11th School of Thermal Analysis
SAT'2026

Program

Organizers

Polish Society of Calorimetry and Thermal Analysis
AGH University of Krakow
Faculty of Materials Science and Ceramics
Department of Glass Technology and Amorphous Coatings
Stanisław Staszic Scientific Association

Under auspices of
International Confederation
for Thermal Analysis and Calorimetry (ICTAC)

14 - 17th April 2026
Zakopane

Tuesday, 14 April 2026

15:00 - 18:00	Registration
16:30	Opening of the 11th School of Thermal Analysis (SAT'2026)
16:40	Prof. Krzysztof Pielichowski (Cracow University of Technology, Poland) PTKAT President
16:50	Prof. Luis A. Perez-Maqueda (University of Seville, Spain, ICTAC President) Thermal analysis and calorimetry a consolidated field of science: definitions, applications and personal perspective
18:00	Welcome reception

Wednesday, 15 April 2026

9:00	Dr Agnieszka Łącz (AGH University of Krakow, Poland) Thermal analysis from A to Z: Practical aspects of TG, DTA and DSC measurements
10:00	Prof. Kinga Pielichowska (AGH University of Krakow, Poland) Differential Scanning Calorimetry (DSC) and Modulated Temperature DSC in Laboratory Practice
11:00	*Coffee break*
11:30	Prof. Krzysztof Pielichowski (Cracow University of Technology, Poland) Thermogravimetry (TG) and coupled thermoanalytical techniques in materials characterization
12.30	NETZSCH Instrumenty Sp z o.o. – H. Smogór, H. Orszulak AI-Assisted Automated Quantification for Polymer Recycling Streams
13.00	Spectro-Lab Sp. z o.o. - A. Kunert Unique solutions in materials research using thermal and rheological analysis techniques offered by TA Instruments
13:30	*Lunch*
15:00	Prof. Alfred Kallay-Menyhard (Budapest University of Technology and Economics, Hungary) Writing scientific articles in the field of Thermal Analysis and Calorimetry
16:00	Anton Paar Poland Sp. z o.o. - M. Szwiec Advanced Analytical Solutions for Material Characterization and Quality Control: Julia DSC and Aquatrac
16.15	HAAS sp. z o.o. – R. Tomikowska DSC evaluation of the low-temperature properties of sustainable waste cooking oil bioesters
16:30	*Coffee break*
17:00-18.00	Poster session 1

Thursday, 16 April 2026

9:00	Prof. Kinga Pielichowska (AGH University of Krakow, Poland) Thermal analysis of biomaterials and nanocomposites
10:00	Prof. Marcin Środa (AGH University of Krakow, Poland) Thermomechanical analysis (TMA) in the characterization of amorphous materials
11:00	*Coffee break*
11:30	Dr. Agnieszka Łącz (AGH University of Krakow, Poland) Thermal analysis as a powerful tool in inorganic chemistry
12.30	Poster session 2
13:30	*Lunch*
15:00-17.00	Oral presentations
20:00	*Gala dinner*

Friday, 17 April 2026

9:30	Prof. Marcin Środa (AGH University of Krakow, Poland) Dynamic mechanical analysis (DMA) in materials engineering
10:30	*Coffee break*
11:00	Prof. Andrei Rotaru (Babeş–Bolyai University, Institute of Physical Chemistry-Ilie Murgulescu, CEEC-TAC, Romania) Principles of kinetic analysis based on thermal analysis data
12:00	Closing of the 11th School of Thermal Analysis and awarding of certificates.
12:30	*Lunch*

Lectures

L-1	**Prof. Luis A. Perez-Maqueda** Thermal analysis and calorimetry a consolidated field of science: definitions, applications and personal perspective
L-2	**Dr Agnieszka Łącz** Thermal analysis from A to Z: practical aspects of TG, DTA and DSC measurements
L-3	**Prof. Kinga Pielichowska** Differential scanning calorimetry (DSC) and modulated temperature DSC in laboratory practice
L-4	**Prof. Krzysztof Pielichowski** Thermogravimetry (TG) and coupled thermoanalytical techniques in materials characterization
L-5	**Prof. Alfred Kallay-Menyhard** Writing scientific articles in the field of thermal analysis and calorimetry
L-6	**Prof. Kinga Pielichowska** Thermal analysis of biomaterials and nanocomposites
L-7	**Prof. Marcin Środa** Thermomechanical analysis (TMA) in the characterization of amorphous materials
L-8	**Dr Agnieszka Łącz** Thermal analysis as a powerful tool in inorganic chemistry
L-9	**Prof. Marcin Środa** Dynamic mechanical analysis (DMA) in materials engineering
L-10	**Prof. Andrei Rotaru** Principles of kinetic analysis based on thermal analysis data

Oral presentations

O-1	**M. Cegła*, N. Banacka, P. Prasuła** Investigation of energetic materials with the use of thermal analysis techniques
O-2	**M. Brzeziak*, P. Prasuła** Laboratory evaluation of ignition temperature and kinetic parameters of RDX-based military explosives
O-3	**K. Ciporska*, M. Brykała, M. Chmielewski, M. Stróżyk, K. Suchorab, J. Kim, J. Jagielski** High-temperature stability and oxidation kinetics of Cr and Cr/Al-coated zirconium claddings investigated by thermal analysis methods
O-4	**K. Kaszyca*, B. Bucholc, K. Krzyżak, G. Kuderski, K. Kowiorski, A. Jagiełło-Bosiek, M. Borysiewicz, M. Chmielewski, R. Zybała** Properties of sintered NiAl and copper materials as experimental data for modelling purposes
O-5	**M. Kędzierski*, M. Przybysz-Romatowska, A. Szadkowska, J. Trzaskowska** Study of the influence of inorganic carriers on the thermal properties of natural substances used as polymer modifiers
O-6	**E. Szczepanik*, K. Pielichowska** Thermal analysis of the water states in hydrogel composites modified with sheep wool for agricultural applications

Sponsor presentations

S-1	**NETZSCH Instrumenty Sp z o.o. – H. Smogór, H. Orszulak** AI-assisted automated quantification for polymer recycling streams
S-2	**Spectro-Lab Sp. z o.o. - A. Kunert** Unique solutions in materials research using thermal and rheological analysis techniques offered by TA Instruments
S-3	**Anton Paar Poland Sp. z o.o. - M. Szwiec** Advanced analytical solutions for material characterization and quality control: Julia DSC and Aquatrac
S-4	**HAAS sp. z o.o. – R. Tomikowska** DSC evaluation of the low-temperature properties of sustainable waste cooking oil bioesters

Posters

Poster session 1

P1-1	**D. Adamczyk*, E. Augustynowicz, K. Pielichowska** Effect of MXene and sheep milk on the thermal properties and biomedical potential of GelMA-based hydrogels
P1-2	**D. Adamczyk***, **P. Szatkowski, K. Pielichowska** Thermal and mechanical characterization of PVA-based hydrogels: Effect of polymer chain length and crosslinking ratio
P1-3	**J. Aniśko-Michalak*, M. Barczewski** Influence of the antioxidant properties of various types of tea on resistance to oxidation determined using calorimetric methods
P1-4	**E. Bator*, L. Bieniasz, K. Wróblewski, Z. Bober, Ł. Ożóg, Ż. Szymaszek, K. Maternia-Dudzik, K. Buba, A. Grużewska, O. Herdzik, D. Źrebiec, W. Gonciarz, A. Czerniecka-Kubicka** Extended-release capsule with cytisine as a drug used in the nicotine addiction treatment. Thermal and biological studies
P1-5	**L. Bieniasz*, K. Wróblewski, Z. Bober, Ł. Ożóg, Ż. Szymaszek, E. Bator, K. Maternia-Dudzik, K. Buba, A. Grużewska, O. Herdzik, D. Źrebiec, K. Rafińska, W. Gonciarz, R. Androsch, M. Pyda, A. Czerniecka-Kubicka** Development of an extended-release formulation of cytisine, a drug used in the nicotine addiction treatment. thermal analysis, stability, biological and structure effects
P1-6	**Z. Bober*, K. Maternia-Dudzik, Ł. Ożóg, L. Bieniasz, Ż. Szymaszek, E. Bator, A. Kamizela, A. Szyszkowska, W. Gonciarz, K. Gancarczyk, A. Czerniecka-Kubicka** Tracking the progress of biocomposites based on poly(3-hydroxybutyrate) with hypromellose additives via thermal analysis, mechanical properties, and biological studies
P1-7	**M. Kędzierski*, K. Pielichowska** Thermal characteristics of kraft lignin and biorefinery lignin in the context of their application in biodegradable composites
P1-8	**B. Macherzyńska*, A. Pitera, K. Nowicka-Dunal, K. Pielichowska** Evaluation of the carbonization process of citrus biomass using thermogravimetric analysis
P1-9	**A. Magiera*, M. Kuźnia, R. Stanik, M. Gude** Thermal properties of rigid polyurethane foams modified with waste biomass and combustion ash
P1-10	**D. Matykiewicz*, B. Dudziec** Evaluation of the cross-linking and post-curing process of eugenol-based epoxy resin

P1-11	**R. Gąsiorowski, D. Matykiewicz*, D. Janiszewska-Latterini** Thermal stability analysis of plasticized and nonplasticized lignocellulosic materials from sorghum bicolor across morphological plant fractions and growth stages
P1-12	**K. Nowicka-Dunal*, O. Karpacz, K. Pielichowska** The carbonization temperature effect on the properties of pomelo biomass-derived carbon aerogels
P1-13	**Ł. Ożóg*, K. Maternia-Dudzik, Z. Bober, L. Bieniasz, Ż. Szymaszek, E. Bator, A. Kamizela, A. Szyszkowska, W. Gonciarz, K. Gancarczyk, A. Czerniecka-Kubicka** Improving poly(3-hydroxybutyrate) properties using nanocellulose in biomedical applications: thermal, mechanical and biological studies
P1-14	**E. Szczepanik*, E. Molik, K. Pielichowska** Analysis of the degradation rate of polymer matrix in composites containing animal fibre
P1-15	**Ż. Szymaszek*, Z. Bober, Ł. Ożóg, L. Bieniasz, E. Bator, M. Skotnicki, W. Gonciarz, B. Jadach, L. Lovecká, K. Maternia-Dudzik, M. Kovářová, M. Pyda, V. Sedlařík, A. Czerniecka-Kubicka** The cytisine-enriched poly(3-hydroxybutyrate) fibers for sustained-release dosage form. Thermal, structure, and biological studies
P1-16	**A. Zawierucha*, P. Rybiński, A. Głowacki** Characterization and thermal properties of chitosan films modified with poly(vinyl alcohol) (PVA)

Poster session 2

P2-1	**N. Banacka*, M. Cegła** Evaluation of the thermomechanical properties of a homogeneous rocket propellant by DMA and TMA methods
P2-2	**M. Bytniewska, M. Barczak*,** Hydrothermal synthesis of nanoporous carbon-sulfur composites: thermogravimetric determination of sulfur content and pore allocation
P2-3	**A. Głowacki*, A. Zawierucha, P. Rybiński** Influence of carbon fillers and melamine polyphosphate synergy on the thermal stability and fire response of flexible PUR foams
P2-4	**I. Grelowska*, M. Reben, B. Burtan-Gwizdał** Effect of fluorine incorporation on thermal properties of niobium tellurite glasses
P2-5	**S. Jurczyk*, B. Chmielnicki, M. Sobota, P. Chaber** The properties of self-reinforced composites of selected polyhydroxyalkanoates
P2-6	**Ł. Kolek*, T. Rozwadowski, K. Dychtoń** Phase sequence and kinetics of melt and cold crystallization in 4FO5OPFEPEBiEC8S smectic liquid crystal

P2-7	**B. Macherzyńska*, J. Pakosz** Application of thermal analysis methods to hair research
P2-8	**A. Matusiak*, E. Zawadzka, A. Wypiór, H. Brzeziński, U. Świtała** The impact of a secondary composite raw material on the thermal properties and thermal resistance of an epoxy composite
P2-9	**D. Modzelewski*, P. Prasuła, M. Brzeziak, T. Gołofit** Influence of ammonium perchlorate on the thermal decomposition of TNT/TEX aluminized explosive compositions
P2-10	**Sz. Świontek, A. Mrozik, M. Środa*** Radiophotoluminescence of silver-doped sodium aluminophosphate glasses in the UV range
P2-11	**Sz. Świontek, K. Wiśniewski, M. Środa*** Thermal and luminescence properties of Sm^{3+}-doped barium fluoroborate glass for red-orange fiber laser applications
P2-12	**A. Krupińska, M. Ochowiak, R. Tomikowska*, R. Tomikowski, A. Tomikowski, S. Włodarczak** Investigation of thermal conductivity of gypsum composites modified with coffee grounds using transient hot bridge THB
P2-13	**A. Wypiór*, A. Matusiak, E. Zawadzka, H. Brzeziński, U. Świtała** Thermal analysis methods in the evaluation of flame retardants in polymeric materials
P2-14	**P. Zając*, A. Bukowczan, K. Pielichowski** Thermal analysis of non-isocyanate polyurethanes