Events

HUNGARIAN SYMPOSIUM ON THERMAL ANALYSIS

National Symposium with international participation
Budapest, June 10–12, 1981, Hungary
Organized by the Thermoanalytical Group of the Hungarian Chemical Society

PLENARY LECTURES

The application of thermoanalytical methods in the investigation of biological substances
M. BIHARI-VARGA
(2nd Department of Pathology, Semmelweis Medical University, Budapest 1450, Üllői út 93, Hungary)

The application of improved DTA methods in mineralogy
W. SMYKATZ-KLOSS
(Mineralogisches Institut der Universität, 7500 Karlsruhe 1, P. O. Box 6380, FRG)

LECTURES

Thermoanalytical investigation of alcoholysis of triethylaluminium
H. ANDERSON and U. HOFFMANN
(Department of Chemistry, E. M. Arndt University, GDR-2200 Greifswald, Soldtmann Str. 23, GDR)

The mode of action of phosphorus- and halogen-based flame retardants
B. ANDROSITS, T. KOZMA* and J. SIMON
(Institute for General and Analytical Chemistry of the Technical University, H-1521 Budapest, Hungary
* Hungarian Electric Work Trust, Hungary)

Methods of thermal analysis in the study of the thermal dissociation of basic aluminium potassium sulfate in reducing atmospheres
B. ANDRUSZKIEWICZ, B. PACEWSKA and J. PYSIAK
(Institute of Chemistry, Plock Branch of Warsaw Technical University, Lukasiewicza 17, 09-400 Plock, Poland)

Contradictions in kinetic calculation using the Arrhenius model
M. ARNOLD, G. VERESS, J. PAULIK and F. PAULIK
(Institute for General and Analytical Chemistry, Technical University, H-1521 Budapest, Hungary)

An adiabatic calorimeter for phase equilibrium studies
Application to the system $H_2O-ZnNO_3$
J. BERTHET, J. J. COUNIOUX and R. COHEN-ADAD
(Université Claude Bernard Lyon I, Physico-Chimie minérale II. Villeurbanne Cédex, France)

TG study on the chlorination reactions of Fe_2O_3
I. BERTÓTI, A. TÓTH, I. S. PAP and T. SZÉKELY
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary)

Investigation of polyolefine stability with derivatograph
O. BIRÓ, J. VARGA, I. SZŐLLŐSI and J. KUCSMA*
(Technical University of Budapest, Department of Plastics and Rubber H-1521 Budapest, Hungary,
* Tisza Chemical Works (TVK) H-3581 Leninváros, Hungary)

Thermoanalytical study of cyclic timoleptics by TAS method
J. BOLDVAI and M. GÖTZ
(National Institute of Pharmacy, H-1051 Budapest V. Zrínyi u. 3., Hungary)

Thermogravimetric detection of existence of copolymers with mesomorphic structure
A. CHERNEVA,* Z. ADONYI,** F. CSER,*** GY. HARDY***
(* Institute of Chemical Technology, Sofia, Bulgaria
** Technical University of Budapest, Hungary
*** Research Institute of Plastics, Budapest, Hungary)

Kinetograph for the direct and continuous transformation of thermogravimetric data to Arrhenius-like plot
P. K. DÁVID, L. LIGETHY,* E. ZELENYÁNSZKI, S. GÁL** and GY. LIPTAY**
(Research Institute of the Electrical Industry H-1601 Budapest/Rákospalota 1, POB 45, Hungary
* Hungarian Cable Works, H-1523 Budapest, POB 13, Hungary
** Technical University, H-1521 Budapest, Gellért tér 4. Hungary)

Alumina plant experiences on thermometric titrimetry of sodium aluminate solutions
I. FEHÉR
(ALUTERV-FKI Research, Engineering and Prime Contracting Centre of the Hungarian Aluminium Corporation, H-1389 Budapest, P. O. Box 128, Hungary)

Influence of the isolation and purification steps on the thermal behaviour of chitin
I. GARCIA ALONSO, D. OVIEDO VEGA and R. D. HENRIQUES
(Institute of Chemistry and Experimental Biology, Science Academy of Cuba, 26 Ave. No. 1605 Havana City, Cuba)

Application of thermal analysis for investigation of the kinetics of thermal dissociation of solids
A. GLINKA, B. PACEWSKA, B. CYBULSKA and J. PYSIAK
(Institute of Chemistry, Plock Branch of Warsaw Technical University, Lukasiewicza 17, 09-400 Plock, Poland)

Investigation of the stages of thermal dissociation of solids by the methods of thermal analysis
A. GLINKA, B. PACEWSKA, B. CYBULSKA and J. PYSIAK
(Institute of Chemistry, Plock Branch of Warsaw Technical University, Lukasiewicza 17, 09-400 Plock, Poland)

The significance of thermoanalytical methods in the study of the effects of different compounds modifying the lipid structure of biological and model membranes
S. GYÖRGYI, M. SZŐGYI and F. TÖLGYESI
(Institute of Biophysics, Semmelweis Medical University H-1444 Budapest, P. O. Box 263, Hungary)

Some fields of application of thermal analysis in the pulp and paper industry
S. HERNÁDI and J. PAPP
(Hungarian Paper Research Institute, 1215 Budapest, Duna u. 57, Hungary)

Thermoanalytical investigations on cellulose aging
F. HEVESI TÓTH, GY. POKOL,* É. BUZÁGH-GERE,* S. GÁL* and J. GYÖRE
(Ministry of the Interior, Budapest, Hungary,
* Institute for General and Analytica Chemistry Technical University, Budapest, H-1521 Hungary)

DTA examination of the AlSi12.5 alloy containing Sr
L. KERTÉSZ and J. HAJDU
(Institute of Solid-State Physics, L. Eötvös University, Budapest, Hungary)

The determination of temperature by DTA in SXES
L. KERTÉSZ and A. SZÁSZ
(Institute for Solid-State Physics, L. Eötvös University, Budapest, Hungary)

Investigation of the metastable states of AlMgSi alloys by DTA and SXES
L. KERTÉSZ and A. SZÁSZ
(Institute for Solid-State Physics, L. Eötvös University, Budapest, Hungary)

Investigation of chemical processes associated to heating of Fe_2O_3/NH_4Cl mixtures
É. KOCSÁRDY and K. PAPP
(ALUTERV-FKI Research, Engineering and Prime Contracting Centre of the Hungarian Aluminium Corporation, H-1389 Budapest, P. O. B. 128, Hungary)

Thermoanalytical investigations on cyclodextrin inclusion compounds II.
J. KŐMIVES, J. SZTATISZ, S. GÁL and J. SZEJTLI*
(Institute for General and Analytical Chemistry, Technical University, H-1521 Budapest, Hungary
* Chinoin Biochemical Research Laboratory, Budapest, Hungary)

Thermal behaviour of 2,3-benzodiazepines
I. KONKOLY THEGE, L. LADÁNYI,* I. SIMONYI* and GY. ZALAVÁRI*
(Institute of Inorganic and Analytical Chemistry L. Eötvös University, H-1443 Budapest, P. O. Box 123, Hungary
* EGYT Pharmaceutical Works, Budapest, Hungary)

Thermoanalytical studies on propagation of combustion processes and activity of flame retardants
M. KOŠIK, V. REISER and A. BLAŽEJ
(Chemical Faculty of Slovak Technical University 880 37 Bratislava, Jànska 1. Czechoslovakia)

Application of continuous and selective water detector in thermoanalytical investigations
J. KRISTÓF, J. INCZÉDY, J. PAULIK* and F. PAULIK*
(Institute for Analytical Chemistry, University of Chemical Engineering, H-8201 Veszprém, P. O. Box 28, Hungary
* Institute for General and Analytical Chemistry, Technical, University, H-1521 Budapest, Hungary)

Thermogravimetric investigation on $AlCl_3$-hydrolysis at room temperature
J. KÜRTHY-KOMLÓSI and P. NAGY
(ALUTERV-FKI, H-1389 Budapest, P. O. Box 128, Hungary)

DTA study of interaction in the system Si_3N_4-TiN
S. N. LAKIZA and N. P. TELNIKOVA
(Institute for Problems of Materials Science Krzizanovskogo, 3, Kiev-180, 252180, USSR)

Thermal decomposition of transition metal carboxylates
V. B. LAZAREV, V. P. KOMAROV and I. S. SHAPLYGIN
(Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences, Leninsky Prosp. 31 Moscow 117071, USSR)

Thermogravimetric investigation of the kinetics of structure relaxation of amorphous silica
V. B. LAZAREV, G. P. PANASYUK, G. P. BUDOVA and I. L. VOROSHILOV
(Kurnakov Institute of General and Inorganic Chemistry of the Academy of Sciences of the USSR, 117071, Moscow, USSR)

Phase formation during solidification in Al–Fe alloys
A. LENDVAI
(ALUTERV-FKI, Research, Engeneering and Prime Contracting Centre of the Hungarian Aluminium Corporation, H-1389 Budapest, P.O. Box 128, Hungary)

A new differential scanning calorimeter for polymers studies and quality control
P. LE PARLOUER
(SETARAM, 101–103 Rue de Sèze F 69006 Lyon, France

Thermal investigation of polyolefine insulating materials used in high voltage technique
G. LIPTAY, L. LIGETHY* and E. PETRIK-BRANDT
(Technical University Budapest, Institute for Inorganic Chemistry, H-1521 Budapest, Gellért tér 4. Hungary
* Hungarian Cable Works, H-1117 Budapest, Budafoki út 60, Hungary)

Thermal investigation to glass-forming-tendency and crystallization behaviour of amorphous germaniumchalcogenides
W. LUDWIG and B. VOIGT
(Department of Chemistry, Friedrich-Schiller-University Steiger 3, 6900 Jena, GDR)

Determination of urea and other components in urine by the DIE method
P. MARIK-KORDA
(Institute for General and Analytical Chemistry, Technical University, 1521 Budapest, Hungary)

Thermal study of polyurethanes containing phosphorus and chlorine
K. MARKOVA,* K. TROEV, CH. BECHEV** and G. BORISOV
(* Higher Institute of Chemical Technology, Burgas, Bulgaria
** Higher Institute of Chemical Technology, Sofia, Bulgaria Central Laboratory of Polymers, Bulgarian Academy of Sciences, Bulgaria)

An investigation into the crystallization and melting behaviour of polyethylene by DSC: influence of chain length and chain branching
V. B. F. MATHOT and M. F. J. PIJPERS
(DSM, Central Laboratories, P. O. Box 18, 6160 MD Geleen, The Netherlands)

Mass spectrometric investigation of thermal decomposition of fatty acid thallium salts
T. MEISEL, I. LÁNYI and A. GERGELY
(Institute for General and Analytical Chemistry, Technical University of Budapest, H-1521 Budapest, Hungary)

Kinetic study of the chlorination of vanadium pentoxide by carbon tetrachlorid
GY. MINK, A. BORBÉLY, I. S. PAP, B. PÖDÖR, I. BERTÓTI and T. SZÉKELY
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1521 Budapest, P. O. Box 132, Hungary)

Thermogravimetric investigation of modificated polyethylene terephtalate
W. MINTCHEVA, S. VOYNOVA, A. CHERNEVA and P. PETROV
(Institute of Chemical Technology, Sofia, Bulgaria)

Thermal stability of some N-2-cyanoethylated polyurethanes
D. MUNTEANU, N. LUCACUI, I. NANU* and R. PAPE
(Institute of Chemical Research, Plastics Research Center, Laboratory "Solventul" — Petrochemical Works "Solventul", Spl. N. Titulescu, Timisoara 1800 Rumania
* Polytechnical Institute "Traian Vuia" Timisoara, Rumania)

Thermogravimetric investigation of the Maillard reaction
F. ÖRSI
(Institute of Biochemistry and Food Technology, Technical University of Budapest, H-1521 Budapest, P. O. Box 92, Hungary)

Regularities in the thermal dissociation of basic aluminium salts
B. PACEWSKA, A. GLINKA, B. CYBULSKA, ST. MICHALOWSKI* and J. PYSIAK
(Institute of Chemistry, Plock Branch of Warsaw Technical University 09-400 Plock, Poland
* Institute of Industrial Chemistry, Warsaw, Poland)

The influence of the diffusional processes on the reaction between γ-alumina and carbon tetrachloride
I. S. PAP and I. BERTÓTI
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary)

Mass-spectrometric investigation of thermal decomposition processes occurring during chlorination of metal oxides
B. PŐDÖR and I. BERTÓTI
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary)

The gibbsite-boehmite transformation under hydrothermal conditions
GY. POKOL, K. TOMOR and S. GÁL
(Institute for General and Analytical Chemistry, Technical University, H-1521 Budapest, Hungary)

Thermoanalytical study of ternary system $(NH_4)_2SO_4-NH_4HSO_4-NH_4NO_3$
S. POTËMIN* and I. KONKOLY THEGE
(* Institute of Chemistry, Leningrad State University, 199164 Leningrad, Universitetskaya em. 7/9, USSR,
Institute of Inorganic and Analytical Chemistry, L. Eötvös University, H-1443 Budapest, P. O. Box 123, Hungary)

Thermoanalytical and thermogastitrimetric investigation on the oil shale
K. REISZ and J. INCZÉDY
(Institute for Analytical Chemistry, University of Chemical Engineering, 8201 Veszprém, P. O. Box 28, Hungary)

TG investigation of the heat treatment effect on the chlorination reactivity of γ-Al_2O_3
ZS. RÓDER, I. BERTÓTI and A. IMRE*
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary
* Research, Engineering and Prime Contracting Centre of the Hungarian Aluminium Corporation, H-1389 Budapest, P. O. Box 128, Hungary)

Application of oxide ceramics in thermal analysis
J. ROSICKÝ
(Institute of Inorganic Chemistry, Faculty of Natural Sciences, Charles University, 128 40 Prague 2, Czechoslovakia)

Standard reactions for calibrating thermometric instruments
I. SAJÓ
(Research Institute for Ferrous Metallurgy, Department of Metallurgical Chemistry, H-1509 Budapest, P. O. Box 14, Hungary)

Kinetics of the thermal degradation of polyimides
YU. N. SAZANOV
(Institute of Macromolecular Compounds of the Academy of Sciences of the USSR, Leningrad, USSR)

Thermal analysis by EMP measurements on solid electrolytes
H.-J. SEIFERT and G. THIEL
(Institute of Inorganic Chemistry, University Gh Kassel, D 3500 Kassel, Heinrich-Plett-Str. 40, FRG)

Thermometric analysis of glazes and frits used in the ceramic industry
B. SIPOS and I. SAJÓ
(Research Institute for Ferrous Metallurgy, Department of Metallurgical Chemistry, H-1509 Budapest, P. O. Box 14, Hungary)

Thermogravimetric investigations on sideritic-pyritic bauxites
K. SOLYMÁR and S. KENYERES
(ALUTERV-FKI Research, Engineering and Prime Contracting Centre of the Hungarian Aluminium Corporation, H-1389 Budapest, P. O. Box 128, Hungary)

The compensation effect in flame retarded polypropylene
I. ŠPILDA, J. RÝCHLY,* M. KOŠIK, K. BALOGH** and A. BLAŽEJ
(Slovak Technical University, Dept. Chemistry, 880 37 Bratislava, Czechoslovakia
* Polymers Institute of Slovak Academy of Science Dubravskà cesta 809 34 Bratislava, Czechoslovakia
** Fire Technical Station, Rožňavskà 11, 818 00 Bratislava, Czechoslovakia)

Investigation of the chemisorption of propylene on zinc oxide by temperature programmed desorption
R. SPINICCI
(Institute of Applied Chemistry, Via S. Marta 3 — 50139 Firenze, Italy)

Thermal behaviour of lignin modified by chlorophosphazenes
H. STRUSZCZYK
(Institute of Man-made Fibers, Technical University of Lodz, 90-924 Lodz, 36 Zwirko Str., Poland)

Thermotropic multiple phase transitions in rat adrenocortical lipids
D. SZABÓ, J. SZABON* and J. SOMOGYI
(Institute of Experimental Medicine, Hungarian Academy of Sciences, H-1450 Budapest, P. O. Box 67, Hungary
* Central Research Institute for Physics of the Hungarian Academy of Sciences, H-1525 Budapest, P. O. Box 49, Hungary)

Polymesomorph transformations of single and multicomponent liquid crystalline systems: supercooling
J. SZABON
(Central Research Institute for Physics of the Hungarian Academy of Sciences, H-1525 Budapest, P. O. Box 49, Hungary)

Smectic liquid crystal phase induction and inhibition
J. SZABON
(Central Research Institute for Physics of the Hungarian Academy of Sciences, H-1525 Budapest, P. O. Box 49, Hungary)

Automation of the thermometric analysis of ferroalloys
G. SZEGEDI and I. SAJÓ
(Research Institute for Ferrous Metallurgy, Department of Metallurgical Chemistry, H-1509 Budapest, P. O. Box 14, Hungary)

Investigation of fluorine-transport reactions by TG-MS method
T. SZÉKELY, F. TILL and B. LŐCSEI*
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary
* Research Institute of the Glassindustrial Works, H-1119 Budapest, Fehérvári út 71—73, Hungary)

Distribution of calcite and dolomite in soils, determined by thermogravimetry
G. SZENDREI
(Research Institute for Soil Science and Agricultural Chemistry of the Hungarian Academy of Sciences, H-1022 Budapest, Herman Ottó u. 15, Hungary)

Use of thermal analysis for investigation of various crystalline zirconium phosphate forms
L. SZIRTES, Z. POKÓ,* J. KÖRNYEI
(Institute of Isotopes of the Hungarian Academy of Sciences, H-1525 Budapest, P.O.Box 77, Hungary
* Central Research Institute for Physics of the Hungarian Academy of Sciences, H-1525 Budapest, P. O. Box 49, Hungary)

Thermal and thermal oxidation properties of isocyanate polymers
I. SZŐLLŐSI, F. FARKAS* and KELEMEN A. HALLER*
(Technical University of Budapest, Department of Plastics and Rubber, H-1521 Budapest, Hungary
* Graboplast, Research Department, H-9023 Győr, Fehérvári u. 16, Hungary)

Age determination of quaternary and pliocene terrestrial strata in Hungary by a thermoanalytical method
GY. SZÖŐR
(Chair of Mineralogy and Geology, L. Kossuth University H-4010 Debrecen, P. O. Box 4, Hungary)

Thermoanalytical measurements on model membranes modified with nonionic surfactants
F. TÖLGYESI, M. SZŐGYI and S. GYÖRGYI
(Institute of Biophysics, Semmelweis Medical University H-1444 Budapest, P. O. Box 263, Hungary)

Studies on the reaction of zinc oxide and ammonium chloride
K. TOMOR, GY. POKOL and S. GÁL
(Institute for General and Analytical Chemistry, Technical University, H-1521 Budapest, Hungary)

TG investigation on the γ-alumina chlorination: comparative study by $COCl_2$ and $CO + Cl_2$
A. TÓTH, I. BERTÓTI, T. SZÉKELY and I. S. PAP
(Research Laboratory for Inorganic Chemistry of the Hungarian Academy of Sciences, H-1502 Budapest, P. O. Box 132, Hungary)

Thermoanalytical test for the detection of danger situations in the production, handling and storage of spontaneously inflammable materials
I. TÓTH, GY. IVÁNYI and J. DUKAI
(Institute for Safety in Chemical and Explosive Industry, Budapest, Hungary)

Determination of N-phenylhydroxylamine by the "TET" method on the basis of a nitrosation reaction
F. TRISCHLER
(Chemical Works of Gedeon Richter Ltd., H-1575, Gyömrői út 19—21, Budapest, Hungary)

A computer-controlled dithermanal instrument for the automatic determination of the heat of combustion of coals
J. UJVÁRY and I. SAJÓ
(Research Institute for Ferrous Metallurgy, Department of Metallurgical Chemistry, H-1509 Budapest, P. O. Box 14, Hungary)

Crystallization and melting of nucleated polypropylene
J. VARGA, J. MENCZEL, A. SOLTI and K. BELINA
(Technical University of Budapest, Department of Plastics and Rubber H-1521 Budapest, Hungary)

Software for a thermobalance — mass spectrometer system
G. VÁRHEGYI and F. TILL
(Hungarian Academy of Sciences, Research Laboratory for Inorganic Chemistry, Budaőrsi út 45, Budapest, 1112, Hungary)

Anticipation of texture of zlloys studied by thermal analysis. Aluminium — zinc — tin ternary phase diagram
D. VINCENT and A. SEBAOUN
(Laboratoire des Physico-Chimie minérale II, associé au CNRS n° 116, Université Claude Bernard Lyon I, 43, Boulevard du Onze Novembre 1918, 69622 Villeurbanne Cédex, France)

Thermogravimetric study of the dehydration process of $Ca(NO_3)_2 \cdot CO(NH_2)_2 \cdot 3\,H_2O$ under quasi isothermal — quasi isobaric conditions
K. WIECZOREK-CIUROWA, I. PIECHOCIŃSKA, F. PAULIK* and J. PAULIK*
(Institute of Inorganic Chemistry and Technology, Technical University of Cracow, 31—155 Cracow, Poland
* Institute for General and Analytical Chemistry, Technical University, H-1521 Budapest, Hungary)

The influence of the sulphur on oxidation of polypropylene containing flame retardant agents
E. WIESNER, R. ŠIMO, J. POSPIŠIL* and J. KOVÁŘOVÁ*
(Research Institute of Chemical Fibres, 059 12 Svit, ČSSR
* Institute of Macromolecular Chemistry, Czechoslovak Academy of Science, 162 06 Prague 6, ČSSR)

Investigation of solid state transformation kinetics
L. GRÁNÁSY, T. KEMÉNY and B. FOGARASSY
(Central Research Institute for Physics, Budapest, P. O. Box 49, H-1525, Hungary)

Thermal analysis instrumentation — some thoughts for today
J. P. REDFERN
(Stanton Redcroft Limited, Copper Mill Lane, London S. W. 17.OBN, UK)

Automation in thermal analysis
H. G. WIEDEMANN
(Mettler Instrumente AG, CH-8606 Greifensee, Switzerland)

Accelerating rate calorimetry
R. F. BURLINSON
(Columbia Scientific Corp. U. K.)

Determination of the heats of decompositions by drop calorimetry
R. NAUMANN and D. PETZOLD
(Mining Academy, Dept. of Chemistry, Freiberg, GDR)

The impact of microprocessors on thermal analysis applications
Thermal analysis of composite materials
P. BURROUGHS
(Du Pont Sci. Inst. U. K.)

Origin of the hydrogen detectable by TPD on nickel skeleton catalysts
S. BÉKÁSSY and J. HEISZMAN
(Department of Organic Chemical Technology Technical University, Budapest, Hungary)

11TH NATAS, 1981

The NATAS (North American Thermal Analysis Society) held the 11th meeting in New Orleans, LA, October 18th–21th, 1981.

The following papers were presented:

Mettler Award Address

Non-isothermal kinetics and their application to thermal analysis
TAKEO OZAWA
(Electrochemical Laboratory, Ibaraki, Japan)

Symposium on the application of thermal analysis to energy research

Special lecture on direction of energy research and thermal analysis
S. MARKS
(Univ. Delaware)

Characterization of radiation crosslinked high density polyethylene for thermal energy storage modifications
R. B. WITAKERS, S. M. CRAVEN, D. E. ETTER, E. F. JENDREK
(The Mound Facility, Monsanto)

Solid-solid phase transformation in binary alloys of pentaerythritol and homologous compounds
D. BENSON, R. BURROW, D. ARTUS
(Solar Energy Res. Inst.)

The use of solid state transitions for thermal energy storage
A. J. LEFFLER, J. MYERS, D. WEINSTEIN
(Villanova Univ.)

Thermal characterization of lithium aluminate alkali carbonate electrolyte structures
G. K. KUCERA
(Argonne National Laboratories)

The application of thermal analysis techniques in the recovery of energy and chrome from tannery wastes by pyrolysis
H. S. MURALIDHARA, R. NEWELL
(System Consultants, Inc.)

Enthalpy of distillate fuels by DSC
J. ZIMMERMANN
(U.S. Naval Academy)

High pressure DSC study of refuse derived fuels
WING TSANG, J. A. WALKER
(NBS)

Thermal Analysis of melting and freezing of jet and diesel fuels
C. MOYNIHAN
(Catholic University)

Kinetics and mechanism of the thermal decomposition of green river oil shale kerogen
K. RAJESHWAR
(Colorado State University)

Thermal studies of carbohydrate gasification
K. S. GREGORSKI, A. E. PARLATH
(USDA)

Thermal analysis of coal and peat components
R. AMEY, C. D. WEST
(Occidental College)

Calorific value of fossil fuels and biomass by pressure differential scanning calorimetry
L. C. HOVSEPIAN, B. K. HOVSEPIAN
(E. I. Du Pont Co.)

Symposium on chemical and physical effects of water in polymers

The nature of bound water in polymers
S. P. ROWLAND
(Southern Regional Research Center)

Differentiation of bound versus free water in a polymer by DSC
H. E. BAIR
(Bell Labs.)

Water induced plasticization of epoxy resins
P. MOY,* F. E. KARASZ**
(* Ethicon, ** U. of Mass.)

Hydrolysis of PC: Correlating chemical and physical factors
C. A. PRYDE
(Bell Labs.)

Hydrolitic stability of polycarbonate and poly(butylene terephthalate)
P. G. KELLEHER, C. A. PRYDE, H. E. BAIR and M. Y. HELLMAN
(Bell Labs.)

Aging of poly (1,4-butylene terephthalate) products at elevated temperature and high relative humidity
W. F. BORMAN
(General Electric Co.)

Thermal transitions and physical aging in gelatin
A. S. MARSHALL and S. E. B. PETRIE
(Eastman Kodak Co.)

Effect of water on curing of epoxy systems
J. THUEN
(Narmco Materials)

The effect of water on the flexural modulus of glass reinforced polyester composites
D. L. DURAND, T. N. GROGEAN and H. E. BAIR
(Bell Labs.)

Disribution of volatile compounds and polymeric materials
M. A. GRAYSON, C. J. WOLF
(McDonald Douglas Corporation)

Symposium on the glass transition of polymers

Special lecture on the relation between the liquid and glassy states
R. SIMHA
(Case Western Reserve University)

The composition-dependent glass-transition
P. E. COUCHMAN
(Rutgers State University)

Non-symmetric broadening of the glass transition in multiphase polymers
U. GAUR
(RPI)

Statistical mechanical theories of the glass transition — a fresh approach
R. P. KUSY and A. R. GRENNBERG
(University of North Carolina)

The influence of thermal properties on the glass transition temperature of network polymer/diluent systems
T. S. ELLIS and F. E. KARASZ
(Univ. of Mass.)

The glass transition: What's the point?
M. B. ROLLER
(Mobil Chemical Company)

Enthalpy recovery in pressure vitrified and mechanically stressed polymeric glasses
W. M. PREST, JR.
(Xerox)

Calorimetric studies and spontaneous thermal effects in poly(chlorotrifluoroethylene)
C. S. CHANG
(NBS)

Determination of the glass transition of polymer by the auto vibron
T. MURAYAMA
(Monsanto)

Glass transition observation on poly(bisphenol-a-carbonate)/4-dodecyloxy-2-hydroxy-benzophenone blends
A. R. SHULTZ, J. A. GROETSCH III, R. E. DESSY, A. L. YOUNG, K. K. WEBB and D. R. OLSON
(General Electric)

The glass transition temperature of compatible polymer blends through hydrogen bonding
B. Y. MIN and E. M. PEARCE
(Polytechnic of New York)

Characterization of an epoxy-glars prepreg using various thermoanalytical techniques
P. S. GILL and P. F. LEVY
(E. I. Du Pont Co.)

Non-equilibrium behaviour in network epoxy glasses and its effects on the long-term properties of graphite/epoxy composites
E. S. W. KONG
(Stanford University and NASA Ames Research Center)

Symposium on the melting transition in polymers

Special lecture on the relation between structure and properties of semi-crystalline polymers
L. MANDELKERN
(Florida State University)

The heat of fusion of poly(tetrafluoroethylene)
H. W. STARKWEATHER, JR., P. ZOLLER and G. A. JONES
(E. I. Du Pont Co.)

The melting behaviour of poly(vinylidene fluoride)
S. WEINHOLD, J. B. LANDO and M. H. LITT
(Case Western Reserve University)

Configurational thermodynamics of the crystalline state
R. SIMHA
(Case Western Reserve Univ.)

Partial melting of poly(phenylene oxide) below the glass transition temperature
H. E. BAIR and T. K. KWEI
(Bell Laboratory)

Gelation of amorphous polystyrene
H. TAN, C. BOSNYAK, A. HILTNER and E. BAER
(Case Western Reserve University)

Transition in polyphosphazene homopolymers and copolymers
J. H. MAGILL
(University of Pittsburgh)

Symposium on catalyst performance

Catalytic gasification of carbons
D. D. L. CHUNG and C. G. WAYCHIC
(Carnegie-Mellon Univ.)

Catalytic effects on the surface reaction of SO_2 with lignite and coal
C. T. RATCLIFFE and G. PAP
(Allied Chemical Co.)

Study of the clay effect on crude oil combustion by the method of thermogravimetric analysis (TGA) and differential scanning calorimetry (DSC)
S. VOSSOUGHI, G. P. WILLHITE, Y. EL SHOUBURY and G. BARTLETT
(Univ. of Kansas)

Monitoring catalytic activity by DSC
J. R. KOSEK
(E. I. Du Pont Co.)

Characterization of solid acids by TG/DSC
S. SOLED, G. B. MCVICKER and B. DERITES
(Exxon Co.)

Temperature programmed desorption studies of oxide catalysts
C. G. FREDERICK, A. W. SLEIGHT and U. CHOWDHRY
(E. I. Du Pont Co.)

Temperature programmed surface reaction studies of the reactivity of carbon deposited on nickel catalysts
J. G. MCCARTY, H. WISE, D. CHERIDAN and P. Y. HOU
(SRI International)

EGA studies of the reduction of NiO by H_2
P. K. GALLAGHER, E. M. GYORGY and W. R. JONES
(Bell Labs.)

Catalytic effect of iron in hydrogasification of coal
T. D. PADRICK, D. D. DEES and T. M. MASSIS
(Sandia Labs.)

Symposium on the kinetics of chemical and physical processes

Introductory remarks
J. H. FLYNN
(NBS)

Curing kinetics of a diepoxide/poly(amide-amine) system by DSC
A. R. SHULTZ
(General Electric R. & D.)

Kinetics of thermal polymerization of diacetylene polymer in the solid state
K. N. DESAI, A. F. GARITO and A. R. MCGHIE
(Univ. of Pennsylvania)

The changing kinetics of polymerization of hexamethylene diammonium adipate
P. D. GARN and P. DASGUPTA
(Univ. of Akron)

The kinetics of the degradation of isotactic poly(butene-1) by nitrogen dioxide gas
S. S. STIVALA, R. ALLAHYARI and L. REICH
(Stevens Inst. Tech.)

Determination of polymer decomposition kinetics using non-isothermal EGA techniques
R. M. LUM
(Bell Laboratories)

Kinetic analysis of the thermal- and thermooxidative degradation of some aromatic polyamides
Y. P. KHANNA* and E. M. PEARCE**
(* Allied Chemical Corp., ** Polytech. Institute of New York)

Pyrolysis of cotton fabrics containing inorganic flame retardants
W. E. FRANKLIN
(So. Regional Research Center)

Use of thermal methods of analysis for estimating shelf life of polymeric composite insulating materials
K. M. KAMATH
(Bwarat Heavy Electricals, Lts., India)

Comments on two enigmas of condensed phase kinetics — The compensation effect and exact differential rate equations
J. H. FLYNN
(NBS)

Mathematical simulation of crystallization in DTA experiments
H. YINNON,* C. Y. FANG* and D. R. UHLMANN* and M. WEINBERG**
(* Mass. Inst. Tech., ** GTE Labs.)

Microcomputer date acquisition and control for a Du Pont TGA
F. SU and J. M. HUBERT
(Chevron Research)

The conversion of kinetic data taken at constant time increments to constant reaction increments
D. W. JOHNSON, JR. and P. K. GALLAGHER
(Bell Labs.)

Nonisothermal kinetic analysis of the decomposition of tetramethyldioxetane
G. D. MENDENHALL
(Mich. Tech. Univ.)

The modeling of high pressure scanning calorimetric profiles for autooxidation reactions
R. K. BROWN, J. A. WALKER and W. TSANG
(NBS)

Thermogravimetric analysis of the kinetics of intercalate desorption from graphite intercalation compounds
S. H. ANDERSON and D. D. L. CHUNG
(Carnegie-Mellon University)

Thermodynamics and kinetics of arsenic pentafluoride intercalation of graphite
A. R. MCGHIE, J. W. MILLIKEN and J. E. FISCHER
(Univ. of Penna)

Analysis of condensed-phase reactors by direct observation of energy
R. N. ROGERS
(Los Alamos)

Experimental thermochemical observations of condensed-phase reactions
J. L. JANNEY
(Los Alamos)

Global kinetics for the shock-induced decomposition of heterogeneous explosives
J. WACKERLE and A. B. ANDERSON

A study of the kinetics of the thermal decomposition of nitrogen trichloride using accelerated rate calorimetry (ARC)
T. B. HUDSON
(Dow Chemical)

Thermal response of spherical explosive charges subjected to external heating
D. L. JAEGER
(Los Alamos)

Adiabatic kinetics and temperature-time curves in reaction calorimetry
D. W. SMITH
(Columbia Scientific)

Determination of kinetic data of liquid phase reactions by accelerating rate calorimetry
D. W. SMITH
(Columbia Scientific)

Closing remarks
J. H. FLYNN

Panel presentation and discussion on thermal evaluation of chemical hazards

Assesment of reaction hazards by means of a bench scale heat flow calorimeter (BSC)
G. GIGER and W. REGANASS
(Ciba-Geigy)

Advanced SEDEX (Sensitive detector of exothermic processes)
J. HAKL
(Sandoz AG.)

Assesment of thermal hazards using differential scanning calorimetry and isothermal calorimetry
J. D. MCCARTY
(Hercules)

Chemical hazard research using adiabatic reaction calorimeters. Adiabatic runaway device (ARD) and Walker's adiabatic calorimeter (WAC)
L. C. WALKER
(Dow Chemical)

Thermal hazard evaluation by an accelerating rate calorimeter (ARC)
L. R. WHITING and J. C. TOU
(Dow Chemical)

Open floor discussion

General Papers

Polymers

Thermal expansion of ultradrawn polystyrene
L. H. WANG and R. S. PORTER
(Univ. Mass.)

High pressure volume dilatometry as a thermoanalytical technique applied to polymers
P. ZOLLER
(E. I. Du Pont)

Forced vibration studies of polymers by dynamic mechanical thermal analysis
J. W. M. FURSDON
(Polymer Laboratories)

Characterization of elastomers and vulcanizates by thermal analysis
A. K. SIRCAR
(J. M. Huber Corp.)

Thermal analysis of sulfonated EPDM ionomers
J. J. MAURER and G. D. HARWEY
(Exxon)

The application of differential thermal analysis to a high temperature forging alloy
J. S. FIPPHEN
(Wyman Gordon Co.)

DTA characterization of rapidly solidified powders
J. A. DOMINOUE, W. J. BOESCH and G. E. MAURER
(Allegheny Ludlum.)

DSC analysis of precipitate microstructures in 7075 after multi-stage aging
J. M. PAPAZIAN
(Gruman Aerospace)

A DSC technique to measure the amount of indium or tin leached from lead based solders by rosin fluxes
S. TEED and V. MARCOTTE
(IBM)

A DSC study of the heat capacity and phase transition in calcium doped nickel oxides
V. LORPRAYOON, W. M. LEE and B. C. CORNILSEN
(Michigan Tech. Univ.)

Thermal acoustic emission: study of the exfoliation of graphite
S. H. ANDERSON, H. H. LEE and D. D. L. CHUNG
(Carnegie-Mellon University)

A new instrument for thermoluminescence research
D. B. NUZZIO
(Rutgers University)

Thermovoltaic detection (TVD) : a new technique seeking an application
W. W. WENDLANDT
(Univesity of Houston)

Siamese twin liquid crystals
A. C. GRIFFIN and G. A. CAMPBELL
(Univ. Southern Mississippi)

Thermal properties of some polyimine liquid crystals
A. C. GRIFFIN and T. R. BRITT
(Univ. Southern Mississippi)

Calorimetry

Heat-flux differential scanning calorimetry — theory and practice
J. D. LEE and P. F. LEVY
(E. I. Du Pont Co.)

Re-examination of the solid phase transition in n-paraffins by high sensitivity differential scanning calorimetry
S. J. REHFELD, D. J. EATOUGH and R. M. HART
(Brigham Young University and Hart Scientific)

Multiple-sample differential scanning calorimetry
R. C. JOHNSON and V. IVANSONS
(E. I. Du Pont Co.)

Automated isothermal/isoperibol calorimetry
S. L. SPARKS
(Tronac)

Energy

The determination of combustion efficiency and calcium utilization of a fluidized bed combustion furnace
R. E. CULMO and R. L. FYANS
(Perkin-Elmer)

DSC and TG studies of kentucky coal
M. B. HARRIS and J. P. ELDER
(Inst. for Mining and Minerals Research)

Auto-oxidative properties of automotive lubricating oil by high pressure differential scanning calorimetry
J. A. WALKER and W. TSANG
(NBS)

Application of pyrolysis — gas chromatography to fossil fuels and biomass
B. K. HOVSEPIAN
(E. I. Du Pont Co.)

The determination of chrysotile in insulation samples using combined TGA-EGA
J. U. SCALERA
(U. S. Dept. of the Interior)

Applications of simultaneous thermal analysis
B. L. TREHERNE
(Stanton Redcroft)

An automated system for simultaneous thermal analysis and mass spectrometry
H. K. YUEN, G. W. MAPPES and W. A. GROTE
(Monsanto)

Phosphate ester decomposition by temperature programmed mass spectrometry
H. G. LANGER and J. D. FELLMAN
(Dow Chemical)

Thermogravimetry of dihydroxyviolanthrone esters
R. G. FERRILLO, A. GRANZOW and E. KLINSBERG
(American Cyanamid.)

Identification of vegetable oils in food products by sub-ambient DSC
S. M. DYSZEL
(U. S. Customs Svc.)

The formation and reaction of pyrophoric iron sulfides
E. B. PRESTRIDGE
(Exxon)

Temperature control with the microprocessor operated TGS-2 at high heating rates
J. P. ELDER
(Inst. for Mining and Minerals Research)

Hazards

Adiabatic solution calorimetry as an aid to process engineering
D. T. GERMANO
(Dow Chemical)

DSC application in the field of pseudo-stable materials and explosives
W. D. EMMERICH, E. KAISERSBERGER and H. PFOFFENBERGER
(Netzsch-Gerätebau)

Use and advantage of high pressure cells with heat-flux DSC for thermal hazards evaluation
P. LE PARLOUËR
(Setaram)

Differential scanning calorimetric studies using a new, reusable high pressure capsule
C. M. EARNEST
(Perkin-Elmer)

Computer and software applications

Recent advances in computerized thermal analysis
W. P. BRENNAN, R. L. FYANS and J. S. MAYER
(Perkin-Elmer)

Thermal analysis of clay minerals: a new microcomputer approach to an old study
C. M. EARNEST
(Perkin-Elmer)

Computerized thermal analysis study of curing reactions
J. S. MAYER and W. P. BRENNAN
(Perkin-Elmer)

Data analysis improvements for the Du Pont 1090 thermal analysis system
R. L. BLAINE and P. F. LEVY
(E. I. Du Pont Co.)

Derivation and testing of revised data analysis equations for the Du Pont 1090/DMA system
J. D. LEAR and P. S. GILL
(E. I. Du Pont Co.)

Interfacing a microprocesor controlled thermal analyzer to an external computer
P. F. LEVY
(E. I. Du Pont Co.)

Development of a molded resin process by thermal analysis technology
R. K. KHATTAK and E. E. WOODS
(Westinghouse Electric)

The analysis of silane coupling agents bonded to glass fibers by thermogravimetric-mass spectroscopy techniques
S. K. LAHR and A. M. WALKER
(IBM)

Thermogravimetric evaluation of coatings for the suppression of conductive fiber release
S. E. WENTWORTH
(U. S. Army Materials and Mechanics Research Center)

Differential volatilization analysis with differential condensation of the product
P. HAMOUDI
(University of Science and Technology of Algiers)