JTACC+V4 3rd Journal of Thermal Analysis and Calorimetry Conference and 9th V4 (Joint Czech-Hungarian-Polish-Slovakian) Thermoanalytical Conference / JTACC+V4 2023

20-23 June 2023 / Balatonfüred, Hungary
Danubius Hotel Annabella

Programme*

Tuesday / 20 June

14:00-16:00	**Registration / Lobby**		
	Deák Room		
16:00-16:40	**Welcome Remarks / JTAC Best Reviewer Award and JTACC-V4 Travel Grant ceremony**		
	Chairs: Imre Miklós Szilágyi, Alfréd Kállay-Menyhárd, János Kristóf		
16:40-17:20	**Young Scientist Award Lecture / Rahim Zahedi (Iran):** Energy, exergy, exergoeconomic and exergoenvironmental analysis and optimization of quadruple combined solar, biogas, SRC and ORC cycles with methane system		
17:20-18:00	**Scientific Excellene Award Lecture / Chi-Min Shu (Taiwan):** Comprehensive exploration of critical safety issues in lithium-ion batteries via advanced calorimetry approach technique: thermal runaway and fire behavior		
	Terrace of Deák Room		
18.00-20:00	**Welcome Reception**		

Wednesday / 21 June

8:00-8:30	**Registration / Lobby**		
	Deák Room		
8:30-9:10	**Plenary / Michael L. Hobbs (USA):** Modeling delayed thermal runaway in nitric acid-soaked cat litter mixed with radioactive waste		
9:10-9:30	**Silver Sponsor Lecture: Jaroslav Kolejka (Unicam)**		
9:30-10:00	**Coffee Break & Poster Session 1. / Ground Floor Lobby**		
10:00-10:30	**Coffee Break & Poster Session 2. / Ground Floor Lobby**		
	Deák Room	**Club Room**	**Panoráma Room**
	Nanomaterials, Materials science, Metals 1.	**Fuels, Life, Bio, Pharmaceuticals, Geo, Instrumentation 1.**	**Nanofluid, Thermal conductivity, Heat transfer, Exergy, Energy conversion 1.**
	Chair: Kinga Pelichowska (Poland)	**Chair: Jiri Kucerik (Czech Republic)**	**Chair: Rudolf Perischnig (Germany)**
10:30-11:00	**Invited / Liezel van der Merwe (South Africa)**: Thermogravimetry as a research tool during the beneficiation of diamond mine residues	**Invited / Mustafa Versan Kök (Türkiye):** Crude oil characterization: simultaneous TGA-DTA, TGA-FTIR and TGA-MS	**Invited / Omid Mahian (China):** Nanoparticles and energy systems
11:00-11:20	**Hans Flandorfer (Austria):** Self-healing anodes for Li-ion batteries: Phase relations in the systems Li-Zn and Li-Sn-Zn	**Qinzheng Teng (China):** Analysis of potassium release from paper sludge under oxygen rich combustion conditions	**John Shelton (USA):** Experimental study of the rheological behavior of nanofluids containing palmitic acid/silica nanocapsules synthesized by the sol gel method
11:20-11:40	**Dávid Mikšík (Czech Republic):** An investigation of phase behavior in the Co-Se-Sn ternary system using experiments and thermodynamic modeling	**Xiaolin Wei (China):** Optical observation and combustion properties during paper sludge fast heating	**Charlie O'Mahony (Ireland):** Determination of 3-d geometry of buried defects using angled flash thermography
11:40-12:00	**Boris Contri (France):** What if the protection against oxidation of certain chromia-forming alloys was not due to the chromia layer? Example of Inconel®625 oxidation in CO2	**Yesid J. Rueda-Ordóñez (Colombia):** Energy upgrading of the cocoa pod husk through torrefaction - thermal decomposition and kinetic analyses	**Waqar Ahmed (China):** ZnO@GO/DW based binary composite nanofluid for improved energy transmission
12:00-12:20	**Raj Narayan Hajra (South Korea):** Identification of a new phase transformation of C36 → C14 for NbCr2 alloy: an experimental and First Principle calculation study	**Bence Babinszki (Hungary) :** The effect of pyrolysis conditions on yield, thermal behaviour and volatile matter composition of biocarbon products	**Róbert Sánta (Hungary):** Energy analysis of U-type deep borehole ground source heat pump system
12:20-13:30	**Buffet Lunch / Tagore Room Restaurant**		
	Deák Room	**Club Room**	**Panoráma Room**
	Nanomaterials, Materials science, Metals 2.	**Fuels, Bio, Pharmaceuticals, Geo , Calorim, Thermochem, Instrumentation 2.**	**Nanofluid, Thermal conductivity, Heat transfer, Exergy, Energy conversion 2.**
	Chair: Maria Zaharescu (Romania)	**Chair: Titus Vlase (Romania)**	**Chair: Róbert Sánta (Hungary)**
13.30-14:00	**Invited / Dirk Walter (Germany):** "Small dwarfs – high toxic effects"? – Nanoparticles at the workplace and in the environment	**Invited / Zsuzsanna Czégény (Hungary):** Biocarbons produced under pressurized conditions: characterisation of the volatiles	**Invited / Suvanjan Bhattacharyya (India):** Thermohydraulic performance of water in an inclined circular tube fitted with spring tape inserts in transition flow regime
14:00 - 14:20	**Harsha Uskaikar (India):** Thermal and spectroscopic characterization of manganese oxide prepared by different synthesis routes	**Daniel Andrés López (Germany):** Improved deep neural network-driven automatic segmentation of skin's thermal radiation in moving posterior legs during cardiopulmonary exercise testing for time series data analysis	**Rudolf Pietschnig (Germany):** Optimizing working fluids for thermal energy storage systems using open sorption
14:20 - 14:40	**Kinga Pielichowska (Poland):** The effect of magnetic particles on the selected thermal properties of polyurethane-based biomaterials	**Jiri Kucerik (Czech Republic):** Selected applications of thermal analysis in the reseach of microplastics in soil	**Yerzhan Belyayev (Kazakhstan):** Thermal performance analysis of a heat pump assisted regenerative solar still
14:40-15:00	**Jaison Jeevanandam (Portugal):** Thermogravimetry analysis of free and gelatin hydrogel formulated nanocellulose extracted from non-native Arundo donax plant	**Mercedes Pereira Rodríguez (Spain):** Thermogravimetry as a tool to discriminate the susceptibility of different components to fibre release from the same fabric	**Shijie Liu (China):** Evaluation of mechanical vapor recompression system based on twisted oval tube evaporator for treatment of high salinity wastewater
15:00-15:20	**Thomas Dippong (Romania)**: The effect of mono, di and trivalent transition metals doping on the thermal behavior, structure and morphology of NiFe2O4@SiO2	**Edina Szabó (Hungary):** In-depth investigation of thermal behaviour of pharmaceutical amorphous solid dispersions	**Dongsheng Zhu (China):** Research on safe vibration-free modular energy saving technology of high efficiency heat exchanger
15:20-15:40	**Magdalena Sobiesiak (Poland):** Research on the carbonization process of hybrid polymer microspheres using the TGA-EGA method - evaluation of the influence of sulphanilic acid on the process	**Petr Fiurasek (Canada) :** McGill chemistry characterization (MC2) facility	
15:40-16:10	**Coffee Break & Poster Session 3. / Ground Floor Lobby**		
	Deák Room	**Club Room**	**Panoráma Room**
	Ceramics, Cements, Inorganics 1.	**Fuels, Bio, Pharmaceuticals, Geo , Calorim, Thermochem, Instrumentation 3.**	**Nanofluid, Thermal conductivity, Heat transfer, Exergy, Energy conversion 3.**
	Chair: Martin Palou (Slovakia)	**Chair: Ignazio Blanco (Italy)**	**Chair: Stefano Vecchio-Ciprioti (Italy)**
16:10-16:40	**Invited / Petra Sulcová (Czech Republic):** 50th anniversary of the foundation of Czech group for thermal analysis	**Invited / Géza Regdon, jr. (Hungary):** What is a pharmaceutical technologist pharmacist doing among thermoanalysts?	**Invited / Edward Lee-Ruff (Canada):** Strain and strange small ring organic molecules
16:40-17:00	**Sarka Zuzjakova (Czech Republic):** W–Zr thin-film metallic glasses: thermal behavior and evolution of properties	**Rishabh Dwivedi (India):** Experimental investigations on the thermo–mechanical characterization of Jalore granitic rocks for India's HLW disposal	**Ewelina Ksepko (Poland):** Thermogravimetric analysis of oxygen carriers for the application in CLC technology
17:00-17:20	**Justyna Sułowska (Poland):** Effect of melting behavior on the structure of sulfur-bearing glasses for use as a glassy fertilizers	**Mahmoud Reda (Austria)**: Thermochemical properties of tin disulfide	**Samy Yousef (Lithuania):** Gasification of surgical masks waste and its life cycle assessment
17:20-17:40	**Magdalena Szumera (Poland):** Study the influence of Fe, Mo, Mn, and Zn ions on the structure and crystallisation of soil-active glasses	**Lukas Fischer (Austria):** Self-healing anodes for LI-ION batteries: enthalpy of mixing in the liquid system Li-Zn, and Li-Sn-Zn	**Orhan Keklikcioglu (Türkiye):** Thermohydraulic performance and second law efficiency analysis of a heat exchanger tube using a combination of two heat transfer enhancement techniques
17:40-18:00	**Alena Akusevich (Slovakia):** Study of thermal behavior and sintering ability of YAG/Al2O3 glasses	**Nader Ghaffari Khaligh (Malaysia):** 2-cycloalkylsulfanyl-[1,3,4]thiadiazole-5-thiol or 5-Cyclopentylsulfanyl-3H-[1,3,4]thiadiazole-2-thione: Synthesis and Spectroscopic characterization, and single crystal XRD of new monocycle	
18:00-19:00	**JTAC Forum**		

Thursday / 22 June

8:00-8:30	**Registration / Lobby**		
	Deák Room		
8:30-9:10	**Plenary / Qiyuan Xie (China)**: Bridge the thermal analysis and fire safety engineering: new insights and challenges		
9:10-9:30	**Silver Sponsor Lecture: Laurent Zoppi (Mettler Toledo)**		
9:30-10:00	**Coffee Break & Poster Session 4. / Ground Floor Lobby**		
10:00-10:30	**Coffee Break & Poster Session 5. / Ground Floor Lobby**		
	Deák Room	**Club Room**	**Panoráma Room**
	Nanomaterials, Materials science, Metals 3.	**Fuels, Bio, Pharmaceuticals, Geo , Calorim, Thermochem, Instrumentation 4.**	**Polymer, pyrolysis 1.**
	Chair: Veronika Vágvölgyi (Hungary)	**Chair: Juan-Carlos Moreno-Pirajan (Colombia)**	**Chair: Hua Zhang (China)**
10:30-11:00	**Invited / George Kaptay (Hungary):** Paradigm-shift in equilibria of nano-materials and some evidence from calorimetry	**Invited / Éder TG Cavalheiro (Brazil):** Thermoanalytical studies of some antioxidants	**Invited / Giuseppe Lazzara (Italy):** Microwax/halloysite nanotubes composites: a versatile material for conservation of cultural heritage
11:00 -11:20	**Irina M. Petreanu (Romania):** Nanocomposite polyfenyleneoxide with amino-functionalized silica: structural characterization based on thermal analysis	**Jose E. Delgado Liriano (France):** Adiabatic hydrogenation of alkyl levulinates to gamma valerolactone	**Sasan Moradi (Spain):** Fully recyclable vitrimers based on ternary thiol-isocyanate-epoxy dual-curing systems
11:20-11:40	**Eva Cuninková (Slovakia):** Analysis of thermo-physical and mechanical properties of the 3D printing materials applicable for superconducting TORT cables	**Sheng-Wei Liao (Taiwan):** Hazardous characteristics of abs powder: experimental analysis and safety recommendations	**Enrique Blázquez-Blázquez (Spain):** Hybrid mesoporous silica with antioxidants as a feasible approach for improving thermal protection of recycled polyolefins
11:40 -12:00	**Marián Drienovský (Slovakia):** Thermal analysis and oxidation behavior of Al-Co-Fe-Ni-Cu multiprincipal element alloys at high temperature	**Gabe Wood (USA):** Case study: calorimetry used to support scale-up of the hydrolysis of epichlorohydrin	**Olivier Fischer (Canada):** Thermogravimetric analysis and kinetic modeling of the pyrolysis of different biomass types by means of model-fitting, model-free and phenomenological modeling approaches
12:00 -12:20	**Martin Keppert (Czech Republic):** Reactivity of precursors for geopolymerisation studied by isothermal calorimetry	**Kun Fu (China):** Removal of metallic radionuclides from irradiated graphite by chlorination roasting	**Anna Vykydalová (Slovakia):** Thermal properties of PHB/PCL investigated by using DSC and TGA
12:20-12:30	**Group photo**		
12:30-13:30	**Buffet Lunch / Tagore Room Restaurant**		
	Deák Room	**Club Room**	**Panoráma Room**
	Nanomaterials, Materials science, Metals 4.	**Kinetics, Thermal hazard 1.**	**Polymer, pyrolysis 2.**
	Chair: Thomas Dippong (Romania)	**Chair: Gábor Várhegyi (Hungary)**	**Chair: Vianney Andrew Yiga (Sweden)**
13:30-14:00	**Invited / Oana Catalina Mocioiu (Romania):** Zinc oxide: thermal analysis, structure, applications	**Invited / Petru Budrugeac (Romania):** Applicability of model free isothermal prediction procedures based on the Friedman method and three incremental isoconversional methods	**Invited / Krzysztof Pielichowski (Poland):** Thermal characteristics of polyurethane/POSS hybrid materials and nanocomposites
14:00-14:20	**Veronika Vágvölgyi (Hungary)**: Halloysite – Zn-Cu/Zn-Cu/Ti-Ni oxide composite systems as potential photocatalysts	**Feng Zhang (China):** Experimental investigation on the temperature distribution of corrugated steel web box girder with and without encased concrete	**Laura S. Vázquez (Spain):** Evaluation by DSC of the Joule curing process of carbon epoxy composites
14:20-14:40	**Dániel Attila Karaje (Hungary):** Combining ZnO inverse opal and ZnO nanorods using ALD and hydrothermal growth	**Zuzana Cibulkova (Slovakia):** Thermooxidative stability of lignin- and lignosulfonate-filled rubber compounds based on NBR and SBR	**Jana Navratilova (Czech Republic):** Crystallization of long-chain branched polypropylene with nucleating agents
14:40-15:00	**Aatikah Meraj (Malaysia):** Structural, morphological and thermal properties of kenaf microcrystalline cellulose/PBAT films for packaging applications	**Kuan-Chun Chiu (Taiwan):** Study of thermal stability of ionic liquids [PYR14][DCA] in different atmospheres	**Csongor Vámos (Hungary)**: Porous polymer by solvent treatment and controlled crystallization for high solar-reflectivity and passive radiative cooling
15:00-15:20	**Mohammad Jawaid (Malaysia):** Effect of kenaf fibre loading on thermal and dynamic mechanical properties of bioepoxy composites	**Abdelhakim Settar (France)**: Kinetic analysis using isoconversional methods and fitting model of fire retardant coated on banana biocomposite reinforced by silicon carbide	**Agata Paulina Węglarska (Poland):** Aging and degradation processes in polymer coatings of optical fiber cables
15:20-15:40	**György J. Pokol (Hungary):** Thermal and spectroscopical analysis of platinum (II) complexes with glyoximes, schiff bases	**Tibor Dubaj (Slovakia):** Assessing the performance of various incremental isoconversional methods	**Lenka Gajzlerova (Czech Republic):** Morphological evolution of long-chain branched polypropylene under various processing conditions
15:40-16:10	**Coffee Break & Poster Session 6. / Ground Floor Lobby**		
17:30-18:30	Transfer to the Conference Dinner		
18:30-22:00	**Conference Dinner in Hangvilla Restaurant / Veszprém**		
22:00-23:00	Transfer to Danubius Hotel Annabella		

Friday / 23 June

8:00-8:30	**Registration / Lobby**		
	Deák Room		
8:30-9:10	**Plenary / Berta Balla Holló (Serbia):** The role of TG-MS in the characterization of coordination compounds		
9:10-9:30	**Bronze Sponsor Lecture: Ekkehard Füglein (NETZSCH)**		
9:30 - 10:00	**Coffee Break & Poster Session 7. / Ground Floor Lobby**		
10:00 -10:30	**Coffee Break & Poster Session 8. / Ground Floor Lobby**		
	Deák Room	**Club Room**	**Panoráma Room**
	Ceramics, Cements, Inorganics 2.	**Energetic, Fire**	**Polymer, pyrolysis 3.**
	Chair: Magdalena Szumera (Poland)	**Chair: Željko Jaćimović (Montenegro)**	**Chair: Yasser Elhenawy (South Africa)**
10:30-11:00	**Invited / Jan Dusza (Slovakia):** Development of ultra - high temperature high - entropy ceramics	**Invited / László Kótai (Hungary):** Thermal activation of redox-active complexes: solid phase quasi-intramolecular redox reactions as an easy route to prepare nanosized (mixed) metal oxides	**Invited / Sabu Thomas (India):** Engineering at the nanoscale: a strategy for developing high performance functional materials from biopolymers
11:00-11:20	**Arezki Tagnit Hamou (Canada):** Measurement of pozzolans reactivity with the isothermal calorimetry and other methods	**Yang Xiao (China):** Designation of rare-earth based PVC tube associated with fluorescent and its stabilized properties	**István Sándor Czirok (Hungary):** Laboratory scale production and thermal characterization of charcoals from variously tanned leathers
11:20-11:40	**Martin Palou (Slovakia):** Effect of four-component binder on strength and microstructure characteristics of fiber-reinforced self-compacting mortars	**Rafal Lysowski (Poland):** Fe and Cu spinel based materials as potential oxygen carriers for biomass combustion	**Mariusz Wądrzyk (Poland):** Pyrolysis of hydrothermally pretreated carrot pomace – investigation using Py-GC-MS, Py-FT-IR, and TGA techniques
11:40-12:00	**Jana Čepčianska (Slovakia):** Effect of supplementary cementitious materials on the whiteness and hydration heat of white cement	**Kazem Lakzian (Taiwan)** The minimum required flammable component renders an aqueous-organic mixture to be flammable	**Vianney Andrew Yiga (Sweden):** Pyrolysis of alkali modified rice husks: combustion, kinetics and thermodynamic parameters using thermogravimetric analysis
12:00-12:20	**Blanka Kubikova (Slovakia):** Phase equlibrium and phase analysis of molten lanthanide systems	**Guenther Carlos Krieger Filho (Brazil):** Kinetic parameters and heat of reaction for tropical forest fuels	**Branislav Stanković (Serbia):** The kinetics analyses of non-isothermal dehydration of poly(methacrylic acid) hydrogel by application of nucleation model
12:20-13:30	**Buffet Lunch / Tagore Room Restaurant**		
	Deák Room	**Club Room**	**Panoráma Room**
	Nanofluid, Thermal conductivity, Heat transfer, Exergy, Energy conversion 4.	**Kinetics, Thermal hazard 2.**	**Polymer, pyrolysis 4.**
	Chair: Mehrdad Mesgarpour (Thailand)	**Chair: Jo-Ming Tseng (Taiwan)**	**Chair: Olivier Fischer (Canada)**
13:30-14:00	**Invited / Mohammad Ferdows (Bangladesh):** Thermal investigation of hybrid nanoliquid convection across moving surface	**Invited / Peter Simon (Slovakia):** Two interpretations of isoconversional kinetic parameters	**Invited / János Móczó (Hungary):** Crystalline structure and reinforcement in natural fiber reinforced PP composites
14:00-14:20	**Hsin Yu Chi (Taiwan):** Using a GPU-based lattice Boltzmann method to investigate the heat convection of a lithium battery pack	**Mostafa Safdari Shadloo (France):** Modelling the regeneration process in soot filters using iterative lattice Boltzmann method	**Ke Wu (China):** Pyrolysis kinetics and volatile release of hydrothermally aged asphalt
14:20-14:40	**Keng Yinn Wong (Malaysia):** Is thermal-guided mobile air supply a practical measure in burn isolation wards? Potential future applications	**Gábor Várhegyi (Hungary):** Can varying activation energy be determined reliably from thermoanalytical experiments?	**Hua Zhang (China)**: From plastics to carbon materials and methane by pyrolysis under autogenic atmosphere
14:40-15:00	**M. Ziya Sogut (Türkiye):** Low carbon approach with the low-temperature air distrbution in air conditioning applications	**Maciej Kaniewski (Poland):** Thermal decomposition kinetics of ammonium nitrate - the issue that is yet to be fully resolved	**Zoltán Sebestény (Hungary):** Thermal decomposition of PVC and leather mixtures
15:00-15:30	**Coffee Break & Poster Session 9. / Ground Floor Lobby**		
15:30-16:00	**Closing**		

* The organizers reserve the right to make changes in the programme