

**CEEC-TAC7**

# PROGRAM

## **Editors**

Jiří Kučerík

Pavel Šiler

Veronika Řezáčová

Anca Criveanu

Andrei Rotaru



*7<sup>th</sup> Central and Eastern European Conference on  
Thermal Analysis and Calorimetry (CEEC-TAC7).*

*28-31 August 2023*

*Brno, Czech Republic*

*Dedicated to the 85<sup>th</sup> Birthday Anniversary of Prof. Jaroslav Šesták*



**The 7<sup>th</sup> Central and Eastern European Conference  
on Thermal Analysis and Calorimetry**

**CEEC-TAC7**

*28-31 August 2023 – Brno, Czech Republic*

is organized by the:

**Central and Eastern European Committee for  
Thermal Analysis and Calorimetry (CEEC-TAC),**

**Brno University of Technology (BUT),**

**Faculty of Chemistry of BUT (FCH),**

**Babeş-Bolyai University (UBB)**

**Czech Group for Thermal Analysis (CGTA)**

under the patronage of the:

**Czech Academy of Sciences - Akademie věd České republiky**



# Organizers

**CEEC-TAC**

**Central and Eastern European Committee for  
Thermal Analysis and Calorimetry**

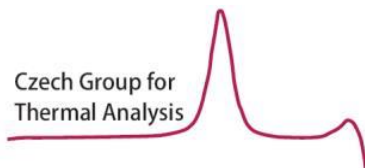


**Akademie věd  
České republiky**  
Czech Academy  
of Sciences



UNIVERSITATEA BABEȘ-BOLYAI  
BABEȘ-BOLYAI TUDOMÁNYEGYETEM  
BABEȘ-BOLYAI UNIVERSITÁT  
BABEȘ-BOLYAI UNIVERSITY  
TRADITIO ET EXCELLENTIA

Czech Group for  
Thermal Analysis



## Sponsors

# NETZSCH

Proven Excellence.

*Bronze Sponsor*



*Bronze Sponsor*



*Bronze Sponsor*



*Exclusive Sponsor*

# CHROMSPEC

SPOL. S R.O.

*Partner*



## Organizing Committees

*Chairpersons: Matko Erceg (Czech Republic) & Andrei Rotaru (Romania)*  
*Vice-Chairpersons: Jaroslav Bartak (Czech Republic) & Vaclav Slovák (Czech Republic)*

### International Organizing Committee

**Pierre Brodard** (Switzerland)  
Swiss Association for Thermal Analysis and Calorimetry

**Konstantinos Chrissafis** (Greece)  
Hellenic Society of Thermal Analysis

**Fabio Faraguna** (Croatia)  
Committee for Thermal Analysis and Calorimetry  
of the Croatian Society of Chemical Engineers

**Ionuț Ledefi** (Romania)  
Commission for Thermal Analysis and Calorimetry of the Romanian Academy

**Vilma Petkova** (Bulgaria)  
Bulgarian Society of Thermal Analysis and Calorimetry

**Gyorgy Pokol** (Hungary)  
Working Committee for Thermal Analysis of the Hungarian Academy of Sciences

**Oleg Petuhov** (Moldova)  
Society for Thermal Analysis and Calorimetry of Moldova

**Krzysztof Pieliowski** (Poland)  
Polish Society of Calorimetry and Thermal Analysis

**Peter Simon** (Slovakia)  
Slovak Group for Thermal Analysis and Calorimetry

**Petra Sulcova** (Czech Republic)  
Czech Working Group for Thermal Analysis

**Stefano Vecchi Cipriotti** (Italy)  
Italian Association for Calorimetry and Thermal Analysis

Kestutis Baltakys (Lithuania)	Vilko Mandic (Croatia)	Luis A. Perez-Maqueda (Spain)
Ljubisa Balanovic (Serbia)	Thomas Maskow (Germany)	Vlad T. Popa (Romania)
Natasa Celan Korosin (Slovenia)	Igor Medved (Slovakia)	Anna Prnova (Slovakia)
Pavla Honcova (Czech Republic)	Alfred Menyhard (Hungary)	Irena Szczygiel (Poland)
Mice Jakic (Croatia)	Birgit Mets (Estonia)	Svetla Todinova (Bulgaria)
Dijana Jelic (Bosnia & Hercegovina)	Nina Obradovic (Serbia)	Hanna Trebacz (Poland)
Giuseppe Lazzara (Italy)	Rodica Olar (Romania)	Anton Trnik (Slovakia)
Dragan Manasijevic (Serbia)	Tomas Opravil (Czech Rep.)	Titus Vlase (Romania)

### Executive Organizing Committee

Damir Barbir	Jakub Fojt	Cornelia Marinescu	Pavel Rovnanik
Mihaela Bojan	Eliska Kamenikova	Simona Martinkova	Cristian Tigae
Anca Criveanu	Eva Kinnertova	Lukas Matejka	Jiri Svec
Dragos Criveanu	Irena Kresic	Anca Moanta	Gabriela Zelenkova
Marius Criveanu	Jitka Koruska	Petra Prochazkova	Anezka Zezulova
Claudiu Dobrinescu	Dana Kubatova	Veronika Rezacova	Gloria Zlatic

President of the conference: Prof. Ing. Dr. **Michal Vesely**  
(Dean of the Faculty of Chemistry at Brno University of Technology)

### Honorary Committee

Honorary Chair: **Jaroslav Sestak** (Czech Republic)

Lorezno Abate	Tiit Kaljuvee	Iulian Riposan
Branka Andric	Janos Kristof	Dan Rosu
Giuseppe Arena	Marek Liska	Christoph Schick
Jerzy Blazejowski	Tudor Lupascu	Raimundas Siauciunas
Petru Budrugaec	Jan Majling	Judit Simon
Robert Cerny	Slavko Mentus	Petr Stehlik
Herbert Danninger	Jiri Militky	Maria R. Tine
Katarina Gyoryova	Barbara Pacewska	Svatopluk Zeman

### Scientific Committee

Scientific Committee Chairpersons:

**Jiri Malek** (Czech Republic) & **Matko Erceg** (Croatia)

Scientific Committee Vice-Chairpersons:

**Pavel Siler** (Czech Republic), **Bedrich Smetana** (Czech Republic) &  
**Wojciech Ciesielski** (Poland)

M. Antonijevic (UK)	T. Holjevac Grguric (Croatia)	J. Pekez (Serbia)
M. Badea (Romania)	J. Holubova (Czech Republic)	S. Perinovic Jozic (Croatia)
B. Barta Hollo (Serbia)	R.M. Ion (Romania)	R. Pietrzak (Poland)
A. Bartyzel (Poland)	I. Janotka (Slovakia)	A. Precupas (Romania)
D. Bednarska (Poland)	M. Jozwiak (Poland)	H. Pruchnik (Poland)
L. Behalek (Czech Republic)	K. Katoh (Japan)	P. Ptacek (Czech Republic)
P. Brdlik (Czech Republic)	F. Kokalj (Slovenia)	K. Raftopoulos (Poland)
M. Brebu (Romania)	P. Kosinski (Poland)	G. Regdon Jr. (Hungary)
P. Broz (Czech Republic)	P. Kostal (Czech Republic)	L. Rosu (Romania)
R. Bulanek (Czech Republic)	M. Krol (Poland)	P. Rotaru (Romania)
Z. Bulinski (Poland)	A. Lakatos (Hungary)	P. Rybinski (Poland)
A.M. Cardinale (Italy)	L. Lapcik (Czech Republic)	L. Sciascia (Italy)
G. Cavallaro (Italy)	P. Lapka (Poland)	M. Slany (Slovakia)
R. Cerc Korosec (Slovenia)	K. Ludzik (Poland)	F. Soukal (Czech Republic)
L. Chmurzynski (Poland)	R. Lyszczyk (Poland)	I. Stawoska (Poland)
M. Cieslar (Czech Republic)	W. Marczak (Poland)	N. Stipanelov Vrandecic (Croatia)
L. Curkovic (Croatia)	A. Michnik (Poland)	G. Strbac (Serbia)
T. Dambrauskas (Lithuania)	D. Migas (Poland)	M. Sumar Ristic (Serbia)
Z. Dohnalova (Czech Republic)	S. Milioto (Italy)	I.M. Szilagyi (Hungary)
E. Drozd (Poland)	A.A. Minea (Romania)	E. Tarani (Greece)
Z. Drzazga (Poland)	G. Moskal (Poland)	C.D. Varganici (Romania)
C. Duce (Italy)	M. Nicoara (Romania)	G. Vlase (Romania)
M. Dudek (Poland)	J. Orava (Czech Republic)	M. Voncina (Slovenia)
A. Eisinias (Lithuania)	J. Pagacz (Poland)	S. Vucetic (Serbia)
J. Farjas (Spain)	B. Pagano (Italy)	I. Wilinska (Poland)
D. Galusek (Slovakia)	M. Palou (Slovakia)	P. Zeman (Czech Republic)
P. Gierycz (Poland)	I. Panzic (Croatia)	O. Zobac (Czech Republic)
A. Grajcar (Poland)	F. Parisi (Italy)	Z. Zovko Brodarac (Croatia)
F. Hnilicka (Czech Republic)	M. Pekar (Czech Republic)	S. Zuzjakova (Czech Republic)



# **PROGRAM**



## Monday, 28<sup>th</sup> of August

- 11<sup>30</sup>-16<sup>30</sup>**      *Poster and Coffee break area at BUT-FCH*  
**Registration of participants at CEEC-TAC7**
- 18<sup>00</sup>-19<sup>00</sup>**      *Room E at BUT-Rectorate*  
**Opening Ceremony**
- 19<sup>00</sup>-19<sup>40</sup>**      *Room E at BUT-Rectorate*  
Chair: Andrei Rotaru  
**HL Jaroslav Sestak**  
Former personalities of the Czech-Slovak thermal analysis  
community and their inventive contributions
- 19<sup>40</sup>-22<sup>00</sup>**      *Room E at BUT-Rectorate*  
**Welcome Cocktail**

## Tuesday, 29<sup>st</sup> of August

### **Room A (Grey)**

Chair: Jaroslav Bartak

09<sup>00</sup>-09<sup>40</sup> PL1 Thermal risk analysis of lithium-ion batteries under overheating in waste treatment systems

**Atsumi Miyake**

09<sup>40</sup>-10<sup>10</sup> IL1 Advanced isoconversional kinetic analysis: Insights in polymerization mechanisms

**Nicolas Sbirrazzuoli**

10<sup>10</sup>-11<sup>40</sup>

*Poster and Coffee break area*

**Poster Session 1 & Coffee Break**

### **Room A (Grey)**

Chair: Crisan Popescu

11<sup>40</sup>-12<sup>00</sup> OP1.01 Effect of S, Cu and Li doping on C<sub>3</sub>A hydration kinetics  
Eva Bartonickova

12<sup>00</sup>-12<sup>20</sup> OP1.02 Thermokinetic analysis and characterization of polyethylene terephthalate (PET) nanoparticles biodepolimerization via isothermal titration calorimetry

Noelia Fernandez Merayo

12<sup>20</sup>-12<sup>40</sup> OP1.03 New NETZSCH Software for thermal simulation of chemical reactions in big volumes

Elena Moukhina

12<sup>40</sup>-13<sup>00</sup> OP1.04 Applicability of the methods based on the general rate equation

Peter Simon

### **Room B (Green)**

Chair: Ignazio Blanco

11<sup>40</sup>-12<sup>00</sup> OP2.01 Characterization of unknown animal glues from artwork samples by thermal, rheological, and structural analysis  
Elena Pulidori

12<sup>00</sup>-12<sup>20</sup> OP2.02 Thermal behaviour of lead and mercury carboxylates as paintings' degradation products

Ruslan Barannikov

12<sup>20</sup>-12<sup>40</sup> OP2.03 Fe spinel-based materials for biomass combustion applications

Ewelina Ksepko

12<sup>40</sup>-13<sup>00</sup> OP2.04 Controlling the reaction path of Ni/Al reactive multilayer on substrates

Deepshikha Shekhawat

### ***Room C (Red)***

Chair: Kinga Pielichowska

- 11<sup>40</sup>-12<sup>00</sup> OP3.01 Use of thermal analysis for the study of the adsorption of pharmaceuticals from water  
Jan Bednarek
- 12<sup>00</sup>-12<sup>20</sup> OP3.02 Phase transition in polymer hydrogels investigated by swelling, DSC, FTIR and NMR  
Ivan Krakovsky
- 12<sup>20</sup>-12<sup>40</sup> OP3.03 The step-wise dissolution method: An efficient DSC-based protocol for API-polymer solubility determination  
Alex Mathers
- 12<sup>40</sup>-13<sup>00</sup> OP3.04 Sandwich fibrous paraffin wax encapsulations for selected applications  
Mohanapriya Venkataraman

### ***Room D (Blue)***

Chair: Vilma Petkova

- 11<sup>40</sup>-12<sup>00</sup> OP4.01 Comparison of thermogravimetry response of alkali-activated slag and Portland cement pastes after stopping their hydration using solvent exchange method  
Vlastimil Bilek
- 12<sup>00</sup>-12<sup>20</sup> OP4.02 Performance of hybrid steel and aramid fibre reinforcement in ultra-high performance concrete  
Lubos Bocian
- 12<sup>20</sup>-12<sup>40</sup> OP4.03 Thermal stability of catalyst based on semicrystalline calcium silicate hydrate with intercalated Co<sup>2+</sup>, Cu<sup>2+</sup> and Cr<sup>3+</sup> ions  
Tadas Dambrauskas
- 12<sup>40</sup>-13<sup>00</sup> OP4.04 The impact of internal hydrophobization on a supplementary cementitious materials hydration  
Kalina Materak

### ***Kanas Restaurant Lunch***

13<sup>00</sup>-14<sup>30</sup>

### ***Room A (Grey) CEEC-TAC7 Info***

14<sup>30</sup>-14<sup>40</sup>

### ***Room A (Grey)***

Chair: Jiri Kucerik

- 14<sup>40</sup>-15<sup>20</sup> APL1 The Gibbs-Helmholtz equation in modern thermochemistry: combining calorimetric and quantum chemical methods  
**Sergey Verevkin**
- 15<sup>20</sup>-15<sup>50</sup> IL2 Beginning to calculate thermodynamic state functions for soils: the role of thermal analysis and calorimetry  
**Nieves Barros**

### ***Room A (Grey)***

Chair: Nobuyoshi Koga

- 16<sup>00</sup>-16<sup>20</sup>** OP1.05 Application of isoconversional methods for predicting the cure of epoxy composites under arbitrary thermal histories  
Jordi Farjas
- 16<sup>20</sup>-16<sup>40</sup>** OP1.06 Determination of biomass composition by kinetic analysis of thermogravimetric data  
Emre Uraz
- 16<sup>40</sup>-17<sup>00</sup>** OP1.07 Application of isothermal and non-isothermal TG to acrylate coatings on optical fibers: experimental verification of isoconversion principle  
Andrei Stolov

### ***Room B (Green)***

Chair: Athanasios Tiliakos

- 16<sup>00</sup>-16<sup>20</sup>** OP2.05 Defect engineering of titanium oxide thin films printed via one-step reactive spark plasma discharge coupled with aerosol direct writing  
Floren Radovanovic-Peric
- 16<sup>20</sup>-16<sup>40</sup>** OP2.06 Surface mobility and crystal growth study in chalcogenide thin films  
Jaroslav Bartak
- 16<sup>40</sup>-17<sup>00</sup>** OP2.07 Two types of crystal growth in Se–Te thin films  
Simona Martinkova

### ***Room C (Red)***

Chair: Stefano Vecchio Cipriotti

- 16<sup>00</sup>-16<sup>20</sup>** OP3.05 Combining calorimetry and simultaneous thermal analysis (TGA-DSC) to assess energy fluxes of soil organic matter  
Eliana Di Lodovico
- 16<sup>20</sup>-16<sup>40</sup>** OP3.06 Temperature dependence of the enthalpy of formation of oligomeric DNA duplexes: Implications for the thermodynamics of DNA  
Hajar Ajiyel
- 16<sup>40</sup>-17<sup>00</sup>** OP3.07 Biocalorimetry as a tool to analyse fungal lignocellulose utilization strategies  
Thomas Maskow

### ***Room D (Blue)***

Chair: Branislav Stankovic

- 16<sup>00</sup>-16<sup>20</sup>** OP4.05 Comparison of commercial nitrate-based accelerators and their pure constituents on hydration kinetics, composition, and hydration degree of zinc oxide blended Portland cement  
Lukas Matejka

- 16<sup>20</sup>-16<sup>40</sup>** OP4.06 Low temperature DSC characterisation of the influence of admixtures on the hydration of cement  
Paul Thomas
- 16<sup>40</sup>-17<sup>00</sup>** OP4.07 Effect of different hydration accelerators on the properties of zinc-doped cement  
Pavel Siler

**17<sup>00</sup>-17<sup>30</sup>** *Poster and Coffee break area*  
**Coffee Break**

*Room A (Grey)*

Chair: Konstantinos Chrissafis

- 17<sup>30</sup>-17<sup>50</sup>** OP1.08 On the comment to ISO 11358-2 obtaining activation energy of thermal degradation of linear low density polyethylene  
Masayuki Ito
- 17<sup>50</sup>-18<sup>10</sup>** OP1.09 Thermodynamic prediction and experimental verification of phase transformation kinetics in 3Mn steel with Ti and V microadditions  
Anna Wojtacha
- 18<sup>10</sup>-18<sup>30</sup>** OP1.10 Effect of nucleation on crystallization of chalcogenide glasses  
Jana Shanelova

*Room B (Green)*

Chair: Luis A. Perez-Maqueda

- 17<sup>30</sup>-17<sup>50</sup>** OP2.08 Tuning properties and behaviour of W-Zr thin-film metallic glasses  
Sarka Zuzjakova
- 17<sup>50</sup>-18<sup>10</sup>** OP2.09 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub> and Li<sub>2</sub>O-SiO<sub>2</sub> systems: experimental investigations and thermodynamic modelling  
Danilo Alencar de Abreu
- 18<sup>10</sup>-18<sup>30</sup>** OP2.10 Isothermal Calorimetry for investigation of heat signatures of batteries during charging and discharging  
Ekkehard Fuglein

*Room C (Red)*

Chair: Sergey Verevkin

- 17<sup>30</sup>-17<sup>50</sup>** OP3.08 Accuracy of simultaneous calorimetric measurement and its importance for thermodynamic modelling in soil systems  
Shiyue Yang
- 17<sup>50</sup>-18<sup>10</sup>** OP3.09 Cellulose II highly porous materials as sound absorbers  
Arijeta Bafti
- 18<sup>10</sup>-18<sup>30</sup>** OP3.10 Synthesis and performance comparison of methacrylic pour point depressants with commercial additives  
Ivan Pucko

***Room D (Blue)***

Chair: Tadas Dambrauskas

- 17<sup>30</sup>-17<sup>50</sup>** OP4.08 Comparison of performance of lime- and magnesia-based hempcrete in water vapour permeability tests  
Karol Pietrak
- 17<sup>50</sup>-18<sup>10</sup>** OP4.09 The influence of ZrO<sub>2</sub> addition on thermal and mechanical properties of Y<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> ceramics materials  
Anna Prnova
- 18<sup>10</sup>-18<sup>30</sup>** OP4.10 Thermoporometry of carbons with large mesopores: PSD evaluation difficulties  
Lucie Korena

***Room B (Green)***

**18<sup>30</sup>-19<sup>15</sup>** **ICTAC Kinetics Workshop**

***Room C (Red)***

**18<sup>30</sup>-19<sup>15</sup>** **ICTAC Life & Environmental Science Workshop**

***Room B (Green)***

**19<sup>15</sup>-20<sup>00</sup>** **CEEC-TAC General Assembly**



## Wednesday, 30<sup>th</sup> of August

### **Room A (Grey)**

Chair: Vaclav Slovak

**09<sup>00</sup>-09<sup>40</sup>** PL2 The role of thermal methods in Additive Manufacturing  
**Ignazio Blanco**

**09<sup>40</sup>-10<sup>10</sup>** IL3 Ion transport mechanisms in superionic ceramic conductors  
**Athanasios Tiliakos**

**10<sup>10</sup>-11<sup>40</sup>**  
**Poster and Coffee break area**  
**Poster Session 2 & Coffee Break**

### **Room A (Grey)**

Chair: Peter Simon

**11<sup>40</sup>-12<sup>00</sup>** OP1.11 Overall evaluation of structural relaxation of selected chalcogenide glasses based on DSC data  
Pavla Hancova

**12<sup>00</sup>-12<sup>20</sup>** OP1.12 Viscosity of chalcogenide glass-formers  
Petr Kostal

**12<sup>20</sup>-12<sup>40</sup>** OP1.13 CO<sub>2</sub>-induced crystallization of poly(L-lactic acid): enhanced cold crystallization with growth of  $\alpha'$ -crystals  
Maria Laura Di Lorenzo

**12<sup>40</sup>-13<sup>00</sup>** OP1.14 The ice and salt crystallization patterns of the MgSO<sub>4</sub>·nH<sub>2</sub>O system within the sandstone under temperature fluctuations  
Iman AN Omrani

### **Room B (Green)**

Chair: Simona Martinkova

**11<sup>40</sup>-12<sup>00</sup>** OP2.11 Development of thermodynamic database for ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>-HfO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub> system  
Manuel Löffler

**12<sup>00</sup>-12<sup>20</sup>** OP2.12 Regeneration and reuse properties of the highly effective electrochemically-derived nanostructured ordered titania photocatalyst  
Vilko Mandic

**12<sup>20</sup>-12<sup>40</sup>** OP2.13  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> supported MnO<sub>x</sub> catalysts for VOCs oxidation  
Katarina Muzina

**12<sup>40</sup>-13<sup>00</sup>** OP2.14 Study of the Hf-Mn system by thermal and phase analysis and calorimetry  
Pavel Broz

### **Room C (Red)**

Chair: Nieves Barros

**11<sup>40</sup>-12<sup>00</sup>** OP3.11 Thermal reliability of n-eicosane – loaded phase change fibers  
Iouliana Chrysafi

- 12<sup>00</sup>-12<sup>20</sup>** OP3.12 Prediction of tensile modulus in semicrystalline polymers based on their melting characteristics recorded by calorimetry  
Alfred Menyhard
- 12<sup>20</sup>-12<sup>40</sup>** OP3.13 Innovative biocomposites based on PLA and beer bagasse used in two different additive manufacturing techniques  
Silvia Carichino
- 12<sup>40</sup>-13<sup>00</sup>** OP3.14 Isothermal thermogravimetry to fingerprint the oxidative behaviour of lipids  
Celia Duce

***Room D (Blue)***

Chair: Wojciech Ciesielski

- 11<sup>40</sup>-12<sup>00</sup>** OP4.11 Design and dilatometric processing of nanobainitic structures in Al-alloyed 3Mn multiphase steel  
Mateusz Morawiec
- 12<sup>00</sup>-12<sup>20</sup>** OP4.12 The interaction between Al-Li-Mg alloy and crucible coating during melting and processing  
Franjo Kozina
- 12<sup>20</sup>-12<sup>40</sup>** OP4.13 Interaction kinetics between molten aluminium alloy Al99.7 and H11 tool steel with and without a protective coating  
Maja Voncina
- 12<sup>40</sup>-13<sup>00</sup>** OP4.14 Solidification of remelted AlSi<sub>9</sub>Cu<sub>3</sub>(Fe) alloy  
Zdenka Zovko Brodarac

***Kanas Restaurant***

**13<sup>00</sup>-14<sup>30</sup>**  
**Lunch**

***Room A (Grey)***

**14<sup>30</sup>-14<sup>40</sup>**  
**CEEC-TAC7 Info**

***Room A (Grey)***

Chair: Jiri Malek

- 14<sup>40</sup>-15<sup>20</sup>** APL2 Thermal analysis of advanced phase change materials for thermal energy storage  
**Kinga Pielichowska**
- 15<sup>20</sup>-15<sup>50</sup>** IL4 Exploring physico-geometrical kinetic features of the thermal decomposition of solids using thermal analysis  
**Nobuyoshi Koga**

***Room A (Grey)***

Chair: Nicolas Sbirrazzuoli

- 16<sup>00</sup>-16<sup>20</sup>** OP1.15 Influence of additives on the thermal and combustion behaviors of gas generators based on guanidine nitrate and basic copper nitrate  
Katsumi Katoh

**16<sup>20</sup>-16<sup>40</sup>** OP1.16 Gas generation behaviour in the decomposition of ammonium dinitramide and hydrazide mixtures  
Hiroki Matsunaga

**16<sup>40</sup>-17<sup>00</sup>** OP1.17 Thermal analysis as a tool to assess safety of ammonium nitrate and its mixtures  
Maciej Kaniewski

***Room B (Green)***

Chair: Vilko Mandic

**16<sup>00</sup>-16<sup>20</sup>** OP2.15 In-situ TEM annealing of Al-Cu-Al heterogeneous nanostructures  
Lucia Bajtosova

**16<sup>20</sup>-16<sup>40</sup>** OP2.16 Thermodynamic simulation and experimental verification of phase transitions in medium-Mn alloy  
Adam Skowronek

**16<sup>40</sup>-17<sup>00</sup>** OP2.17 Electron microscopy and molecular dynamics study of Ni nanoparticles at elevated temperatures  
Miroslav Cieslar

***Room C (Red)***

Chair: Joanna Grzelczyk

**16<sup>00</sup>-16<sup>20</sup>** OP3.15 Application of plastic materials by evolved gas analysis (TG-MS and TG-FTIR) equipped with optical microscope  
Tadashi Aii

**16<sup>20</sup>-16<sup>40</sup>** OP3.16 Drying and thermal characterisation of limequat peel  
Seray Pehlivan

**16<sup>40</sup>-17<sup>00</sup>** OP3.17 Influence of mechanochemical activation on the degree of amorphisation and pozzolanic activity of kaolin  
Marko Rukavina

***Room D (Blue)***

Chair: Anton Trnik

**16<sup>00</sup>-16<sup>20</sup>** OP4.15 Thermodynamic approach for designing processing routes of 4Mn quenching and partitioning steel  
Aleksandra Kozłowska

**16<sup>20</sup>-16<sup>40</sup>** OP4.16 Splat-to-splat interface thermal conductivity determination for dual phase YSZ/zirconates thermal barrier coatings  
Grzegorz Moskal

**16<sup>40</sup>-17<sup>00</sup>** OP4.17 Carbothermal reaction of mechanically activated ZrC powders followed by DSC-TGA  
Nina Obradovic

***Room A (Grey)***

**17<sup>00</sup>-17<sup>45</sup>** **ICTAC Standards & Nomenclature Workshop**

**17<sup>45</sup>-20<sup>00</sup>**

**Afternoon Break**

**20<sup>00</sup>-24<sup>00</sup>**

***Pivovarský dům Poupě Restaurant***  
**Conference Dinner**

## Thursday, 31<sup>st</sup> of August

### **Room A (Grey)**

Chair: Pavel Siler

09<sup>00</sup>-09<sup>40</sup> PL3 Stories of hair told by Thermal Analysis  
**Crisan Popescu**

09<sup>40</sup>-10<sup>10</sup> IL5 Thermal analysis of magnetic materials  
**Joan-Josep Sunol**

10<sup>10</sup>-11<sup>40</sup>  
**Poster and Coffee break area**  
**Poster Session 3 & Coffee Break**

### **Room A (Grey)**

Chair: Oleg Petuhov

11<sup>40</sup>-12<sup>00</sup> OP1.18 Unique setups for unique applications  
Stephan Moreau

12<sup>00</sup>-12<sup>20</sup> OP1.19 The effect of temperature on gradual degradation of structural  
components in biomass residues  
Mihai Brebu

12<sup>20</sup>-12<sup>40</sup> OP1.20 Thermogravimetric analysis of bioadsorbents from coffee  
residue for CO<sub>2</sub> capture  
Marcelina Soltysik

12<sup>40</sup>-13<sup>00</sup> OP1.21 Changes in the thermal behaviour of phosphorite sample from  
Toole deposit (Estonia) along the drill-core  
Eliise-Koidula Kivimae

### **Room B (Green)**

Chair: Fabio Faraguna

11<sup>40</sup>-12<sup>00</sup> OP2.18 Fitting theoretical models to viscosity of graphene nanofluids  
as a function of temperature  
Carlos Augusto Xavier Ramos

12<sup>00</sup>-12<sup>20</sup> OP2.19 Natural hybrid pigments as durable multifunctional coloring  
agents for polymer composites  
Boleslaw Szadkowski

12<sup>20</sup>-12<sup>40</sup> OP2.20 Thermal and structural properties of PVDF@Zn-MOF  
nanocomposites  
Sergej Il'kovic

12<sup>40</sup>-13<sup>00</sup> OP2.21 Modified plant fillers of polymer composites  
Justyna Miedzianowska

### **Room C (Red)**

Chair: Atsumi Miyake

11<sup>40</sup>-12<sup>00</sup> OP3.18 Natural rubber biocomposites filled with chemically modified  
agricultural waste  
Marcin Maslowski

- 12<sup>00</sup>-12<sup>20</sup> OP3.19 Challenges of developing of a pyrolysis plant for thermal treatment of plastic wastes  
Ion Antonescu
- 12<sup>20</sup>-12<sup>40</sup> OP3.20 The influence of the ultrasound and pulsed electric field application in extraction process on thermal properties of berry seed oils  
Iga Piasecka
- 12<sup>40</sup>-13<sup>00</sup> OP3.21 Evaluation of biodegradability and thermal stability of edible and biodegradable disposable tableware of waste from olive oil production  
Joanna Grzelczyk
- Room D (Blue)**  
Chair: Joan-Josep Sunol
- 11<sup>40</sup>-12<sup>00</sup> OP4.18 Study of an alternative binder based on the carbonation of ladle furnace slag  
Jiri Masilko
- 12<sup>00</sup>-12<sup>20</sup> OP4.19 Flash Joule Beating-Boro/Carbothermal reduction (FJH-BCTR): An approach for the instantaneous synthesis of transition metal diborides  
Luis A Perez-Maqueda
- 12<sup>20</sup>-12<sup>40</sup> OP4.20 The influence of the preparation method on the thermal, optical, and magnetic properties of Bi<sup>3+</sup> doped CAS glasses  
Melinda Majerova
- 12<sup>40</sup>-13<sup>00</sup> OP4.21 Thermo-Optic-Phase-Shifter using silicon rib technology  
Dror Malka
- Kanas Restaurant**  
**Lunch**
- 13<sup>00</sup>-14<sup>30</sup>
- Room A (Grey)**  
**CEEC-TAC8 Info**
- 14<sup>30</sup>-14<sup>40</sup>
- Room A (Grey)**  
Chair: Matko Erceg
- 14<sup>40</sup>-15<sup>20</sup> APL3 Modelling of the kinetics of dehydration of poly(acrylic acid) hydrogel – 15 years after  
**Branislav Stankovic**
- 15<sup>20</sup>-15<sup>50</sup> IL6 Investigating the physical aging of epoxy resins for civil engineering applications  
**Laurent Delbreilh**
- Room A (Grey)**  
**Closing Ceremony**
- 15<sup>50</sup>-16<sup>00</sup>
- 16<sup>00</sup> **Poster and Coffee break area**  
**Farewell**

## LIST COMMUNICATIONS

### HONORARY LECTURE

- HL** Sestak, Jaroslav Former personalities of the Czech-Slovak thermal analysis community and their inventive contributions

### AWARD PLENARY LECTURES

- APL1** Verevkin, Sergey The Gibbs-Helmholtz equation in modern thermochemistry: combining calorimetric and quantum chemical methods
- APL2** Pielichowska, Kinga Thermal analysis of advanced phase change materials for thermal energy storage
- APL3** Stankovic, Branislav Modelling of the kinetics of dehydration of poly(acrylic acid) hydrogel – 15 years after

### PLENARY LECTURES

- PL1** Miyake, Atsumi Thermal risk analysis of lithium-ion batteries under overheating in waste treatment systems
- PL2** Blanco, Ignazio The role of thermal methods in Additive Manufacturing
- PL3** Popescu, Crisan Stories of hair told by Thermal Analysis

### INVITED LECTURES

- IL1** Sbirrazzuoli, Nicolas Advanced isoconversional kinetic analysis: Insights in polymerization mechanisms
- IL2** Barros, Nieves Beginning to calculate thermodynamic state functions for soils: the role of thermal analysis and calorimetry
- IL3** Tiliakos, Athanasios Ion transport mechanisms in superionic ceramic conductors
- IL4** Koga, Nobuyoshi Exploring physico-geometrical kinetic features of the thermal decomposition of solids using thermal analysis
- IL5** Sunol, Joan-Josep Thermal analysis of magnetic materials
- IL6** Delbreilh, Laurent Investigating the physical aging of epoxy resins for civil engineering applications

### ORAL PRESENTATIONS

#### ORAL PRESENTATIONS 1 Theory & Methods, Kinetics & Structural Changes, Fuels & Biofuels, Energetics and Applied Thermal Engineering

- OP1.01** Bartonickova, Eva Effect of S, Cu and Li doping on C<sub>3</sub>A hydration kinetics
- OP1.02** Fernandez Merayo, Noelia Thermokinetic analysis and characterization of polyethylene terephthalate (PET) nanoparticles biodepolymerization via isothermal titration calorimetry
- OP1.03** Moukhina, Elena New NETZSCH Software for thermal simulation of chemical reactions in big volumes
- OP1.04** Simon, Peter Applicability of the methods based on the general rate equation

<b>OP1.05</b> Farjas, Jordi	Application of isoconversional methods for predicting the cure of epoxy composites under arbitrary thermal histories
<b>OP1.06</b> Uraz, Emre	Determination of biomass composition by kinetic analysis of thermogravimetric data
<b>OP1.07</b> Stolov, Andrei	Application of isothermal and non-isothermal TG to acrylate coatings on optical fibers: experimental verification of isoconversion principle
<b>OP1.08</b> Ito, Masayuki	On the comment to ISO 11358-2 obtaining activation energy of thermal degradation of linear low density polyethylene
<b>OP1.09</b> Wojtacha, Anna	Thermodynamic prediction and experimental verification of phase transformation kinetics in 3Mn steel with Ti and V microadditions
<b>OP1.10</b> Shanelova, Jana	Effect of nucleation on crystallization of chalcogenide glasses
<b>OP1.11</b> Hancova, Pavla	Overall evaluation of structural relaxation of selected chalcogenide glasses based on DSC data
<b>OP1.12</b> Kostal, Petr	Viscosity of chalcogenide glass-formers
<b>OP1.13</b> Di Lorenzo, Maria Laura	CO <sub>2</sub> -induced crystallization of poly (L-lactic acid): enhanced cold crystallization with growth of $\alpha'$ -crystals
<b>OP1.14</b> Omrani, Iman AN	The ice and salt crystallization patterns of the MgSO <sub>4</sub> ·nH <sub>2</sub> O system within the sandstone under temperature fluctuations
<b>OP1.15</b> Katoh, Katsumi	Influence of additives on the thermal and combustion behaviors of gas generators based on guanidine nitrate and basic copper nitrate
<b>OP1.16</b> Matsunaga, Hiroki	Gas generation behaviour in the decomposition of ammonium dinitramide and hydrazide mixtures
<b>OP1.17</b> Kaniewski, Maciej	Thermal analysis as a tool to assess safety of ammonium nitrate and its mixtures
<b>OP1.18</b> Moreau, Stephan	Unique setups for unique applications
<b>OP1.19</b> Brebu, Mihai	The effect of temperature on gradual degradation of structural components in biomass residues
<b>OP1.20</b> Soltysik, Marcelina	Thermogravimetric analysis of bioadsorbents from coffee residue for CO <sub>2</sub> capture
<b>OP1.21</b> Kivimae, Eliise-Koidula	Changes in the thermal behaviour of phosphorite sample from Toolse deposit (Estonia) along the drill-core

## **ORAL PRESENTATIONS 2 Thermodynamics & Calorimetry of Solids, Thin Films, Nanostructures & Nanomaterials**

<b>OP2.01</b> Pulidori, Elena	Characterization of unknown animal glues from artwork samples by thermal, rheological, and structural analysis
<b>OP2.02</b> Barannikov, Ruslan	Thermal behaviour of lead and mercury carboxylates as paintings' degradation products
<b>OP2.03</b> Ksepko, Ewelina	Fe spinel-based materials for biomass combustion applications
<b>OP2.04</b> Shekhawat, Deepshikha	Controlling the reaction path of Ni/Al reactive multilayer on substrates



<b>OP2.05</b>	Radovanovic-Peric, Floren	Defect engineering of titanium oxide thin films printed via one-step reactive spark plasma discharge coupled with aerosol direct writing
<b>OP2.06</b>	Bartak, Jaroslav	Surface mobility and crystal growth study in chalcogenide thin films
<b>OP2.07</b>	Martinkova, Simona	Two types of crystal growth in Se-Te thin films
<b>OP2.08</b>	Zuzjakova, Sarka	Tuning properties and behaviour of W-Zr thin-film metallic glasses
<b>OP2.09</b>	de Abreu, Danilo Alencar	Li <sub>2</sub> O-Al <sub>2</sub> O <sub>3</sub> and Li <sub>2</sub> O-SiO <sub>2</sub> systems: experimental investigations and thermodynamic modelling
<b>OP2.10</b>	Fuglein, Ekkehard	Isothermal Calorimetry for investigation of heat signatures of batteries during charging and discharging
<b>OP2.11</b>	Loffler, Manuel	Development of thermodynamic database for ZrO <sub>2</sub> -Y <sub>2</sub> O <sub>3</sub> -HfO <sub>2</sub> -Ta <sub>2</sub> O <sub>5</sub> system
<b>OP2.12</b>	Mandic, Vilko	Regeneration and reuse properties of the highly effective electrochemically-derived nanostructured ordered titania photocatalyst
<b>OP2.13</b>	Muzina, Katarina	γ-Al <sub>2</sub> O <sub>3</sub> supported MnO <sub>x</sub> catalysts for VOCs oxidation
<b>OP2.14</b>	Broz, Pavel	Study of the Hf-Mn system by thermal and phase analysis and calorimetry
<b>OP2.15</b>	Bajtosova, Lucia	In-situ TEM annealing of Al-Cu-Al heterogeneous nanostructures
<b>OP2.16</b>	Skowronek, Adam	Thermodynamic simulation and experimental verification of phase transitions in medium-Mn alloy
<b>OP2.17</b>	Cieslar, Miroslav	Electron microscopy and molecular dynamics study of Ni nanoparticles at elevated temperatures
<b>OP2.18</b>	Xavier Ramos, Carlos Augusto	Fitting theoretical models to viscosity of graphene nanofluids as a function of temperature
<b>OP2.19</b>	Szadkowski, Boleslaw	Natural hybrid pigments as durable multifunctional coloring agents for polymer composites
<b>OP2.20</b>	Il'kovic, Sergej	Thermal and structural properties of PVDF@Zn-MOF nanocomposites
<b>OP2.21</b>	Miedzianowska, Justyna	Modified plant fillers of polymer composites

### **ORAL PRESENTATIONS 3 Calorimetry of Polymers, Bio(macro)molecules, Life science and Organic Functional Systems & Compounds**

<b>OP3.01</b>	Bednarek, Jan	Use of thermal analysis for the study of the adsorption of pharmaceuticals from water
<b>OP3.02</b>	Krakovsky, Ivan	Phase transition in polymer hydrogels investigated by swelling, DSC, FTIR and NMR
<b>OP3.03</b>	Mathers, Alex	The step-wise dissolution method: An efficient DSC-based protocol for API-polymer solubility determination
<b>OP3.04</b>	Venkataraman, Mohanapriya	Sandwich fibrous paraffin wax encapsulations for selected applications
<b>OP3.05</b>	Di Lodovico, Eliana	Combining calorimetry and simultaneous thermal analysis (TGA-DSC) to assess energy fluxes of soil organic matter

- OP3.06** Ajiyel, Hajar Temperature dependence of the enthalpy of formation of oligomeric DNA duplexes: Implications for the thermodynamics of DNA
- OP3.07** Maskow, Thomas Biocalorimetry as a tool to analyse fungal lignocellulose utilization strategies
- OP3.08** Yang, Shiyue Accuracy of simultaneous calorimetric measurement and its importance for thermodynamic modelling in soil systems
- OP3.09** Bafti, Arijeta Cellulose II highly porous materials as sound absorbers
- OP3.10** Pucko, Ivan Synthesis and performance comparison of methacrylic pour point depressants with commercial additives
- OP3.11** Chrysafi, Iouliana Thermal reliability of n-eicosane – loaded phase change fibers
- OP3.12** Menyhard, Alfred Prediction of tensile modulus in semicrystalline polymers based on their melting characteristics recorded by calorimetry
- OP3.13** Carichino, Silvia Innovative biocomposites based on PLA and beer bagasse used in two different additive manufacturing techniques
- OP3.14** Duce, Celia Isothermal thermogravimetry to fingerprint the oxidative behaviour of lipids
- OP3.15** Arii, Tadashi Application of plastic materials by evolved gas analysis (TG-MS and TG-FTIR) equipped with optical microscope
- OP3.16** Pehlivan, Seray Drying and thermal characterisation of limequat peel
- OP3.17** Rukavina, Marko Influence of mechanochemical activation on the degree of amorphisation and pozzolanic activity of kaolin
- OP3.18** Maslowski, Marcin Natural rubber biocomposites filled with chemically modified agricultural waste
- OP3.19** Antonescu, Ion Challenges of developing of a pyrolysis plant for thermal treatment of plastic wastes
- OP3.20** Piasecka, Iga The influence of the ultrasound and pulsed electric field application in extraction process on thermal properties of berry seed oils
- OP3.21** Grzelczyk, Joanna Evaluation of biodegradability and thermal stability of edible and biodegradable disposable tableware of waste from olive oil production

#### **ORAL PRESENTATIONS 4 Functional Materials, Ceramics, Metals & Alloys, Cements and Engineering Materials & Composites**

- OP4.01** Bilek, Vlastimil Comparison of thermogravimetry response of alkali-activated slag and Portland cement pastes after stopping their hydration using solvent exchange method
- OP4.02** Bocian, Lubos Performance of hybrid steel and aramid fibre reinforcement in ultra-high performance concrete
- OP4.03** Dambrasukas, Tadas Thermal stability of catalyst based on semicrystalline calcium silicate hydrate with intercalated  $\text{Co}^{2+}$ ,  $\text{Cu}^{2+}$  and  $\text{Cr}^{3+}$  ions

<b>OP4.04</b>	Materak, Kalina	The impact of internal hydrophobization on a supplementary cementitious materials hydration
<b>OP4.05</b>	Matejka, Lukas	Comparison of commercial nitrate-based accelerators and their pure constituents on hydration kinetics, composition, and hydration degree of zinc oxide blended Portland cement
<b>OP4.06</b>	Thomas, Paul	Low temperature DSC characterisation of the influence of admixtures on the hydration of cement
<b>OP4.07</b>	Siler, Pavel	Effect of different hydration accelerators on the properties of zinc-doped cement
<b>OP4.08</b>	Pietrak, Karol	Comparison of performance of lime- and magnesia-based hempcrete in water vapour permeability tests
<b>OP4.09</b>	Prnova, Anna	The influence of ZrO <sub>2</sub> addition on thermal and mechanical properties of Y <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> ceramics materials
<b>OP4.10</b>	Korena, Lucie	Thermoporometry of carbons with large mesopores: PSD evaluation difficulties
<b>OP4.11</b>	Morawiec, Mateusz	Design and dilatometric processing of nanobainitic structures in Al-alloyed 3Mn multiphase steel
<b>OP4.12</b>	Kozina, Franjo	The interaction between Al-Li-Mg alloy and crucible coating during melting and processing
<b>OP4.13</b>	Voncina, Maja	Interaction kinetics between molten aluminium alloy Al99.7 and H11 tool steel with and without a protective coating
<b>OP4.14</b>	Zovko Brodarac, Zdenka	Solidification of remelted AlSi <sub>9</sub> Cu <sub>3</sub> (Fe) alloy
<b>OP4.15</b>	Kozłowska, Aleksandra	Thermodynamic approach for designing processing routes of 4Mn quenching and partitioning steel
<b>OP4.16</b>	Moskal, Grzegorz	Splat-to-splat interface thermal conductivity determination for dual phase YSZ/zirconates thermal barrier coatings
<b>OP4.17</b>	Obradovic, Nina	Carbothermal reaction of mechanically activated ZrC powders followed by DSC-TGA
<b>OP4.18</b>	Masilko, Jiri	Study of an alternative binder based on the carbonation of ladle furnace slag
<b>OP4.19</b>	Perez-Maqueda, Luis A	Flash Joule Beating-Boro/Carbothermal reduction (FJH-BCTR): An approach for the instantaneous synthesis of transition metal diborides
<b>OP4.20</b>	Majerova, Melinda	The influence of the preparation method on the thermal, optical, and magnetic properties of Bi <sup>3+</sup> doped CAS glasses
<b>OP4.21</b>	Malka, Dror	Thermo-Optic-Phase-Shifter using silicon rib technology

## POSTER SESSION 1

- PS1.01** Kozłowska, Aleksandra Dilatometric study on phase transformations in non-deformed and plastically deformed medium-Mn multiphase steels with increased Al and Si additions
- PS1.02** Krol, Mariusz Effect of hot deformation on microstructure and precipitation kinetics in M789 cobalt-free maraging steel produced by SLM
- PS1.03** Ksepko, Ewelina Fe spinel-based materials and their CLOU properties
- PS1.04** Kulawik, Damian New storage materials based on carbon nanotubes and metal alloys
- PS1.05** Kulawik, Damian Structural and enhanced hydrogen storage properties of Mg-Co-Ga system
- PS1.06** Lapka, Piotr Preliminary comparative numerical analysis of three-layer hemp concrete wall with a layer enhanced with microencapsulated PCM
- PS1.07** Masłowski, Marcin Field horsetail (*Equisetum arvense*) - a functional additive to elastomer biocomposites
- PS1.08** Miedzianowska, Justyna Biochar as an alternative filler for elastomer composites
- PS1.09** Mikuskiewicz, Marta Synthesis and thermal properties of  $(RE^{1.0}RE^{2.0})_2Zr_2O_7$  zirconates
- PS1.10** Mikuskiewicz, Marta Thermal diffusivity/conductivity of Pr, Eu and Ho zirconates
- PS1.11** Morawiec, Mateusz Effect of the intercritical annealing temperature on the austenite formation in 5Mn alloy: Thermodynamic analysis
- PS1.12** Moskal, Grzegorz Rare earth elements zirconates` thermal and mechanical properties determination based on DFT simulations data
- PS1.13** Skowronek, Adam On thermodynamic modelling the effect of martensite on phase transformation kinetics in medium-Mn bainitic steel
- PS1.14** Snopiński, Przemysław Thermal stability and irradiation resistance of LPBF AlSi10Mg alloy post-processed via KoBo extrusion method
- PS1.15** Snopiński, Przemysław Hot deformation behaviour of additively manufactured and conventional maraging steels
- PS1.16** Suchorowicz, Katarzyna Investigation of biomass waste carbonization process supported by TGA for solar-thermal energy conversion applications
- PS1.17** Suchorowicz, Katarzyna Thermal analysis of the carbonized citrus fruit biomass infiltrated with sugar alcohols-based PCMs
- PS1.18** Szadkowski, Bolesław The study on the new biopolymer/natural dye hybrid pH indicators: preparation, characterization, and application
- PS1.19** Szatkowski, Piotr Thermal properties of polymeric phase change materials modified with selected nanoadditives
- PS1.20** Szatkowski, Piotr Thermal properties of thermochromic phase change materials modified with boron nitride
- PS1.21** Tomaszewska, Agnieszka Heat treatment thermal parameters` determination of Co-(Ni)-Al-Mo-Nb-X superalloys

<b>PS1.22</b> Tomaszewska, Agnieszka	Thermogravimetric analysis of new tungsten-free Co-based superalloys with rare earth elements additions
<b>PS1.23</b> Xavier Ramos, Carlos Augusto	Characterization of nanofluids for biomedical applications: Study of density and viscosity properties
<b>PS1.24</b> Antonescu, Ion	Thermal analysis of a pump used in an innovative installation for cementing and special operations at the oil well intended to improve the efficiency of the extraction of conventional energy resources
<b>PS1.25</b> Brebu, Mihai	Thermogravimetric characterisation of various agriculture biomass residues prior to valorisation by thermal methods
<b>PS1.26</b> Bustiu cel, Sergiu Ionut	Biocomposites based on hydroxyapatite loaded with amoxicillin for bone tissue repair and regeneration
<b>PS1.27</b> Bustiu cel, Sergiu Ionut	Antibiotic-loaded bioceramics for bone tissue healing
<b>PS1.28</b> Carstea, Didina-Ramona-Cassandra	Analytical prediction of the curing overheating and overshoot
<b>PS1.29</b> Chereches, Elena Ionela	An overview of viscosity of several nanoparticles enhanced liquids
<b>PS1.30</b> Criveanu, Anca	Morpho-structural properties of thermally treated iron oxide nanoparticles synthesized by laser pyrolysis using ethanol as sensitizer
<b>PS1.31</b> Ghita, Gabriel	Differential thermal gravimetric analysis for plants growth soil with different salt concentration
<b>PS1.32</b> Gradinaru, Madalina	Thermal and FTIR characterization of medicated jelly with betulin and betulinic acid
<b>PS1.33</b> Gradinaru, Madalina	Absorption of phosphorus from water, use of hydrogels based on biopolymers
<b>PS1.34</b> Petuhov, Oleg	Evaluating the thermal regeneration processes of spent activated carbons used in winemaking
<b>PS1.35</b> Petuhov, Oleg	Preparation and characterization of carbonaceous adsorbents from solid industrial waste
<b>PS1.36</b> Sfirloaga, Paula	Optimizing the thermal treatment in order to obtain a single hexagonal phase of $YMnO_3$
<b>PS1.37</b> Sfirloaga, Paula	Properties of manganese yttrium oxide: Influences of dopants on the thermal, structural and optical properties
<b>PS1.38</b> Teodorescu, George-Mihail	Thermal and mechanical properties of ash powder/glass fiber reinforced polyamide hybrid composites
<b>PS1.39</b> Thalmaier, Gyorgy	A cold/chemical sintering process for manufacturing Zn foams from spherical powders
<b>PS1.40</b> Usurelu, Catalina-Diana	Throughout thermal characterization of ester-grafted nanocellulose
<b>PS1.41</b> Oprica, Gabriela-Madalina	Thermal stability of aliphatic polyesters recovered from hot embossing substrates
<b>PS1.42</b> Vlase, Gabriela	Analysis through hyphenated techniques of Pottery samples from the settlements and burial ground at Pecica – East site (Pecica, Arad County, Romania)
<b>PS1.43</b> Vlase, Gabriela	Synthesis and characterisation of some metals doped hydroxyapatite with different applications

- PS1.44** Vlase, Titus Analysis of late Neolithic pottery and clay samples from the Ronăţ-Triaj site (Timișoara, Timis County, Romania) using hyphenated techniques
- PS1.45** Vlase, Titus Analysis by multiple techniques of some fragments of Dacian ceramics, discovered near the Dacian fortress of Alun-Piatra Roșie (Hunedoara county)
- PS1.46** Balasko, Tilen Influence of La additions on solidification and microstructure in the as-cast state of the alloy EN AW-7175
- PS1.47** Voncina, Maja The influence of La and Ce additions on the solidification of alloys from the Al-Fe system
- PS1.48** Svec, Jiri Synthesis of calcium aluminate hydrates, their characterization and dehydration
- PS1.49** Rotaru, Andrei Thermal analysis of two new coordination polymers based on 4,4'-bis(1H-imidazol-1-ylmethyl)biphenyl
- PS1.50** Rotaru, Petre Kinetics studies on oxygen D2 diffusion in Ag<sub>2</sub>O doped YBCO-123 material

## POSTER SESSION 2

- PS2.01** Thomas, Paul Influence of cooling rate and crystallisation temperature on the phase development in deuterated tripalmitin using DSC
- PS2.02** Morvezen, Gwenn Coupled dielectric spectroscopy and DSC for ferroelectric materials
- PS2.03** Di Lodovico, Eliana Novel isothermal macrocalorespirometer for measuring soil microbial activity
- PS2.04** Moukhina, Elena Selection of kinetic method for analysis of decomposition, curing and crystallization of polymers by NETZSCH Kinetics Neo Software
- PS2.05** Chrissafis, Konstantinos Thermal Inspection of a 'Green' Epoxy Adhesive
- PS2.06** Chrissafis, Konstantinos Evaluating the thermal performance of selenides synthesized by ball milling and pack cementation for thermoelectric applications
- PS2.07** Chrysafi, Iouliana In-situ monitoring the curing evolution of pMDI with soy-bean protein using a DRIFT environmental chamber
- PS2.08** Lorinczy, Denes Investigating the impact of PACAP on thermal stability of G-actin by differential scanning calorimetry
- PS2.09** Lorinczy, Denes Ca<sup>2+</sup> dependent thermal sensitivity of bacterial MreB assemblies
- PS2.10** D'Agostino, Giulia The influence of temperature and sulfation on Funori gel formation
- PS2.11** Sciascia, Luciana Clay-based drug delivery: Advancing controlled release with montmorillonite and kaolin
- PS2.12** Vecchio Cipriotti, Stefano Thermodynamic study of 1,4-bis(3-methylimidazolium-1-yl)butane bis(triflyomethylsulfonyl)imide ([C4mim][NTf<sub>2</sub>])<sub>2</sub> from 6 to 350 K

<b>PS2.13</b> Vecchio Cipriotti, Stefano	Blends of biodegradable polymers: morphology, mechanical and thermal properties
<b>PS2.14</b> Aarii, Tadashi	New DSC-vesta2 with cutting-edge $\chi$ sensor <sup>®</sup> and self-diagnosis function
<b>PS2.15</b> Higashi, Eiko	Preparation of $\alpha$ -alumina by combustion synthesis and observation of the thermal behavior of its formation process
<b>PS2.16</b> Hotta, Mito	Individual effects of water vapor and carbon dioxide on the thermal decomposition of calcium carbonate
<b>PS2.17</b> Hotta, Mito	Effect of self-generated carbon dioxide on the thermal decomposition of zinc carbonate
<b>PS2.18</b> Ito, Masayuki	Effect of induction period on activation energy of fluorine containing elastomer obtained by ISO 11358-2
<b>PS2.19</b> Koga, Nobuyoshi	Physico-geometrical mechanisms and kinetics of the thermal dehydration of sugar hydrates accompanied by liquefaction
<b>PS2.20</b> Suetsugu, Mari	Dismantlability of epoxy adhesive containing inorganic/organic composite fine particles
<b>PS2.21</b> Baltakys, Kestutis	The adsorption kinetic parameters of phosphorus by calcium silicate hydrated based adsorbent
<b>PS2.22</b> Baltakys, Kestutis	Microwave-assisted synthesis of monetite in the temperature range of 25–200 °C
<b>PS2.23</b> Dambrauskas, Tadas	Influence of Fe <sup>3+</sup> ions on the formation and thermal stability of gyrolite
<b>PS2.24</b> Eisinas, Anatoijus	Cu <sup>2+</sup> /SO <sub>4</sub> <sup>2-</sup> ions adsorption by synthetic mayenite with intercalated SiO <sub>2</sub>
<b>PS2.25</b> Eisinas, Anatoijus	Synthesis and properties of cement additive made from biomass ash
<b>PS2.26</b> Siauciunas, Raimundas	The dependence of the amount of Al <sup>3+</sup> ions inserted into the fluids for biomedical applications: Study of density and viscosity properties
<b>PS2.27</b> Siauciunas, Raimundas	The supplementary cementitious material from used smectite clay and limestone (LC <sup>3</sup> )
<b>PS2.28</b> Ciesielski, Wojciech	Functionalized carbon nanotubes as new potential green electrodes
<b>PS2.29</b> Ciesielski, Wojciech	New materials for hydrogen storage based on carbon nanotubes
<b>PS2.30</b> Dudek, Magdalena	Sr-doped BCY–LSCF composite cathodes: preparation, properties and electrochemical tests in ceramic proton-conducting fuel cells
<b>PS2.31</b> Dudek, Piotr	Thermal and mechanical properties of polymer composite powders for Additive Manufacturing
<b>PS2.32</b> Gocki, Michal	Thermal analysis of debinding and sintering process of FDM manufacture H13 steel
<b>PS2.33</b> Gocki, Michal	Dilatometric study of phase transformation in additively manufactured H13 hot work tool steel
<b>PS2.34</b> Grzelczyk, Joanna	Effect of inhibiting butyrylcholinesterase activity by coffee extracts and fractions thereof digested in in vitro gastrointestinal tract

<b>PS2.35</b> Hebda, Marek	Evaluation of natural materials for sorbent applications
<b>PS2.36</b> Kaniewski, Maciej	Polyhalite as a possible potassium source in ammonium nitrate fertilizers – thermal stability assessment
<b>PS2.37</b> Kierat, Milena	Influence of titanium on thermal properties of Co-Ni-Al-W alloys
<b>PS2.38</b> Kierat, Milena	Thermal diffusivity and conductivity of new Co-based superalloy
<b>PS2.39</b> Petkova, Vilma	Impact of pozzolanic additive on the microstructure and thermal chemistry of cement mortars
<b>PS2.40</b> Petkova, Vilma	High energy milled and high temperature activation of CaO-SiO <sub>2</sub> -P <sub>2</sub> O <sub>5</sub> natural system
<b>PS2.41</b> Yang, Hee-Chul	Kinetic analysis for thermal decomposition reactions of NH <sub>4</sub> ReO <sub>4</sub> for the recovery of high-purity Rh powders from the scrubber residue of molybdenum oxidizing roasting process
<b>PS2.42</b> Yang, Hee-Chul	Structural changes and gas evolution characteristics of strong acidic cation-exchange resins during the course of pyrolysis and carbonization to 1273 K
<b>PS2.43</b> Banjongprasert, Chaiyasit	Corrosion behaviour of arc sprayed Zn15Al coatings: A comparative study of electrochemical, accelerated corrosion tests, and coastal railway exposure
<b>PS2.44</b> Banjongprasert, Chaiyasit	Corrosion behaviour and bonding strength of thermally sprayed nickel alloy coatings for use as bond and top coatings
<b>PS2.45</b> Chaipanich, Arnon	Phase characterizations of Portland cement-high calcium fly ash-calcined clay pastes by thermogravimetric analysis
<b>PS2.46</b> Chaipanich, Arnon	Determination of high calcium fly ash condition after long term storage by thermal analysis
<b>PS2.47</b> Shuecamlue, Sirinapa	Microstructure, wear and corrosion behaviour of NiCrBSi/WC-Co thermally sprayed coating before and after flame remelting
<b>PS2.48</b> Uraz, Emre	Determination of the kinetic parameters for the thermal decomposition of Al(OH) <sub>3</sub> and Mg(OH) <sub>2</sub> by Invariant-Kinetic Parameters method from thermogravimetric data
<b>PS2.49</b> Moanta, Anca	Characterisation and thermal study of new sulfonic azoesters
<b>PS2.50</b> Sestak, Jaroslav	Thermoanalytical books on thermophysical research of materials

### **POSTER SESSION 3**

<b>PS3.01</b> Bafti, Arijeta	Preparing an efficient photocatalyst from SnO <sub>2</sub> modified cellulose II highly porous template
<b>PS3.02</b> Barbir, Damir	The influence of heavy metals on the early hydration processes of Portland cement
<b>PS3.03</b> Faraguna, Fabio	Influence of size and concentration of graphene nanoparticles on thermal and electrical conductivity of mineral oil based nanofluids



<b>PS3.04</b> Gotovusa, Mia	Low-temperature properties of fatty acid isobutyl, pentyl, and hexyl esters, and their blends with mineral diesel
<b>PS3.05</b> Jakic, Mice	Investigation of the effect of MgO on the thermal profile of PEO prepared via hot-melt extrusion technique
<b>PS3.06</b> Jakopec, Silvio	Dielectric properties of porous silico-aluminophosphate geopolymeric ceramic-like material
<b>PS3.07</b> Kresic, Irena	Influence of LiBOB on the structure, thermal properties and ionic conductivity of poly(ethylene oxide)
<b>PS3.08</b> Mandic, Vilko	Pre and post processing of the substrates and surfaces for interface stability engineering in perovskite solar cells
<b>PS3.09</b> Perinovic Jozic, Sanja	Structural and thermal properties of PEO/NaAlg blend complexed with NaPF <sub>6</sub>
<b>PS3.10</b> Radovanovic-Peric, Floren	Sol-gel derived calcium phosphates: synthesis and properties
<b>PS3.11</b> Rukavina, Marko	Application of intensive grinding in obtaining metakaolin and zeolite
<b>PS3.12</b> Tomas, Renato	Thermophysical properties of 1-butyl-2-methylpyridinium tetrafluoroborate ionic liquid in water and methanol at different temperatures
<b>PS3.13</b> Bajtosova, Lucia	Recrystallization of thin Fe-based nanocrystalline films
<b>PS3.14</b> Bartak, Jaroslav	Surface tension in chalcogenide glass-formers
<b>PS3.15</b> Broz, Pavel	Thermally-activated catalysis on CuNi nanoparticles
<b>PS3.16</b> Cieslar, Miroslav	Homogenization of rapidly solidified Al-Li-based ribbons studied by electrical resistivity and in-situ electron microscopy
<b>PS3.17</b> Horak, Tomas	Characterization of CaP coatings prepared on AZ31 magnesium alloy in the presence of various organic complex substances under hydrothermal conditions
<b>PS3.18</b> Horakova, Lenka	The importance of ammonium and potassium precursor cations for the preparation of CaP coatings in terms of impact on microstructure, thermal and corrosion properties
<b>PS3.19</b> Kamenikova, Eliska	Effects of PET microplastics on the soil properties: A thermogravimetric approach
<b>PS3.20</b> Krouska, Jitka	Thermal activity of fresh soil
<b>PS3.21</b> Kubatova, Dana	Hydration and thermal properties of hybrid alkaline cements
<b>PS3.22</b> Liskova, Katerina	FT-IR supported thermogravimetric analysis of organic matter decomposition in soil
<b>PS3.23</b> Liskova, Katerina	Thermogravimetric analysis as a supportive method in a study of plasma activated water effect on organic matter decomposition rate in soil
<b>PS3.24</b> Miklasova, Marta	Influence of titanium dioxide nanoparticles on soil properties
<b>PS3.25</b> Novak, Jan	Non-isothermal crystallization kinetics of biocomposites based on PLLA/PHBV and spent coffee grounds
<b>PS3.26</b> Patra, Sneha	Insight into soil biochemistry by combining Glomalin-related soil protein (GRSP) and thermogravimetry/mass spectrometry

<b>PS3.27</b> Rezacova, Veronika	Differential Scanning Calorimetry as a useful tool in the study of Phase Change Materials
<b>PS3.28</b> Romanekova, Ivana	Analysis of microplastics in sewage sludge
<b>PS3.29</b> Somanova, Pavlina	Properties and microstructure of laser treated WC/CoCr thermally-sprayed coating on AZ91 magnesium alloy
<b>PS3.30</b> Stanek, Theodor	Thermal analysis of raw meals doped with Li, Cu and S for the burning Portland cement clinker
<b>PS3.31</b> Sulekova, Nikola	Influence of salts of simple carboxylic acids on hydration and basic properties of RPC
<b>PS3.32</b> Vaculik, David	Viscosity and crystal growth in amorphous samples of Ge <sub>25</sub> Se <sub>75</sub>
<b>PS3.33</b> Stankovic, Bransilav	Dielectric and thermal properties of composites based on low-density polyethylene and NaA zeolite
<b>PS3.34</b> Strbac, Goran	Influence of silver introduction on glass transition and crystallization processes in As <sub>40</sub> Se <sub>30</sub> Te <sub>30</sub> glass
<b>PS3.35</b> Vasic, Milica	Thermal stability and microstructural transformations of Ni-P alloy powders
<b>PS3.36</b> Findorak, Robert	The reactivity study of fuels for the metallurgical industry using thermogravimetry
<b>PS3.37</b> Findorakova, Lenka	Study of global warning key parameters in Slovak urban soils via thermal analysis
<b>PS3.38</b> Majerova, Melinda	Impact of particle size on thermal properties of Y <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> glasses
<b>PS3.39</b> Matko, Igor	Porous carbon fibers prepared from cellulose as carriers of particles of active substances
<b>PS3.40</b> Ondruska, Jan	Thermodynamometry of illite
<b>PS3.41</b> Prnova, Anna	Thermal properties and structure of Y <sub>2</sub> O <sub>3</sub> -Al <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> glasses as precursors for preparation of ceramics materials with eutectic microstructure
<b>PS3.42</b> Trmik, Anton	The high-temperature crystallizations in a system of illitic clay and wollastonite mixtures
<b>PS3.43</b> Barros, Nieves	Sensitivity of thermal analysis and calorimetry to assess the impact of forest management on soils
<b>PS3.44</b> Farjas, Jordi	Kinetic analysis of a recyclable thermoplastic for structural applications
<b>PS3.45</b> Garcia-Garzon, Vanesa	Chemical, mechanical and thermal characterization of gypsum samples from quarries in the Tabernas desert (Almería, Spain)
<b>PS3.46</b> Garcia-Garzon, Vanesa	Characterization of crushed brick waste from the Alhabia Ceramic Plant (Almería, Spain)
<b>PS3.47</b> Perez-Maqueda, Luis A	High temperature thermochemical energy storage in carbonates: A low-cost high-performance approach
<b>PS3.48</b> Sunol, Joan-Josep	Microstructural, thermal, and magnetic properties of (Ni <sub>50</sub> Mn <sub>40</sub> In <sub>10</sub> ) <sub>1-x</sub> Co <sub>x</sub> melt-spun ribbons
<b>PS3.49</b> Nistreanu, Andrei	Ns Light Pulses Transmission through Microcavity in Polaritonic Range
<b>PS3.50</b> Nistreanu, Andrei	Nonlinear Dynamics of an Exciton-Polariton Oscillator in Organic Dye-Filled Microcavity



**Publishing house**



**Copyright**

© Central and Eastern European Committee for  
Thermal Analysis and Calorimetry (CEEC-TAC)  
**2023**

**Nu este de vânzare!**

**Not for sale!**

**Non in vendita!**

**Pas à vendre!**

**Nicht zum Verkauf!**

**Nem értékesítésre szánt!**

**није на продају**

**Nije na prodaju**

**Ni za prodajo**

**Nie je na predaj!**

**Není na prodej!**

**Nie na sprzedaż!**

**Ne pardavimui!**