry, Laboratory for Food Chemistry, Ljubljana, Slovenia  
<sup>2</sup>University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia  
<sup>3</sup>University of Ljubljana, Faculty of Pharmacy, Slovenia

- P014**  
SPC  
**Evaluation of antiproliferative activity of heat shock protein 90 inhibitors in breast cancer and Ewing sarcoma cell lines**  
Natalija Trunkelj, Dunja Urbančič, Jaka Dernovšek, Tihomir Tomašič  
*University of Ljubljana, Faculty of Pharmacy, Slovenia*
- P015**  
SPC  
**Development of first-in-class TAK1 PROTACs for targeted cancer therapy**  
Nika Strašek Benedik, Martina Gobec, Izidor Sosič  
*University of Ljubljana, Faculty of Pharmacy, Slovenia*
- P016**  
SPC  
**Functionalized nanocellulose hybrids with antibacterial activity**  
Kaja Kupnik<sup>1,2</sup>, Mateja Primožič<sup>1</sup>, Vanja Kokol<sup>2</sup>, Željko Knez<sup>1,3</sup>, Maja Leitgeb<sup>1,3</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Mechanical Engineering, Slovenia*  
<sup>3</sup>*University of Maribor, Faculty of Medicine, Slovenia*
- P017**  
SPC  
**Reduction of hexavalent chromium in contaminated soils by microorganisms**  
Miroslav Štrbac<sup>1,2</sup>, Radmila Milačič<sup>1,2</sup>, Tomaž Rijavec<sup>1,2</sup>, Aleš Lapanje<sup>1,2</sup>, Janez Ščančar<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*  
<sup>2</sup>*Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia*
- P018**  
SPC  
**Computational prediction of drug induced liver injury: A comparative study**  
Katarina Velkov<sup>1</sup>, Rita Ortega-Vallbona<sup>2</sup>, Eva Serrano-Candelas<sup>2</sup>, Rafael Gozalbes<sup>2</sup>  
<sup>1</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*ProtoQSAR SL, Parque Tecnológico de Valencia, Paterna, Spain*
- P019**  
SPC  
**Korozijske lastnosti cirkonija v umetni slini s simulacijo vnetnih procesov**  
Nensy Kláčinski, Janja Stergar, Mojca Slemnik  
*Fakulteta za kemijo in kemijsko tehnologijo, Univerza v Mariboru, Slovenija*
- P020**  
SPC  
**Študija korozije cirkonija v umetni slini z dodatkom organskih in ortofosforne kisline**  
Laura Kobe Stožinič, Matjaž Kristl, Mojca Slemnik  
*Fakulteta za kemijo in kemijsko tehnologijo, Univerza v Mariboru, Slovenija*
- P021**  
SPC  
**Advanced corrosion protection of AA2024-T3 using siloxane-silica sol-gel coating**  
Peter Rodič, Manca Mursa, Nina Kovač, Barbara Kapun, Ingrid Milošev  
*Jožef Stefan Institute, Ljubljana, Slovenia*
- P022**  
SPC  
**Explicit-water molecular dynamics study of 3,3- and 6,6-ionene solutions with Br<sup>-</sup> and F<sup>-</sup> counter-ions: Influence of ion-specific effects on structural properties**  
Dimitra Škrekovski<sup>1</sup>, Sandi Brudar<sup>2</sup>, Barbara Hribar-Lee<sup>2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*
- P023**  
SPC  
**Adapting rose water model to analytical model**  
Peter Ogrin, Tomaž Urbič  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*

- P024**  
SPC  
**Towards simplified and green analysis of pharmaceuticals by dispersive micro solid-phase extraction (DMSPE)**  
Aleksander Kravos, Martina Mileva, Helena Prosen  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P025**  
SPC  
**The change in the isotopic composition of carbon in volatile organic compounds during storage**  
Leja Jelenko<sup>1</sup>, Lidija Strojnik<sup>2</sup>, Irena Kralj Cigić<sup>1</sup>, Nives Ogrinc<sup>2,3</sup>  
<sup>1</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*Department of Environmental Sciences, Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>3</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P026**  
SPC  
**Determination of hexavalent chromium in mineral materials by HPLC-ICP-MS after hot alkaline extraction**  
Miroslav Štrbac<sup>1,2</sup>, Janez Ščančar<sup>1,2</sup>, Radmila Milačič<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan Postgraduate School, Ljubljana, Slovenia*
- P027**  
SPC  
**Analog and digital hardware in electrochemical sensing and their effects**  
Abhilash Krishnamurthy<sup>1,2</sup>, Kristina Žagar Soderžnik<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P028**  
SPC  
**Chemistry of the cyanogen–[XeF][AsF<sub>6</sub>] system**  
Erik Uran<sup>1,2</sup>, Kristian Radan<sup>1</sup>, Miha Virant<sup>1</sup>, Mirela Dragomir<sup>1,2</sup>, Matic Lozinšek<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P029**  
SPC  
**Coordination of malononitrile to [XeF]<sup>+</sup> cation**  
Olha Sanko<sup>1,2</sup>, Erik Uran<sup>1,2</sup>, Kristian Radan<sup>1</sup>, Matic Lozinšek<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P030**  
SPC  
**Identical location scanning electron microscopy (IL-SEM)**  
Blaž Tomc<sup>1</sup>, Nejc Hodnik<sup>1,2</sup>, Marjan Bele<sup>1</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*University of Nova Gorica, Slovenia*
- P031**  
SPC  
**Comparison between the effects of conventional and magnetic heating on the hydrodeoxygenation kinetics of furfural**  
Jakov-Stjepan Pavelić<sup>1</sup>, Anja Sedminek<sup>2</sup>, Žiga Ponikvar<sup>2</sup>, Andraž Kocjan<sup>3</sup>, Darko Makovec<sup>2</sup>, Blaž Likozar<sup>1</sup>, Sašo Gyergyek<sup>2</sup>, Miha Grilc<sup>1</sup>  
<sup>1</sup>*Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Department for Synthesis of Materials, Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>3</sup>*Department for Nanostructured Materials, Jožef Stefan Institute, Ljubljana, Slovenia*
- P032**  
SPC  
**Methanation with magnetic heating**  
Anej Blažič<sup>1</sup>, Janvit Teržan<sup>1</sup>, Anja Sedminek<sup>2</sup>, Žan Kovačič<sup>1</sup>, David Bajec<sup>1</sup>, Sašo Gyergyek<sup>2</sup>, Blaž Likozar<sup>1</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*

- P033**  
SPC  
**Induction-heated catalytic decomposition of methane**  
Sergey Girshevich, Janvit Teržan, Stanislav Yakushkin, Anej Blažič, David Bajec, Blaž Likozar  
*National Institute of Chemistry, Ljubljana, Slovenia*
- P034**  
SPC  
**Deactivation of zinc oxide photocatalyst from photocatalytic degradation of antibiotics**  
Miha Ravbar<sup>1,2</sup>  
<sup>1</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*  
<sup>2</sup>*National institute of chemistry, Ljubljana, Slovenia*
- P035**  
SPC  
**Tehnike termične analize pri preučevanju termičnih lastnosti PCM-parafinov kot energetske učinkovite dodatke gradbenim materialom**  
Martina Potočnik, Jaša Hrovat, Aljaž Renko, Niko Kučič, Tina Skalar, Nataša Čelan Korošič  
*Univerza v Ljubljani, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija*
- P036**  
SPC  
**Insights into break-in of proton exchange membrane fuel cells**  
Mitja Kostelec<sup>1,2</sup>, Matija Gatalo<sup>1,3</sup>, Nejc Hodnik<sup>1,2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*University of Nova Gorica, Slovenia*  
<sup>3</sup>*ReCatalyst d.o.o., Ljubljana, Slovenia*
- P037**  
SPC  
**Separation of gold and copper from ethanol leachates**  
Benjamin Poljanc<sup>1</sup>, Anže Zupanc<sup>1,2</sup>, Uroš Rapuš<sup>1</sup>, Aleksi Eronen<sup>2</sup>, Kjell Knapas<sup>2</sup>, Marianna Kemell<sup>2</sup>, Iztok Turel<sup>1</sup>, Timo Repo<sup>2</sup>  
<sup>1</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*Department of Chemistry, Faculty of Science, University of Helsinki, Finland*
- P038**  
**Synthesis and characterization of novel FDDNP analogues for amyloid  $\beta$  detection**  
Matic Rogan<sup>1</sup>, Jerneja Kladnik<sup>1</sup>, Luka Rejc<sup>1</sup>, Damijan Knez<sup>2</sup>, Gabriela Molina-Aguirre<sup>3</sup>, Alba Espargaró<sup>4</sup>, Anže Meden<sup>2</sup>, Lana Blinc<sup>5</sup>, Matic Lozinšek<sup>6</sup>, Ross Jansen-van Vuuren<sup>1</sup>, Bruno Martek<sup>1</sup>, Jernej Mlakar<sup>7</sup>, Ana Dremelj<sup>1</sup>, Damijana Urankar<sup>1</sup>, Andrej Petrič<sup>1</sup>, Stanislav Gobec<sup>2</sup>, Raimon Sabaté<sup>4</sup>, Mara Bresjanac<sup>5</sup>, Balazs Pinter<sup>3</sup>, Janez Košmrlj<sup>1</sup>  
<sup>1</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Pharmacy, University of Ljubljana, Slovenia*  
<sup>3</sup>*The University of Texas at El Paso, El Paso (TX), USA*  
<sup>4</sup>*Faculty of Pharmacy, University of Barcelona, Spain*  
<sup>5</sup>*Faculty of Medicine, Institute of Pathophysiology, University of Ljubljana, Slovenia*  
<sup>6</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>7</sup>*Faculty of Medicine, Institute of Pathology, University of Ljubljana, Slovenia*



- P039 Design and synthesis of novel fluorescent dyes for amyloid  $\beta$  plaque detection**  
Jerneja Kladnik<sup>1</sup>, Luka Rejc<sup>1</sup>, Damijan Knez<sup>2</sup>, Gabriela Molina-Aguirre<sup>3</sup>, Alba Espargaró<sup>4</sup>, Anže Meden<sup>2</sup>, Lana Blinc<sup>5</sup>, Matic Lozinšek<sup>6</sup>, Ross D. Jansen-van Vuuren<sup>1</sup>, Matic Rogan<sup>1</sup>, Bruno Aleksander Martek<sup>1</sup>, Jernej Mlakar<sup>7</sup>, Ana Dremelj<sup>1</sup>, Andrej Petrič<sup>1</sup>, Stanislav Gobec<sup>2</sup>, Raimon Sabaté<sup>4</sup>, Mara Bresjanac<sup>5</sup>, Balazs Pinter<sup>3</sup>, Janez Košmrlj<sup>1</sup>  
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<sup>6</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>7</sup>*Institute of Pathology, Faculty of Medicine, University of Ljubljana, Slovenia*
- P040 Catalytic photoredox sulfenylation of 4-oxo-4H-pyrido[1,2-a]pyrimidine-3-diazonium tetrafluoroborates**  
Manca Jurajevčič, Uroš Grošelj, Nejc Petek, Bogdan Štefane, Jurij Svete  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P041 Alternative synthesis of activated sterically hindered aromatic compounds**  
Martin Podlipec, Marjan Jereb  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P042 Multicatalysis: Sonogashira cross-coupling in tandem with transfer hydrogenation**  
Dominik Jankovič, Janez Košmrlj, Martin Gazvoda  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P043 Synthesis of maleimide type noncovalent bifunctional catalysts**  
Luka Ciber, Bogdan Štefane, Jurij Svete, Uroš Grošelj  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P044 Synthesis and spectral study of methyl-derivative hydrazones**  
Boryana Ivanova Nikolova-Mladenova, Orlin Rumenov Mladenov  
*Medical University of Sofia, Bulgaria*
- P045 Molecular properties of cinnamaldehyde hydrazones**  
Boryana Ivanova Nikolova-Mladenova  
*Medical University of Sofia, Bulgaria*
- P046 Synthesis of proton channel HV1 inhibitors based on 2-aminoimidazole scaffold**  
Zala Kulovec, Martina Piga, Nace Zidar, Tihomir Tomašič  
*University of Ljubljana, Faculty of Pharmacy, Slovenia*
- P047 In vitro antioxidant activity of Merlot grape skin extract from the Šumadija region**  
Edina Avdović<sup>1</sup>, Marko Antonijevič<sup>1</sup>, Dušica Simijonović<sup>1</sup>, Dejan Milenković<sup>1</sup>, Sandra Jovičić Milić<sup>1</sup>, Jovana Bradić<sup>2</sup>, Zoran Marković<sup>3</sup>  
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<sup>2</sup>*Department of Pharmacy, Faculty of Medical Sciences, University of Kragujevac, Serbia*  
<sup>3</sup>*Department of Natural Science and Mathematics, State University of Novi Pazar, Serbia*

- P048**      **Reactive force field parametrisation for silica-ammonia description**  
Matic Pavlin, Matej Huš, Blaž Likozar  
*National Institute of Chemistry, Ljubljana, Slovenia*
- P049**      **Evaluation of the pharmacological and toxicological properties of fullerene nanostructures using machine learning and cheminformatics tools**  
Natalja Fjodorova<sup>1</sup>, Marjana Novič<sup>1</sup>, Katja Venko<sup>1</sup>, Bakhtiyor Rasulev<sup>2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*North Dakota State University, Fargo (ND), USA*
- P050**      **Študija agregacije proteinov z uporabo metod in silico**  
Katja Venko  
*Kemijski inštitut, Ljubljana, Slovenija*
- P051**      **Understanding NLP cytolysin mechanisms: All-atom simulations of pore formation in plant cell membranes**  
Sofia Cresca<sup>1</sup>, Alessandra Magistrato<sup>2</sup>, Jure Borišek<sup>1</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*CNR-IOM at SISSA, Trieste, Italy*
- P052**      **Detection of various surfactants in wastewater and their possible contamination of glassy carbon using EIS**  
Tim Vončina<sup>1</sup>, Urša Tiringner<sup>1,2</sup>, Gijs Vermeij<sup>2</sup>, Martin Rozman<sup>1</sup>, Miha Lukšič<sup>1</sup>  
<sup>1</sup>*University of Ljubljana, Slovenia*  
<sup>2</sup>*Hypersoniq water BV, Delft, The Netherlands*
- P053**      **Residual methyl methacrylate monomer determination in dental acrylic resin**  
Borut Šraj<sup>1</sup>, Anja Šraj<sup>2</sup>, Lovro Lesjak<sup>2</sup>, Drago Kočar<sup>3</sup>, Mitja Kolar<sup>3</sup>  
<sup>1</sup>*University of Zagreb, School of Dental Medicine, Croatia*  
<sup>2</sup>*Interdent d.o.o., Celje, Slovenia*  
<sup>3</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*
- P054**      **Innovative antibiotic quantification using Python in UV-VIS spectroscopy**  
Erik Mihelič<sup>1</sup>, Marjana Simonič<sup>1</sup>, Lidija Fras Zemljič<sup>2</sup>, Olivija Plohl<sup>2</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Mechanical Engineering, Slovenia*
- P055**      **The fate of potentially toxic elements in the Wulka River catchment (Austria)**  
Nuša Erjavec<sup>1</sup>, Janez Ščančar<sup>1,2</sup>, Katarina Markovič<sup>2</sup>, Radmila Milačič<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*
- P056**      **Impact of light, temperature and relative humidity on iron gall inks, logwood inks, and their mixtures on paper**  
Klara Retko<sup>1,2</sup>, Lea Legan<sup>1</sup>, Ida Kraševc<sup>2</sup>, Polonca Ropret<sup>1,2</sup>  
<sup>1</sup>*Institute for the Protection of Cultural Heritage of Slovenia, Research Institute, Ljubljana, Slovenia*  
<sup>2</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P057**      **New method of scientific experiments by ejecting a ballistic canister from an UL aircraft**  
Martin Rozman, Miha Lukšič  
*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*

- P058**      **New contrasting agents and methods in 3D X-ray microtomography**  
Luka Škrlep, Lidija Korat Bensa, Rožle Repič  
*Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia*
- P059**      **Analysis of terpenes in spruce needles from Kranjska Gora, Slovenia**  
Arneta Kuzma<sup>2</sup>, Sonja Šostar Turk<sup>1</sup>, Urška Rozman<sup>1</sup>, Boštjan Križanec<sup>2</sup>,  
Marjana Simonič<sup>3</sup>, Jerneja Lešnik Cotza<sup>4</sup>  
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<sup>3</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>4</sup>*Vocational College for Hospitality and Tourism Maribor, Slovenia*
- P060**      **Electrochemical sensors for detection of benzotriazole in water**  
Neža Sodnik<sup>1</sup>, Melanija Hadolin<sup>2</sup>, Zoran Samardžija<sup>1</sup>, Kristina Žagar Soderžnik<sup>1,3</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*  
<sup>3</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P061**      **4-alil-2-metoksi fenol kot zeleni inhibitor korozije bakra**  
Regina Fuchs-Godec<sup>1</sup>, Marija Riđošić<sup>2</sup>, Milorad Tomić<sup>2</sup>  
<sup>1</sup>*Fakulteta za kemijo in kemijsko tehnologijo, Univerza v Mariboru, Slovenija*  
<sup>2</sup>*Tehnološka fakulteta Zvornik, Univerza v Sarajevu, Bosna in Hercegovina*
- P062**      **Vanillin methacrylate as a precursor for the synthesis of porous polymer materials**  
Muzafera Paljevac<sup>1</sup>, Benjamin Le Droumaguet<sup>2</sup>, Peter Krajnc<sup>1</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*Université Paris Est, Institut de Chimie et des Matériaux Paris-Est, Thiais, France*
- P063**      **Thermal stability of graphene oxide**  
Tadej Slatinek<sup>1</sup>, Irena Pulko<sup>1</sup>, Dejan Kepić<sup>2</sup>, Svetlana Jovanović Vučetić<sup>2</sup>,  
Miroslav Huskić<sup>1</sup>  
<sup>1</sup>*Faculty of Polymer Technology, Slovenj Gradec, Slovenia*  
<sup>2</sup>*Vinča Institute of Nuclear Sciences - National Institute of the Republic of Serbia, University of Belgrade, Serbia*
- P064**      **Separation of magnesium from dolomite with different extraction methods**  
Jernej Imperl<sup>1</sup>, Domen Lavriha<sup>1</sup>, Mitja Kolar<sup>1</sup>, Gorazd Žibret<sup>2</sup>, Vilma Ducman<sup>3</sup>,  
Lea Žibret<sup>3</sup>  
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<sup>2</sup>*Geological Survey of Slovenia, Ljubljana, Slovenia*  
<sup>3</sup>*Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia*
- P065**      **Chemical reactions in flux and their issues**  
Petra Šutar<sup>1</sup>, Tomaž Mertelj<sup>1,2</sup>, Evgeny Goreshnik<sup>1</sup>, Yelyzaveta Chernolevska<sup>1</sup>,  
Dragan Mihailović<sup>1,2,3</sup>  
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<sup>2</sup>*CENN Nanocenter, Ljubljana, Slovenia*  
<sup>3</sup>*Faculty of Mathematics and Physics, University of Ljubljana, Slovenia*

- P066 Porous alumina and titania with well-defined morphology from composite polyHIPE precursors**  
Amadeja Koler, Peter Krajnc  
*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*
- P067 Synthesis of water composites for solar thermochemical energy storage**  
Suzana Mal<sup>1</sup>, Zala Žagar<sup>2</sup>, Jakob Smith<sup>3</sup>, Anton Larchier<sup>3</sup>, Jan Marčec<sup>1,4</sup>,  
Alenka Ristić<sup>1</sup>, Peter Weinberger<sup>3</sup>, Nataša Zabukovec Logar<sup>1,4</sup>  
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<sup>2</sup>*Srednja strojna in kemijska šola, Ljubljana, Slovenia*  
<sup>3</sup>*Institute of Applied Synthetic Chemistry, TU Wien, Vienna, Austria*  
<sup>4</sup>*University of Nova Gorica, Slovenia*
- P068 Preparation of magnetic ceramic composite honeycombs for magnetic heating applications**  
Sašo Gyergyek<sup>1</sup>, Andraž Kocjan<sup>1</sup>, Gernot Fauland<sup>2</sup>, Roland Nilica<sup>2</sup>, Georg Kogler<sup>2</sup>,  
Darko Makovec<sup>1</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Ceram Austria GmbH, Frauental a.d. Laßnitz, Austria*
- P069 Micro-nonuniform heating in field-assisted sintering of multiphase metallic microstructures**  
Tomaž Tomše<sup>1</sup>, Sašo Šturm<sup>1,2</sup>, Kristina Žužek<sup>1,2</sup>  
<sup>1</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P070 Termične lastnosti fazno spremenljivih materialov**  
Urška Rustan, Tina Skalar  
*Univerza v Ljubljani, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija*
- P071 Ultrasonic dyeing of fabrics with Reynoutria japonica leaf and rhizome extracts**  
Dragana {Rade} Grujić<sup>1</sup>, Aleksandar Savić<sup>1</sup>, Ljiljana Topalić-Trivunović<sup>1</sup>,  
Blanka Škipina<sup>1</sup>, Branka Ružičić<sup>1</sup>, Biljana Pećanin<sup>1</sup>, Teodora Bojović<sup>1</sup>, Mitja Kolar<sup>2</sup>  
<sup>1</sup>*University of Banja Luka, Faculty of Technology, Bosnia and Herzegovina*  
<sup>2</sup>*University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia*
- P072 Advancing lignin valorization by exploring functionalized low molecular weight lignin for epoxy resin preparation**  
Rok Pogorevc<sup>1,2</sup>, Edita Jasiukaitytė-Grojzdek<sup>1</sup>, Tina Ročnik Kozmelj<sup>1</sup>, Miha Grilc<sup>1</sup>,  
Blaž Likozar<sup>1,2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Polymer Technology, Slovenj Gradec, Slovenia*
- P073 Catalytic ring-opening oxidation of lignin-like aromatics**  
Vojtěch Škopek<sup>1,2</sup>, Edita Jasiukaitytė-Grojzdek<sup>1</sup>, Blaž Likozar<sup>1</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*
- P074 Goniochromatic assessment of printed silica based multi-color effect pigments on packaging foils**  
Mirica Karlovits, Blaž Likozar, Uroš Novak  
*National Institute of Chemistry, Ljubljana, Slovenia*

- P075**      **Uporabnost magnetnih nanodelcev za odstranjevanje mikro- in nanoplastike iz vode - pregled**  
Janja Stergar, Matjaž Kristl, Irena Ban, Sabina Vohl  
*Univerza v Mariboru, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija*
- P076**      **Transforming wool and feather waste into valuable resources by subcritical water extraction of amino acids**  
Sara Uskoković<sup>1</sup>, Maja Čolnik<sup>1</sup>, Anja Vehar<sup>2,3</sup>, Nives Ogrinc<sup>2,3</sup>, Mojca Škerget<sup>1</sup>  
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<sup>2</sup>*Jožef Stefan Institute, Department of Environmental Sciences, Ljubljana, Slovenia*  
<sup>3</sup>*Jožef Stefan International Postgraduate School, Ljubljana, Slovenia*
- P077**      **Functionalization of textiles using hydrolyzed waste eggshell in the subcritical water**  
Lidija Tušek<sup>1</sup>, Rosvita Pliberšek<sup>2</sup>, Selestina Gorgieva<sup>2</sup>, Lidija Fras Zemljič<sup>2</sup>, Maja Čolnik<sup>3</sup>, Mojca Škerget<sup>3</sup>  
<sup>1</sup>*Scientific Research Centre Bistra Ptuj, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Mechanical Engineering, Slovenia*  
<sup>3</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*
- P078**      **Magnetic hysteresis heating and CFD in fluid reactor with monolith**  
Andraž Pavlišič<sup>1</sup>, Sašo Gyergyek<sup>2</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*Jožef Stefan Institute, Ljubljana, Slovenia*
- P079**      **Density functional theory study of ethanol synthesis from CO<sub>2</sub> hydrogenation on Cu-MFI**  
Chaomin Chen<sup>1,2</sup>, Matej Huš<sup>1,2</sup>, Blaž Likozar<sup>1</sup>  
<sup>1</sup>*National Institute of Chemistry, Ljubljana, Slovenia*  
<sup>2</sup>*University of Nova Gorica, Slovenia*
- P080**      **Biofunctionalized liposomes as advanced nanocarriers for cosmetic applications**  
Nika Kučuk<sup>1</sup>, Mateja Primožič<sup>1</sup>, Željko Knez<sup>1,2</sup>, Maja Leitgeb<sup>1,2</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Medicine, Slovenia*
- P081**      **Stabilization of bioactive substances from Helichrysum italicum for cosmetic purposes**  
Nika Kučuk<sup>1</sup>, Mateja Primožič<sup>1</sup>, Željko Knez<sup>1,2</sup>, Maja Leitgeb<sup>1,2</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Medicine, Slovenia*
- P082**      **Functionalized metal-organic frameworks for antibiotic degradation**  
Katja Vasić<sup>1</sup>, Željko Knez<sup>1,2</sup>, Maja Leitgeb<sup>1,2</sup>  
<sup>1</sup>*University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia*  
<sup>2</sup>*University of Maribor, Faculty of Medicine, Slovenia*
- P083**      **Separation of enzymes and immobilization of obtained fungal laccase from self-cultivated mushrooms**  
Pia Keršič<sup>1</sup>, Katja Vasić<sup>1</sup>, Mateja Primožič<sup>1</sup>, Željko Knez<sup>1,2</sup>, Maja Leitgeb<sup>1,2</sup>  
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<sup>2</sup>*University of Maribor, Faculty of Medicine, Slovenia*

- P084 Characterization of raw xanthan produced from biodiesel industry effluent**  
Azra Osmić<sup>1</sup>, Maša Knez Marevci<sup>1</sup>, Željko Knez<sup>1</sup>, Sebastijan Kovačič<sup>1</sup>,  
Katja Andrina Kravanja<sup>1</sup>, Ida Zahovič<sup>2</sup>, Jelena Dodić<sup>2</sup>, Zorana Trivunović<sup>2</sup>,  
Matjaž Finšgar<sup>1</sup>  
<sup>1</sup>University of Maribor, Faculty of Chemistry and Chemical Engineering, Slovenia  
<sup>2</sup>University of Novi Sad, Faculty of Technology, Serbia
- P085 Soil and in vitro enzymatic degradation of biocomposite films based on alginate and chitosan**  
Miša Mojca Cajnko<sup>1</sup>, Ana Oberlintner<sup>1</sup>, Uroš Novak<sup>1</sup>, Blaž Stres<sup>1,2,3,4,5</sup>  
<sup>1</sup>National Institute of Chemistry, Ljubljana, Slovenia  
<sup>2</sup>Faculty of Civil and Geodetic Engineering, University of Ljubljana, Slovenia  
<sup>3</sup>Faculty of Mechanical Engineering, University of Ljubljana, Slovenia  
<sup>4</sup>Biotechnical Faculty, University of Ljubljana, Slovenia  
<sup>5</sup>Jožef Stefan Institute, Ljubljana, Slovenia
- P086 Direct electrochemical conversion of CO<sub>2</sub> to ethylene via key CO intermediates on Cu electrocatalysts: A mechanistic first principles approach**  
Reza Gholizadeh, Blaž Likozar, Matej Huš  
Department of Catalysis and Chemical Reaction Engineering, National Institute of Chemistry, Ljubljana, Slovenia
- P087 Influence of 0.25 % indium addition to Ni/CeO<sub>2</sub> catalysts for dry reforming of methane**  
Anita Horváth<sup>1</sup>, Andrea Beck<sup>1</sup>, Miklós Németh<sup>1</sup>, György Sáfrán<sup>2</sup>,  
Matevž Roškarič<sup>3</sup>, Gregor Žerjav<sup>3</sup>, Albin Pintar<sup>3</sup>  
<sup>1</sup>Department of Surface Chemistry and Catalysis, Centre for Energy Research, Budapest, Hungary  
<sup>2</sup>Thin Film Physics Department, Centre for Energy Research, Budapest, Hungary  
<sup>3</sup>Department of Inorganic Chemistry and Technology, National Institute of Chemistry, Ljubljana, Slovenia
- P088 Impregnacija grafen oksida za uporabo pri kataliziranih reakcijah**  
Tjaša Cmager, Darja Pečar, Andreja Goršek  
Univerza v Mariboru, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija
- P089 Sinteza in karakterizacija katalizatorjev na osnovi mezoporozne silike**  
Katarina Zavrl, Darja Pečar, Andreja Goršek  
Univerza v Mariboru, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija
- P090 Synthesis and photocatalytic activity of bismuth-based compounds**  
Metka Založnik, Praveen Kumar, Boštjan Žener, Urška Lavrenčič Štangar  
University of Ljubljana, Faculty of Chemistry and Chemical Technology, Slovenia
- P091 Recycling of carbon-based anode materials through hydrogasification**  
Stanislav Yakushkin, Blaž Likozar, Riccardo Muolo  
National Institute of Chemistry, Ljubljana, Slovenia

- P092**      **Preparation of alternative alkali activators: Comparison of hydrothermal and microwave digestion methods**  
Majda Pavlin<sup>1</sup>, Kaja Zupančič<sup>2</sup>  
<sup>1</sup>*Slovenian National Building and Civil Engineering Institute, Ljubljana, Slovenia*  
<sup>2</sup>*Faculty of Chemistry and Chemical Technology, University of Ljubljana, Slovenia*
- P093**      **Plasma-induced hydrophobization of nanocellulose membranes: A synergistic approach combining experiments and theory**  
Ana Oberlintner<sup>1</sup>, Vasyl Shvalya<sup>2</sup>, Blaž Likozar<sup>1</sup>, Matej Huš<sup>1,3,4</sup>  
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<sup>3</sup>*Association for Technical Culture of Slovenia, Ljubljana, Slovenia*  
<sup>4</sup>*Institute for the Protection of Cultural Heritage of Slovenia, Ljubljana, Slovenia*
- P094**      **Imobilizacija encimov na nanostrukturirane funkcionalne materiale za razgradnjo plastike**  
Tjaša Cmager, Anže Pegan, Julija Ribarič, Saša Sitar, Katja Vasić, Mateja Primožič  
*Univerza v Mariboru, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija*
- P095**      **Biodegradability of lignin-based coatings**  
Mateja Zajc, Janja Juhant Grkman, Gregor Lavrič  
*Pulp and Paper Institute, Ljubljana, Slovenia*
- P096**      **Recycling of Rare-Earths (RE) magnets out of white goods and other home appliances**  
Benjamin Podmiljšak<sup>1</sup>, Tomaž Tomše<sup>1</sup>, Damir Huremović<sup>2</sup>, Boris Saje<sup>1,3</sup>, Laura Naomi Grau<sup>4</sup>, Carlo Burkhardt<sup>4</sup>, Emil Šehić<sup>5</sup>, Spomenka Kobe<sup>1</sup>  
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<sup>2</sup>*Surovina d.o.o., Maribor, Slovenia*  
<sup>3</sup>*Kolektor d.o.o., Idrija, Slovenia*  
<sup>4</sup>*Pforzheim University, Germany*  
<sup>5</sup>*ZEOS d.o.o., Ljubljana, Slovenia*
- P097**      **Razumevanje prostornine - izziv za dijake**  
Kaja Bračič, Janja Majer Kovačič  
*Univerza v Mariboru, Fakulteta za naravoslovje in matematiko, Slovenija*
- P098**      **Interdisciplinarno sodelovanje za STEAM izobraževanje: Priložnosti za učitelje kemije in likovne pedagogike**  
Janja Majer, Aljaž Čelofiga  
*Univerza v Mariboru, Fakulteta za naravoslovje in matematiko, Slovenija*
- P099**      **Augmented reality for stimulating learning of chemistry triplet**  
Luka Ribič<sup>1</sup>, Klen Čopič Pucihar<sup>2</sup>, Matjaž Kljun<sup>2</sup>, Miha Slapničar<sup>1</sup>, Luka Vinko<sup>1</sup>, Maheshya Weerasinghe<sup>2</sup>, Iztok Devetak<sup>1</sup>  
<sup>1</sup>*University of Ljubljana, Faculty of Education, Slovenia*  
<sup>2</sup>*University of Primorska, Faculty of Mathematics, Natural Sciences and Information Technologies, Koper, Slovenia*

**P100**      **Pravilnost odgovorov in omejitve prosto dostopnega orodja ChatGPT v slovenščini na primerih okoljske problematike**

Irena Kralj Cigić, Teja Balaško, Nika Guzelj, Lina Lengar, Jaka Levstek, Gregor Pirnat, Larissa Stepanova, Lea Šarić, Jana Štenkler, Kimberly Zihlerl, Helena Prosen

*Univerza v Ljubljani, Fakulteta za kemijo in kemijsko tehnologijo, Slovenija*

**P101**      **Comparison of performance in chemistry tasks in the 2021/2022 national examinations and before the coronavirus epidemic**

Tomi Vavdi<sup>1</sup>, Iztok Devetak<sup>2</sup>, Miha Slapničar<sup>2,3</sup>

<sup>1</sup>*School Center Celje, Grammar School Lava, Slovenia*

<sup>2</sup>*University of Ljubljana, Faculty of Education, Slovenia*

<sup>3</sup>*BEC Ljubljana, General Upper Secondary School and Veterinary Technician School, Slovenia*

**Legend:** SPC – Student paper contest



KONGRESNI CENTER  
GRAND HOTELA  
BERNARDIN, PORTOROŽ

SLOVENSKI  
KEMIJSKI DNEVI 2024



E-POSTRI | E-POSTERS



Slovensko kemijsko društvo  
Slovenian Chemical Society

## Družabna dogodka / Social events



### Družabno srečanje / Get-together party

sreda, 18. september 2024 / Wednesday, 18 September 2024 • 20:00-22:00

V znamenju dobrodošlice za udeležence konference »Slovenski kemijski dnevi 2024« pripravljamo neformalno druženje v dvorani Emerald v kongresnem centru Grand hotela Bernardin. Med druženjem boste lahko uživali ob izbrani pijači in prigrizkih. Udeležba na družabnem srečanju je vključena v kotizacijo. Na začetku večernega dogodka bomo podelili nagrade Slovenskega kemijskega društva.

*To welcome the participants of the 30th Annual Meeting of the Slovenian Chemical Society, an informal gathering will be held in the Emerald Ballroom of the Grand Hotel Bernardin Convention Center. During the evening you will enjoy a selection of drinks and a finger food buffet. The get-together party is included in the registration fee. At the beginning of the evening event, we will present awards from the Slovenian Chemical Society.*

### Konferenčna večerja / Conference dinner

četrtek, 19. september 2024 / Thursday, 19 September 2024 • 20:00-23:59

Konferenčno večerjo, ki je vključena v kotizacijo, pripravljamo na ploščadi International ob hotelu Histron. Menu zajema aperitiv in bogato pogostitev z regionalnimi jedmi ter odličnimi slovenskimi vini. Za glasbo in zabavo bo poskrbljeno.

*The conference dinner, which will take place at the Terrace International of the St. Bernardin Adriatic Resort and Convention Center, is included in the registration fee. The fee covers an aperitif followed by a regional meal accompanied by excellent Slovenian wines. An entertainment programme will also be offered.*

## **Splošne informacije**

### **Parkirišče**

Za udeležence konference bo v Grand hotelu Bernardin na voljo brezplačno zunanje parkirišče.

### **Identifikacijske kartice**

Vse udeležence vljudno naprošamo, da v času konference nosijo svoje identifikacijske kartice. V primeru izgubljene kartice bo pri registracijskem pultu na voljo nova.

### **Dostop do interneta**

Brezžični dostop do omrežja na celotnem prizorišču konference je na voljo brezplačno. Ker lahko dostop do W-LAN uporabljajo vsi obiskovalci, je možna zmanjšana učinkovitost dostopa.

### **Jezik**

Vsa predavanja bodo potekala v angleščini in/ali slovenščini. Simultanega prevoda ne bo.

### **Odmori za kavo**

Kava, čaj in osvežilne pijače bodo postrežene v preddverju kongresnega centra. Odmori za kavo so vključeni v kotizacijo.

### **Kosilo**

Med odmoroma za kosilo vam bodo v restavracijah Grand hotela Bernardin postregli z raznolikim menijem. Kosilo ni vključeno v kotizacijo.

### **Fotografiranje**

Uporaba fotoaparata, video kamer in kamer mobilnih naprav v času predavanj in med postersko sekcijo ni dovoljena.

### **Kajenje**

Kajenje v kongresnem centru ni dovoljeno. Vljudno vas naprošamo, da kadite samo na določenih območjih za kajenje.

### **Taksi**

V primeru, da potrebujete taksi prevoz, vam bo osebje v recepciji Grand hotela Bernardin z veseljem pomagalo.

### **Zavarovanje**

Organizator konference ni odgovoren za kakršnokoli poškodbo udeležencev, škodo, tatvino ali izgubo osebnih stvari. Udeleženci morajo sami poskrbeti za zavarovanje.

### **Nujni klici**

Policija	113
Reševalna / gasilska enota	112

## **General information**

### **Currency**

The official currency in Slovenia is EURO (€). Major credit cards (MasterCard/Eurocard, Visa, Diners and American Express) are accepted in hotels, department stores and restaurants.

### **Cash dispensers**

Cash dispensers are available in all banks. ATMs are also available in the lobby of the Grand Hotel Bernardin (11th floor), in Hotel Histriion and in the shopping street in St. Bernardin Resort.

### **Electricity**

Power supply is 230 V AC, 50 Hz. It is recommended to have a suitable plug-in for Slovenian standard (i.e. EU plug types C and F).

### **Parking**

Free outdoor parking area will be provided for the conference participants.

### **Name badges**

All participants are kindly requested to wear their name badges throughout the conference. In case you lost your badge, a new one will be available at the registration desk.

### **Internet access**

W-LAN access throughout the conference venue is available free of charge. As the W-LAN access can be used by all visitors, a loss of efficiency is possible.

### **Conference language**

All sessions will be held in English and/or Slovene. There will be no simultaneous translation.

### **Coffee breaks**

Coffee, tea and refreshments will be served in the exhibition and poster area and are included in the registration fee.

### **Lunch**

Various meals will be served during the lunch breaks in the restaurants of Grand Hotel Bernardin at your own expense.

### **Photography**

The use of cameras, video cameras and cellphone photography is prohibited during program sessions or in the poster exhibition.

### **Smoking**

Smoking is prohibited inside the venue. You are kindly requested to smoke within the designated smoking areas only.

### **Taxi**

In case you need a taxi, the front desk staff of Grand Hotel Bernardin will be glad to assist you.

### **Insurance**

The organizer may not be held responsible for any injury to participants' damage, theft and loss of personal belongings. Participants should therefore make their own insurance arrangements.

### **Emergency services**

Police call	113
Ambulance / Fire brigade	112

## Sponzorji / Sponsors

Zlati sponzorji / Gold sponsors



Srebrni sponzorji / Silver sponsors



Sponzor nagrad za najboljša študentska predavanja / Sponsor of the best student presentation awards



Organizacijski odbor se zahvaljuje sponzorjem za podporo.  
*The organizing committee would like to thank the sponsors for their support.*

## Razstavljalci / Exhibitors



# “KO KEMIJA POSTANE ŽIVLJENJE”

30

LET  
YEARS



Slovensko kemijsko društvo  
Slovenian Chemical Society

# Premikamo meje za bolnike.



Smo Sandoz,  
vodilno farmacevtsko  
podjetje v svetu za generična  
in podobna biološka zdravila.  
In smo Lek, pionirji farmacevtske industrije  
v Sloveniji.

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proizvodnjo podobnih bioloških zdravil ter najvišji standardi  
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# OPTIK INSTRUMENTS, d.o.o.

DOLGA ŽIVLJENJSKA DOBA | VISOKA ZMOGLJIVOST | ŠIROKA IZBIRA DODATKOV | PREPROSTA UPORABA

## NANOPHOTON

### RAMANSKA MIKROSKOPIJA NAJVIŠJE KAKOVOSTI

- Analiza delcev tudi do 100 nm
- Konfokalna Raman spektroskopija – tudi 3D zmogljivosti
- Ramansko slikanje največje hitrosti (zajem 400 spektrov hkrati) – brez emCCD!
- Premikanje laserskega žarka, ne vzorca, za najmanj napak in vibracij
- UV in DUV laserji
- Popolna avtomatizacija strojne opreme
- Avtomatska kalibracija in avtomatska poravnava



## MIRO ANALYTICAL

### ANALIZA PLINOV S TEHNOLOGIJO QCL

- Merjenje izotopov dušika v  $N_2O$
- Merjenje več plinov hkrati, tudi v kompleksnih mešanicah
- Zelo občutljivi in natančni, tudi do 5 ppt
- Hitre meritve, do 10 meritev na sekundo
- Popolni analizatorji za nadzor nad kakovostjo zraka



## TORNADO

### PROCESNI RAMANSKI SISTEMI VISOKE OBČUTLJIVOSTI

- Tehnologija HTVS (high throughput virtual screening) zagotavlja:
  - Izredno visoko občutljivost
  - Hitrejše zajemanje spektrov
  - Uporabo nižje moči laserja za enako intenziteto signala
- Kontaktna in brezkontaktna sonda, izdelane točno za vaš namen
- Multiplexer omogoča 8 različnih sond na istem instrumentu
- Mogoča analiza tudi v EX območju



## BEAM

### BREZKONTAKTNI PROCESNI FT-NIR ANALIZATOR

- Namestitev direktno na mesto merjenja, brez optičnih kablov
- Merjenje na razdalji 10 ali 20 cm
- Cenovno ugodna rešitev za eno merilno mesto
- Dokazano stabilna tehnologija



## PEAK SCIENTIFIC

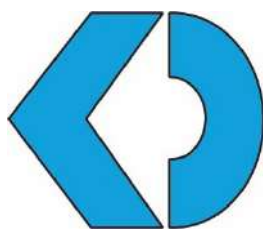
### GENERATORJI PLINOV VISOKE ČISTOSTI ( $N_2$ , $H_2$ , ZRAKA BREZ OGLJIKOVODIKOV)

- Zmanjšana nevarnost za operaterje (puščanje jeklen, ipd.)
- Hitra povrnitev investicije
- Možnosti za različne pretoke, čistosti in tlake









**Kontakt / Contact**

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