Events

FIRST EUROPEAN SYMPOSIUM ON THERMAL ANALYSIS

Salford, 20–24 September, 1976

The First European Symposium on Thermal Analysis organized by the Thermal Methods Group of the Analytical Division of the Chemical Society was held at the University of Salford.

The following papers were presented:

Plenary lectures

Thermometric and enthalpimetric analysis
L. S. BARK
(University of Salford, Salford, U.K.)

Combined methods in thermal analysis
F. PAULIK
(Technical University, Budapest, Hungary)

Instrumentation and technique

Studies involving TG

The origin of thermogravimetry
C. J. KEATTCH
(Department of Chemistry, University of Salford, Salford, Lancs, U.K.)

Thermogravimetric and crystallographic study of nitridation in a non-isothermal low pressur plasma
H. R. OSWALD, S. VERPRETI and E. WIRZ
(Institute of Inorganic Chemistry, University of Zürich, Rämistrasse 76, Switzerland

A new dynamic mechanical analysis system for physical properties characterization
PHILIP S. GILL, ROGER L. BLAINE and LECON WOO
(Du Pont, Instruments, Concord Plaza, Wilmington, DE 19898)

Some new devices for freely suspended top pan balances used for thermogravimetric measurements
TH. GAST, A. MIRAHMADI and F. E. WAGNER
(Institut für Meß- und Regelungstechnik, Technische Universität, Kurfürstendamm 195, 1000 Berlin 15, Germany)

A thermobalance for work to 1500° C
A. C. F. KAMP and J. P. REDFERN
(Stanton Redcroft, Copper Mill Lane, London, U.K.)

Optimization of thermogravimetric experiments under active computer control
B. DICKENS and J. H. FLYNN
(Institute for Materials Research, National Bureau of Standards, Washington, D.C. 20234, U.S.A.)

Relaxation and phase lag methods in thermogravimetry
J. H. FLYNN and B. DICKENS
(Institute for Materials Research, National Bureau of Standards, Washington, D.C. 20234, U.S.A.)

Thermogravimetric investigations under quasi isothermal and quasi isobaric conditions
F. PAULIK and J. PAULIK
(Institute for General and Analytical Chemistry, Technical University, Budapest, Hungary)

Quantitative interpretation of TG and DTG curves obtained for some ferromagnetic substances in a low-intensity AC generated magnetic field
R. MOSKALEWICZ
(Polfer Research Laboratory, 01-029, Warsaw, Dzielna 60, Poland)

Mass spectroscopy/Gas chromatography

An interfaced vapour phase thermal analysis system
P. C. UDEN, D. E. HENDERSON and R. J. LLOYD
(Department of Chemistry, University of Massachussetts, Amherst, Massachussetts 01002, U.S.A.)

The development and application of simultaneous thermal analysis–mass spectroscopy
P. A. BARNES
(Department of Chemistry, Leeds Polytechnic, U.K.)

Improved methods of numerical evaluation of thermogravimetric mass-spectrometric results by the use of DN-line computerization
T. SZÉKELY, F. TILL and G. VÁRHEGYI
(Hungarian Academy of Sciences, Research Laboratory for Inorganic Chemistry, Hungary)

Thermogravimetry combined with chemical ionization mass spectrometry
E. BAUMGARTNER and E. NACHBAUR
(Institut für Anorganische und Analytische Chemie, Universität Graz, A-8010, Graz, Austria)

A DTA system with simple 'triac-control'
R. KNIEP, D. MOOTZ and A. SCHAEFER
(Institute für Anorganische und Strukturchemie, Universität Düsseldorf, Universitätsstr., Düsseldorf, West Germany)

On the temperature of the thermal effect outset
G. O. PILOYAN and I. B. KUDINOV
(Institute for Geology of Ore Deposits, Institute of General and Inorganic Chemistry, Academy of Sciences, Moscow, USSR)

The possibility of a more detailed analysis of DTA-curves

P. HOLBA,* M. NEVŘIVA,** J. SESTAK** and P. C. URBÁNEK***
(* Institute of Inorganic Chemistry, Czechoslovak Academy of Sciences, CSAV, Rez u Prahy, Czechoslovakia;
** Institute of Solid State Physics, CSAV, Cukrovarnicka, Praha 6, Czechoslovakia;
*** Research and Development Centre of Gloss, VVUS, SNP 20, Trencin, Czechoslovakia)

Studies involving adsorption techniques

Thermal treatment of aerosil OX50: pore structure and heats of immersion

R. SH. MIKHAIL, A. M. KHALIL and S. NASHED
(Department of Chemistry, Faculty of Science, Ain Shams University, Abbassia, Cairo, Egypt)

The effect of heat treatment on the surface area and porosity of alumino-silica cracking catalysts

D. DOLLIMORE,* R. SH. MIKHAIL,** NAZEM R. EL NAZER*** and G. R. HEAL*
(* Chemistry Department, University of Salford, U.K.;
** Chemistry Department, Ain Shams University, Cairo, Egypt;
*** Chemistry Department, Faculty of Science, University of Benghazi, Benghazi Libya)

Thermal desorption of hydrogen applied to the study of Al_2O_3 supported Pt, Re, and (Pt + Re)

G. BOLIVAR,* H. CHARCOSSET,* R. FRETY,* G. LECLERCQ* and B. NEFF* with technical assistance of J. VARLOUD*
(* Institut de Recherches sur la Catalyse du CNRS, Villeurbanne, France;
** Université de Poitiers, France)

Aspects and possibilities of a new application of calorimetry; thermoporometry

J. QUINSON,* M. BRUN,** A. LALLEMAND** and C. EYRAUD*
(* Université Lyon 1, Laboratoire de Chimie Appliquée et de Génie Chimique, ERA au CNRS No 300;
** INSA, Lyon Laboratoire de Génie Electrique et de Ferroélectricité)

Hot stage microscopy

Applications of hot stage microscopy

WALTER C. MCCRONE
(McCrone Associates Inc., 2820 S. Michigan Avenue, Chicago, K 60616, U.S.A.)

Physical Chemistry

Kinetic information from calorimeter equipment including DTA

Kinetic information from a conduction calorimeter

J. J. G. M. VAN BOKHOVEN
(Chemical Laboratory TNO, P.O. Box 45, Riyswyk, The Netherlands)

Evaluation of kinetic parameters and simulation of industrial chemical reactions with heat flow calorimetry

W. PERRON* and W. REGENASS**
(* Mettler Instrumente AG., Greifensee, Switzerland;
** Ciba-Geigy AG, Basel, Switzerland)

Use of DTA as an analytical technique for the investigation of the kinetics of a polymorphic transformation

C. COMEL and B. F. MENTZEN
(Laboratoire de Cinétique et Génie Chimiques, Institut National des Sciences Appliquées de Lyon, 20 Avenue A. Einstein, F-69621 Villeurbanne, France)

Thermal analysis, calorimetry and chemical thermodynamics

E. MARTI
(Central Research, Services Department, Ciba-Geigy Limited, Basel, Switzerland)

Isothermal kinetic studies

Factors influencing the kinetic analysis of data from isothermal solid state decomposition reactions

A. C. NORRIS, M. I. POPE and M. SELWOOD
(Chemistry Department, Portsmouth Polytechnic, Portsmouth, Hants, U.K.)

The influence of experimental variables upon the kinetics of isothermal solid state decomposition reactions

A. C. NORRIS, M. I. POPE and M. SELWOOD
(Chemistry Department, Portsmouth Polytechnic, Portsmouth, Hants, U.K.)

Kinetic study of the solid-gas La Ni_5/H_2 reaction

L. BELKBIR, E. JOLY and N. GERARD
(Réactivité des Solides, Faculté des Sciences, Mirande, 2100 Dijon, France)

Kinetics of the decomposition of calcium stearate — a model lubricant system

B. V. BURNLEY and J. T. PEARSON
(Department of Chemical Sciences, The Polytechnic, Huddersfield, U.K.)

Kinetic data from non-isothermal studies

Isobaric study of isoplethic sections of multicomponent systems

R. COHEN-ADAD, M. T. SAUGIER and J. J. COUNIOUX
(Laboratoire de Physico-Chimie, Minérale 11, Université Claude Bernard, Lyon 1, 43 Bd du 11 Novembre 1918, 69621 Villeurbanne, France)

Study of complex reactions by non-isothermal reaction analysis

ERHARD KOCH
(Institut für Strahlenchemie am Max-Planck-Institut für Kohlenforschung, Stiftstrasse 34–36, D-4330, Mülheim, AD Ruhr)

New approach to non-isothermal kinetics

M. MURAT,* A. FEVRE* and C. COMEL**
(* INSA de Lyon, Laboratoire de Chimie Appliquée;
** Laboratoire de Cinétique et de Génie Chimique, Bat 404, 20 Av. Einstein, 69621 Villeurbanne, France)

Thermodynamic and phase equilibrium studies

Gradient thermique à l'interface liquide–vapeur au cours d'une évaporation conséquences

Mm G. BERTRAND, M. LALLEMANT and Mme G. WATELLE-MARION
(Laboratoire de Reactivité des Solides, Faculté des Sciences, Mirande, 21000 Dijon, France)

Thermodynamic studies of non-stoichiometric oxides by thermoanalytical methods
O. TOFT SØRENSEN
(Danish Atomic Energy Commission, Risø, Røskilde, Denmark)

Phase investigations of fluoride systems by TA method
BIRGIT JENSSEN HOLM
(Institute of Inorganic Chemistry, The Norwegian Institute of Technology, N-7036, Trondheim NTH, Norway)

The cubic-tetragonal transformation in dicarbides
I. J. MCCOLM
(School of Materials Science, University of Bradford, Bradford, U.K.)

Applicability of different research methods of DTA in thermal analysis
J. P. SCHULZ
(W. C. Heraeus GmbH, Heraeusstr. 12–14, D-6450 Hanau, Germany)

Catalysis studies

Application of several thermal methods to the study of the activation of alumina supported bimetallic catalysts
C. BOLIVAR,* H. CHARCOSSET,* R. FRETY,* G. LECLERCQ** and L. TOURNAYAN*
(* Institute de Recherches sur la Catalyse du CNRS, Villeurbanne, France
** Université de Poitiers, France)

Application of thermal method in catalysis; ketonization of acetic acid on 3d and 4f metal oxides
S. BERNAL, J. CORNEJO, J. M. CRIADO and J. M. TRILLO
(Departmento de Quimica, Facultad de Ciencias, Universidad de Santander and Universidad de Sevilla, Arda de los Castros, Spain)

Thermogravimetric analysis in the catalytic decomposition of formic acid on manganese(II) oxide
D. DOLLIMORE,* B. W. KRUPAY** and R. A. ROSS**
(* The Department of Chemistry and Applied Chemistry, University of Salford, Salford, U.K.
** The Chemistry Department, Lakehead University, Thunder Bay, Ontario, Canada)

Studies on thermal analysis of nickel vanadate, nickel molybdate and nickel tungstate
S. K. BHATTACHARYA and RAMJI SINGH
(Department of Chemistry, Faculty of Science, Benares Hindu University, Varanasi 221005, India)

A study of coke formation on a silica-alumina catalyst
R. HUGHES and H. M. ZADEH
(Department of Chemical Engineering, University of Salford, Salford U.K.)

Isothermal thermogravimetry of the Ni–Mo–γAl_2O_3 catalysts
P. K. SINHAMAPATRA and L. D. SHARMA
(Indian Institute of Petroleum, 11P–Mohkampur, Dehradun 248005, U.P., India)

Enthalpimetric and thermometric studies

The thermometric determination of isonicotinic acid hydrazide in isoniazid tablets
L. S. BARK and L. KERSHAW
(Ramage Laboratories, University of Salford, Salford, U.K.)

Iodometric determination of sulphate by direct thermometric method
P. MARIK-KORDA
(Institute for General and Analytical Chemistry, Technical University, Budapest, Hungary)

Enthalpimetric determination of micro-amounts of some oxidants using sulphur dioxide as a gaseous titrant
L. S. BARK and P. PRACHUABPAIBUL
(Ramage Laboratories, University of Salford, Salford, U.K.)

The enthalpimetric determination of some constituents of dolomite
L. S. BARK and M. A. H. AL-GIFRI
(Ramage Laboratories, University of Salford, Salford, U.K.)

Organic chemistry and polymers

Metal-organic compounds

Thermal behaviour of tetracyanocomplexes — clathrate compounds
ANNA SOPKOVA
(Department of Inorganic Chemistry, Faculty of Sciences, P. J. Safariks University, Moyzesova 11, Kosice, ČSSR)

Thermal behaviour of some metal complexes of hydrazincarboxylic acid and its derivatives
A. MONACI and G. CHIOZZINI
(Laboratorio Teoria e Struttura Elettronica e Compartamento Spettrochimico dei Composti di Coordinazione del CNR, Roma, via Montorio, Romano 36, Italy)

Thermal properties of hydrazidocarbonates
J. MAČEK, A. RAHTEN and J. SLIVNIK
(Faculty for Natural Sciences and Technology and 'Jozef Stefan' Institute, University of Ljubljana, Murnikov 6, 61000 Ljubljana, Yugoslavia)

Polymer degradations

The thermal degradation of polyepichlorhydrin
P. MORGAN and W. W. WRIGHT
(Materials Department, Royal Aircraft Establishment, Farnborough, Hants, U.K.)

The thermal analysis of some addition type polyimides
J. M. BARTON and G. J. KNIGHT
(Materials Department, Royal Aircraft Establishment, Farnborough, Hants, U.K.)

The effects of metal chlorides on the thermal decomposition of viscose rayon
A. CAPON and F. A. P. MAGGS
(Chemical Defence Establishment, Porton Down, Nr Salisbury, Wiltshire, U.K.)

Thermal analysis studies on polyquinazolones
H. S. O. CHAN and R. H. STILL
(Department of Polymer and Fibre Science, University of Manchester, Institute of Science and Technology, Manchester, U.K.)

Thermal studies of polyvinylhalogen-carbazoles
JAN PIELICHOWSKI and EWA MURAWIEC
(Instytut Chemii i Technologii Organicznej, Politechnika Krakowska, 31-155, Krakow, Poland)

Physical properties

DTA investigation of binary liquid crystalline systems
N. K. SEMENDYAEVA, G. I. KARPUSHKINA, A. A. KOTLYAR and V. N. SHOSHIN
(N. S. Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences, Moscow, USSR)

Approximation of the thermodynamic driving force in polymer crystallization
V. B. F. MATHOT
(Department of Fundamental Polymer Research, Central Laboratory, DSM, Geleen, The Netherlands)

Melting and crystallization behaviour of terephthalate/sebacate copolyesters
W. MARRS, R. H. PETERS and R. H. STILL
(Department of Polymer and Fibre Science, University of Manchester, Institute of Science and Technology, Manchester, U.K.)

Apparent heating rate dependence of the glass transition of a polystyrene from apparatus factors
PAUL D. GARN and OSCAR MENIS*
(University of Akron, Akron, Ohio, U.S.A.
* US National Bureau of Standards, Washington DC, U.S.A.)

Studies of industrial importance

Thermogravimetric investigation of the decomposition of organic materials above their boiling points in a non-volatile matrix
Z. ADONYI and G. KÖRÖSI
(Technical University of Budapest, Department of Chemical Technology, Budapest, Hungary)

The use of DTA in the flexible packaging converting industry
D. J. H. EDWARDS
(Mardon Flexible Packaging Limited, Midsomer, Norton, Bath, U.K.)

The physico-chemical structure of nitrously preoxidised cellulose after two years ageing as determined by derivative pyrolysis
JAN BLAHA
(National Textile Research Institute, Centre for Research and Application of Ionised Radiation, 664 71 Vev, Bityska, Czechoslovakia)

Applications of thermal analysis to the investigation of radiation-chemical cross-linking of cellulose
W. M. DZIEDZIELA
(Institute of Applied Radiation Chemistry, Wroblewstiego 15, Lodz, Poland)

Production of gases from the thermal decomposition of tobacco
RICHARD R. BAKER
(Group Research and Development Centre, British American Tobacco Co. Limited, Regents Park Road, Southampton, U.K.)

Organo-phosphorus compounds

Application of DTA in the study of properties of some organo-phosphorus compounds
G. V. ROMANOV, A. N. PUDOVIK, R. YA. NAZMUTDINOV, V. M. POJIDAYEV and I. A. AKHMADEEV
(A. E. Arbuzov Institute of Organic and Physical Chemistry, Kazan Branch Academy of Sciences, Kazan, USSR)

Inorganic chemistry

Halides and associated materials

Investigations on systems $AX/Mn\ X_2$ ($X = Cl; Br; I$; $A =$ Alkali metal) by means of DTA and X-ray analysis

H. J. SEIFERT
(Ghk, Gesamthochschule Kassel, 3500 Kassel, Heinrich Plett Strasse 40, West Germany)

Thermal properties of hydrazinium fluorometallates of the first row transition elements

J. SLIVNIK, J. MAČEK and A. RAHTEN
(Faculty for Natural Sciences and Technology and 'Jozef Stefan' Institute, University of Ljubljana, Yugoslavia)

Phenomena preceding and connected with dehydration of inorganic salt hydrates

E. BUZÁGH-GERE, J. SZTATISZ and S. GÁL
(Institute for General and Analytical Chemistry, Technical University, 1521 Budapest, Hungary)

Borates

Thermal decomposition of some borates

E. M. SCHWARTZ and A. J. DZENE
(Institute of Inorganic Chemistry of the Latvian Academy of Sciences, Riga, USSR)

Salts of organic acids

The thermal decomposition of metal formates. I. Thermal, mass spectra and electron microscopy studies on alkaline earth formates

D. DOLLIMORE,* JAI P. GUPTA** and D. V. NOWELL**
(* The University of Salford, Salford, U.K.
** The Hatfield Polytechnic, Hatfield, Hertfordshire, U.K.)

Some data relating to the thermal decomposition of potassium acetate

L. PÖPPL
(Institute of Inorganic and Analytical Chemistry, L. Eötvös University, Budapest, Hungary)

A study of the thermal properties of metal carboxylates by thermoanalytical methods

P. A. BARNES, B. V. BURNLEY* and J. T. PEARSON*
(Department of Chemistry, Leeds Polytechnic, Leeds, U.K.;
* Department of Applied Chemical and Biological Sciences, Huddersfield Polytechnic, Huddersfield, U.K.)

A thermochemical investigation of the decomposition of manganese(II) oxalate dihydrate

M. E. BROWN,* D. DOLLIMORE** and A. K. GALWEY***
(* Chemistry Department, Rhodes University, Grahamstown, South Africa
** Chemistry Department, University of Salford, Salford, U.K.
*** Chemistry Department, Queens University, Belfast, Northern Ireland)

The relationship between the kinetics of decomposition of cadmium oxalate and its solid phase decomposition products

D. DOLLIMORE, N. S. FATEMI and G. R. HEAL
(The Department of Chemistry and Applied Chemistry, University of Salford, Salford, U.K.)

Carbonates

Thermal dissociation of calcite-type carbonates under different partial pressures of CO_2
G. BAYER and H. G. WIEDEMANN*
(Institut für Kristallographie und Petrographie, ETH, 8006 Zürich, Schweiz
* Mettler Instrumente AG, 8006 Greifensee/Zürich, Schweiz)

Effect of grinding on thermal decomposition of alkaline earth carbonates
J. M. CRIADO, F. GONZALEZ and J. MORALES*
(Departmento de Quimica Inorganica y Departmento de Investigaciones Fisicas y Quimicas, Centro Coordinado del CSIS, Facultad de Ciencias, Universidad de Sevilla, Spain
* Present address: Edward Davies Chemical Laboratories, University College of Wales, Aberystwyth, U.K.)

The preparation, characterization and thermal decomposition of some alkaline earth double carbonates
R. W. J. HALL and J. H. SHARP
(Department of Ceramics, Glasses and Polymers, University of Sheffield, Northumberland Road, Sheffield, U.K.)

Thermoanalytical study of 1/1 M coprecipitated lead and barium carbonates
M. E. GARCIA-CLAVEL, M. T. CASAIS-ALVAREZ and L. RAMOS-ALVARO
(Seccion de Termoanalisis y Reactividad de Solidos, Departamento de Quimica Analitica del CSIC, Facultad de Quimicas, Ciudad Universitaria, Madrid, Spain)

Nitrates

Phase transformations of ammonium nitrate induced by thermal factors and inoculation
Z. G. SZABÓ, I. KONKOLY-THEGE and E. É. ZAPP
(Institute of Inorganic and Analytical Chemistry, L. Eötvös University, Budapest, Hungary)

Thermal analysis of ammonium nitrate by X-ray diffraction
W. ENGEL* and P. CHARBIT**
(* Treib- und Explosivstoffe 7507, Pfinztal
** Siemens AG, Karlsruhe, West Germany)

Thermal decomposition of conventionally crystallised and freeze dried silver nitrate and cadmium nitrate
D. J. ANDERTON and F. R. SALE
(Metallurgy Department, Manchester University, Manchester, U.K.)

Thermal decomposition of nitrates in vacuum
J. H. LIPPIATT, D. PRICE, R. W. BROWN* and D. C. A. IZOD*
(Department of Chemistry and Applied Chemistry, University of Salford, Salford U.K.
* Ministry of Defence, RARDE, Fort Halstead, Kent, U.K.)

Sulphides

Thermogravimetric studies of alkaline earth metal sulphides
D. R. GLASSON and P. O'NEILL
(John Graymore Chemistry Laboratories, Plymouth Polytechnic, Plymouth, U.K.)

TG and DTA studies of the oxidation of lead sulphide
S. A. JAYAWEERA and P. SLEEMAN
(John Graymore Chemistry Laboratories, Plymouth Polytechnic, Plymouth, U.K.)

Oxides and hydroxides

Formation and dissociation of barium peroxide
H. G. WIEDEMANN and G. BAYER*
(Mettler Instrumente AG, 8606 Greifensee/ZH, Schweiz
* Institut für Kristallographie und Petrographie, ETH, 8006 Zürich, Schweiz)

TS results from dehydration of $Mg(OH)_2$
K. LONVIK
(Department of Physics, University of Trondheim, The Norwegian Institute of Technology, N—7036, Trondheim, Norway)

Mass spectrometrical study of thermal decomposition of inorganic oxidizers at high heating rates
V. V. ALEXANDROV, V. V. BOLDYREV and V. G. MOROZOV
(Institute of Physical-Chemical Foundations of Raw Mineral Materials Processing, Academy of Sciences of the USSR, Novosibirsk 630090, USSR)

The thermal decomposition of hydrous chromium oxides
J. FENERTY and K. S. W. SING*
(Department of Chemistry, Liverpool Polytechnic, Liverpool, U.K.
* School of Chemistry, Brunel University, Uxbridge, Middlesex, U.K.)

Use of derived derivative thermogravimetric curve (DDTG) in the compositional study of two component oxide systems of type $AO + B_2O_3$
B. R. ARORA, B. N. SINGH and R. K. BANERJEE
(The Fertilizer Corporation of India Limited, Planning and Development Division, Sindri, Dhanbad, India)

Ion-exchanged materials

Thermogravimetric analyses of ion exchanged zeolites X and Y
L. V. C. REES
(Physical Chemistry Laboratories, Imperial College of Science and Technology, London, U.K.)

A thermochemical analysis of some heteroionic zeolites having faujasite structures
A. DYER, T. R. NOWELL and M. J. WILSON
(Cockcroft Building, Department of Chemistry and Applied Chemistry, University of Salford, Salford, U.K.)

The thermal decomposition of zirconium phosphates. IV. Ammonium exchanged γ-zirconium phosphates
N. J. MANNING and D. V. NOWELL
(The Hatfield Polytechnic, Hatfield, Hertfordshire, U.K.)

Earth sciences and associated industries

Oxides

Influence of adsorbed phosphate on the dehydroxylation of synthetic geothite (α-FeOOH)
E. PATERSON and R. SWAFFIELD
(Macaulay Institute for Soil Research, Craigiebuckler, Aberdeen, Scotland)

Derivatographic study of formation of mullite, topaz and corundum
A. M. ABDEL REHIM
(Geology Department, Alexandria University, Alexandria, Egypt)

Clays

DTA behaviour of interstratified illite–montmorillonite clays
D. J. MORGAN
(Institute of Geological Sciences, 64—78 Grays Inn Road, London, U.K.)

'Pre-mullite' state during thermal transformation of clays
L. PÖPPL, M. GÁBOR, J. WAJAND and Z. G. SZABÓ
(Institute of Inorganic and Analytical Chemistry, L. Eötvös University, Budapest, Hungary)

Application of DTA-TG-MS in the investigation of clays
M. MÜLLER-VONMOOS
(Eidgenössische Technische Hochschule Zürich, Institut für Kristallographie und Petrographie, CH-8006 Zürich, Sonnegstrasse 5, Switzerland)

Sintering of kaolinite with ammonium fluoride
A. M. ABDEL REHIM
(Geology Department, Alexandria University, Alexandria, Egypt)

Carbonates

A theoretical analysis of the recrystallisation of natural calcite under non-isothermal conditions
K. A. JONES, (the late) M. J. WOLFE and A. K. GALWEY
(Geological Department and Chemistry Department, Queens University of Belfast, Belfast, Northern Ireland)

Quantitative analysis of dolomite by DTA
P. DAVIES, D. DOLLIMORE and G. R. HEAL
(Department of Chemistry and Applied Chemistry, University of Salford, U.K.)

Uranium minerals

Thermal analysis of some uranium minerals and related synthetic compounds
J. ČEJKA,* K. TOBOLA** and Z. URBANEC***
(* National Museum, 11579 Praha, ČSSR
** Inorganic Chemistry Institute, Czechoslovak Academy, 25068 Řež, ČSSR
*** Nuclear Research Institute, 25068 Řež, ČSSR)

Mineral mixtures, coals, oils, etc.

Simultaneous DTA-EGA of natural mineral mixtures
D. J. MORGAN
(Institute of Geological Sciences, 64—78 Grays Inn Road, London, U.K.)

Advances in the identification, differentiation and evaluation of minerals in coal by DTA
S. St. J. WARNE
(Department of Geology, The University of Newcastle, New South Wales, 2308, Australia)

Kinetics of coal gasification reactions under non-isothermal conditions
P. P. FEISTEL, K. H. VAN HEEK and H. JÜNTGEN
(Bergbau Forschung GmbH, 4300 Essen 13, Frillendorfer Str. 351, W. Germany)

The investigation of group components from vacuum distillation residues of crude oil by thermal analysis
J. WIECKOWSKA
(Institute of Chemistry and Technology of Petroleum and Coal, Wrocław Technical University, Poland)

Automated thermometric analysis for measurement of substances in high concentration and its application for fertiliser quality control
R. WEBER and G. BLANC
(Technicon International Division S.A., 12—14 Chemin Rieu, 1208 Geneva, Switzerland)

Cements and associated materials

The application of DTA in a study of the formation of ettringite in cement hydration
J. BENSTED and G. C. BYE
(Associated Portland Cement Manufacturers Limited, Research Department, London Road, Greenhithe, Kent, U.K.)

On the thermal decomposition of α-dicalcium silicate hydrate
J. JERNEJČIČ, Mrs N. VENE* and A. ZAJC**
(The Boris Kidrič Institute of Chemistry, Ljubjana
* Institute Jozef Stefan, University of Ljubljana
** Research Institute for Building Materials and Constructions, Ljubljana, Yugoslavia)

Some applications of the Du Pont DSC cell in quantitative analysis
J. P. DIXON
(Shell Research Limited, Thornton Research Centre, P.O. Box 1, Chester, U.K.)

The use of thermal analysis methods in assessing the quality of high alumina cement concrete
H. G. MIDGLEY
(Building Research Establishment, Department of the Environment, Garston, Watford, U.K.)

Application de l'analyse thermique simultanée à fin de déterminer la carbonation du ciment à cendres volantes
I. STEBNICKA-KALICKA
(Instytut Techniki Budowlanej, ul. Filtrowa 1, 00-950, Warszawa, Poland)

The semi-isothermal thermogravimetry and determination of the degree of conversion of high alumina cement concrete
B. EL JAZAIRI
(Department of Civil Engineering, University of London, Kings College, London, U.K.)

Applied sciences

Metal and alloy systems

Determination of thermodynamic data of solid phase transitions in metals and alloys by quantitative differential thermal analysis
M. HARMELIN,* G. CHAPPUIS** and P. LEHR*
(* Centre d'Etudes de Chimie Métallurgique du CNRS, 15 Rue Georges Urbain, 94400 Vitry, France
** Ecole Nationale Supérieure de Techniques Advances, Groupe Matériaux à Haute Résistance, 32 Boulevard Victor, 75015 Paris, France)

Determination of residual austenite in tool steels by DTA
A. ROSINA
(Metallurgical Department, Faculty of Natural Sciences and Technology, University of Ljubljana, Yugoslavia)

A study of electron-lattice interaction in alpha-phase indium cadmium
PERTTI LUOVA
(Department of Physical Sciences, Turku University, Vesilinnante 5, SF 20500, Turku 50, Finland)

Differential thermal analysis investigation of order–disorder transformations of copper–gold alloys
P. TISSOT and R. DALLENBACH
(Departement de Chimie Minérale Analytique et Appliquée, Université de Genève, 30 Quai Ernest Ansermet, 1211 Genève 4, Switzerland)

Phase diagram of system Na - Sb – Se
V. B. LAZAREV, A. V. SALOV and I. S. SHAPLYGIN
(Kurnakov Institute of General and Inorganic Chemistry, 117071, Leninsky Avenue, Moscow, USSR)

Glass systems

DTA of some glasses in the Se – Sb – Ge system
M. D. BARO,* N. CLAVAGUERA,** M. T. CLAVAGUERA-MORA** and J. CASAS-VAZQUEZ***
(* Department Termologia, Facultad Ciencias, Universitad Autonoma Barcelona, Bellaterra, Barcelona, Spain
** Facultad Fisica, Universitad Barcelona, Avda Generallisimo 647, Barcelona, Spain
*** Department Fisica Fundamental, Facultad Ciencias, Universitad de Valladolid, Spain)

Glass forming ability in the quarternary system Se – Te – Sb – Ge
S. BORDAS,* N. CLAVAGUERA,** J. CASAS-VAZQUEZ* and T. CLAVAGUERA-MORA***
(* Department Termologia, Facultad Ciencias, Universitad Autonoma Barcelona, Bellaterra, Barcelona, Spain
** Facultad Fisica, Universitad de Barcelona, Avda Generallisimo 647, Barcelona, Spain
*** Department Fisica Fundamental, Facultad Ciencias, Universitad de Valladolid, Spain)

Application of thermoanalytical methods to the investigation of lead oxide losses at glass melting
J. HEGYI-PAKO, B. P. LŐCSEI and I. ZIELINSKI
(Central Research and Design Institute for Silicates, Budapest, Hungary)

Interprétation cinétique des dérivatogrammes des mélanges de matières premières des masses silicieuses d'usage technique
MIHAI CERCHEZ
(Institute de Recherches et de Projection pour le Verre et la Céramique Fine, Bd. Ion Sulea Nr 299–301, Secteur 4, Bucarest, Romania)

Textiles

Behaviour of textile materials at fast heating rates
B. J. HILL
(Lambeg Industrial Research Association, The Research Institute Lisburn, Northern Ireland)

A thermoanalytical study of treated wools
J. S. CRIGHTON and W. M. FINDON
(School of Textiles, University of Bradford, Bradford, U.K.)

Aspects of fire retardancy

The use of thermal analysis in fire retardant research
J. SIMON and S. GÁL
(Institute for General and Analytical Chemistry, Technical University, Budapest, Hungary)

High temperature critical oxygen index equipment and measurements
A. C. F. KAMP, R. S. LEWIS and J. P. REDFERN
(Stanton Redcroft, Copper Mill Lane, London, U.K.)

Pyrotechnic and associated systems

Thermal studies on the boron-molybdenum trioxide pyrotechnic delay system
E. L. CHARSLEY and M. R. OTTAWAY
(Consultancy Service, Stanton Redcroft, Copper Mill Lane, London, U.K.)

Differential thermal analysis and temperature profile analysis studies on pyrotechnic delay compositions
E. L. CHARSLEY* and P. G. LAYE**
(* Consultancy Service, Stanton Redcroft, Copper Mill Lane, London, U.K.
** Department of Physical Chemistry, The University, Leeds, U.K.)

Application of thermal analysis to phase transition studies of pyrocompounds
G. M. CLARK, M. TONKS and M. TWEED
(Department of Chemical Sciences, The Polytechnic, Huddersfield, U.K.)

Thermal analysis of double base propellants by pressure DSC
N. EISENREICH and A. PFEIL
(Institut für Chemie der Treib- und Explosivstoffe der Fraunhofer Gesellschaft e. v. 7507 Pfinztal 1, BRD, West Germany)

Thermal characterisation of composite propellant binders
T. J. THOMAS, V. N. KRISHNAMURTHY and V. R. GOWARKER
(Chemicals and Materials Group, Vikram Sarabhai Space Centre, Trivandrum, 695022, India)

Hazard processes

Application of thermal analysis in screening for chemical process hazards
A. V. ZATKA
(Sandoz AG, Postfach, CH-4002, Basel, Switzerland)

Additional papers

Modification of some classically deduced structures taking into account DTG and DTA data. I. The copper silicates shattuckite, plancheite, "Bisbeeite", "Katangite" and chrysocolla
M. C. VAN OOSTERWYCK-GASTUCHE
(Musée Royal de L'Afrique Centrale, Tervuren, Belgium)

New DSC calorimeter for temperature range 150 to 1100°K
DR. MERCIER
(Setaram, Lyon, Siège Social, 101—103 Rue de Seze, 69 Lyon 6, France)

The oxidative thermal degradation of metal chelates and their mode of action as stabilisers for polymers

A. W. BENBOW et al.

(Department of Chemistry, The City University, St. John St., London EC1V 4PB, U.K.)

Kinetic studies of the cross-linking and oxidative thermal degradation of butadiene pre-polymers

A. W. BENBOW et al.

(The Chemistry Department, The City University, St. John St., London EC1V 4PB, U.K.)

The mode of decomposition of organic flame-retardants

A. W. BENBOW et al.

(The Chemistry Department, The City University, St. John St., London EC1V 4PB, U.K.)

Thermoanalytical study of adsorbent materials. I. Desorption of organic substances from activated carbons

V. AMICARELLI,* G. BALDASSARRE,* L. LIBERTI** and V. BATICE**

(* Istituto di Chimica Applicata, Facoltà di Ingegneria, Università di Bari
** Istituto di Ricerca sulle Acque del C.N.R., Sezione di Bari, Bari, Italy)

Recent advances in quantitative thermal analysis

R. BRUCE CASSEL

(Perkin Elmer Corporation, Microanalytical Department, Norwalk, Connecticut 06856, U.S.A.)

Determination of the stability of metal complexes with acetoacetanilides by solution calorimetry, DTA and mass spectroscopy

A. KETTRUP

(Gesamthochschule Paderborn, 479 Paderborn, Fürstenweg 15—17b, Postfach 1621, West Germany)

Analytical system for the simultaneous investigation of systems up to 1550°C using TG, DTA and mass spectrometer

W. D. E. EMMERICH and E. KAISERBERGER

(Netzsch-Geratebau GmbH, P.O. Box 1460, D8672-Selb, West Germany)

The application of the contracting sphere equation to the behaviour of oxygen bubbles in molten glass

CYRIL PARTON* and DAVID DOLLIMORE**

(* Pilkington Brothers Limited, Research and Development Labs., Lathom, Lancashire
** Department of Chemistry and Applied Chemistry, University of Salford, Salford, U.K.)

A thermal analytical study of the curing behaviour of a xylok 255 resin*

K. A. HODD and J. S. MATHER

(Department of Polymer Science and Technology, Brunel University, Uxbridge, Middlesex, U.K.)

The kinetics of reaction of CO_2 with cement

K. ESSIG

(Institut für Baustofftechnologie, Universität Karlsruhe (Th.), 75 Karlsruhe, West Germany)

Stability of polyethylene against atmospheric attack

K. ESSIG

(Institut für Baustofftechnologie, Universität Karlsruhe, West Germany)

STANDARDIZATION SEMINAR, MEZNÍ LOŬKA, CZECHOSLOVAKIA

From October 26 to 28, 1976 at Mezní Loŭka near Decin there was a meeting of the Czechoslovak specialists in the field of thermal analysis. The program of this working seminar was devoted to standardization in thermal analysis. The questions of instrumentation, testing chemicals and terminology in this field were discussed. The proceedings of this seminar supplied to participants included the complete Czechoslovak standardization program for the testing of thermal analysis instruments.

SCIENTIFIC SESSION ON "COMBINED THERMAL METHODS"

October 20–21 1976, Jena (GDR)

The following lectures were presented:

Bericht vom 1. Europ. Thermoanalyt. Symposium
H. ZIMMERMANN (Teltow)

Bericht vom "Termanal 76"
W. LUDWIG (Jena)

Bericht über Testuntersuchungen mit Temperatur- und Enthalpie-standard
K. HEIDE (Jena)

Kombinierte Technik
J. PAULIK (Budapest)

Zu den Möglichkeiten der Kombination thermischer und spektroskopischer Analysenmethoden
D. FASSLER (Jena)

Kombination von DTA und mikroskopische Beobachtung
D. SCHULTZE (Berlin)

Kombinierter Einsatz von Gradientenofen und Infrarotspektrometer für kinetische Untersuchungen
K. VOLKE (Weimar)

Neuere Applikationen auf dem Gebiet der thermischen Analyse
H.–G. WIEDEMANN (Zürich)

Emanation — Thermoanalyse in Kombination mit anderen TA-Methoden
V. BALEK (Prag)

Kombinierte thermische- und massenspektrometrische Untersuchungen
K. HEIDE und W. HÖLAND (Jena)

TG-EGA (GC)-Untersuchungen zu Oberflächenreaktionen an einem Ni-Katalysator in CO/H_2 Atmosphäre
J. SCHUBERT und H. WEISSENBORN (Leuna)

Untersuchungen zur thermischen Zersetzung von zwei zinnorganischen Verbindungen
H. UTSCHICK, K. QUITZSCH und H. KAPITZA (Bitterfeld)

Anwendung der Thermogravimetrie und DSC zur thermischen Charakterisierung von Hochpolymeren
CH. WILD und J. RADDATZ (Leuna)

Über neuere Ergebnisse der quantitativen DTA
H. ANDERSON, U. HOFFMANN und D. HABERLAND (Greifswald)

Kombinierte thermische Analyse an Dreischichtsilikaten
J. SCHOMBURG und M. STÖRR (Greifswald)