Events

THIRD EUROPEAN CONFERENCE ON THERMOPHYSICAL PROPERTIES AT HIGH TEMPERATURES

The Third European Conference on Thermophysical Properties at High Temperatures was held at Unione Industriale, Turin, Italy, on 20–23 June, 1972. The full text of the lectures will be published before long.

The following lectures were delivered:

Heat capacity

Experimental determination of melting enthalpies of uranium and beryllium
A. RADENAC, C. BERTHAUT
(C.E.A., Bruyères-le-Châtel, France)

Specific heat measurements by a pulsed-electron-beam method
M. J. WHEELER
(The General Electric Co. Ltd., Hirst Research Centre, Wembley, England)

The heat capacities of $Ga_2O_3(c)$, $Tl_2O_3(c)$, $ZnO(c)$ and $CdO(c)$
K. C. MILLS
(Division of Chemical Standards, National Physical Laboratory, Teddington, Middlesex, TW11 OLW, England)

High-temperature specific heat of UO_{2+x}
M. HOCH
(University of Cincinnati, Cincinnati, Ohio 45221, USA)

Thermodynamic properties of the condensed phase of alumina near the melting point
E. E. SHPIL'RAIN, D. N. KAGAN, L. S. BARKHATOV
(Institute for High Temperatures of the USSR Academy of Sciences, Moscow, USSR)

Enthalpy of niobium in solid and liquid states
A. E. SHEINDLIN, B. YA. BEREZIN, V. YA. CHEKHOVSKOI
(Institute for High Temperatures of the USSR Academy of Sciences, Moscow, USSR)

Evacuated load-bearing thermal insulation up to 800 °C
D. J. DICKSON
(Electricity Council Research Centre, Capenhurst, Chester, CH1 6ES, England)

Thermal conductivity

The Lorenz function of metals at high temperatures
M. J. LAUBITZ
(National Research Council of Canada, Ottawa, K1A OS1, Canada)

The thermal diffusivity and thermal conductivity of pyrocarbon between 25 °C and 1100 °C after fast neutron irradiation
K. E. GILCHRIST
(UKAEA, RFL, Springfields Works, Preston, England)

Investigation of the thermal conductivity of metals below and above their melting point by laser pulse technique
S. MARŠICANIN, K. D. MAGLIĆ, LARISA V. JOVIĆ
(Boris Kidrič Institute, Vinča, Belgrade, Yugoslavia)

The thermal conductivity of a number of alloys at elevated temperatures
R. P. TYE, R. W. HAYDEN, S. C. SPINNEY
(Dynatech R/D Co., Cambridge, Mass., USA)

Thermal conductivity of rhenium
V. E. PELETSKII, YA. G. SOBOL', E. S. AMASOVICH
(Institute for High Temperatures of the USSR Academy of Sciences, Moscow, USSR)

Thermal and electrical conductivity of tungsten-molybdenum alloys at high temperatures
V. A. VERTOGRADSKII, V. YA. CHEKHOVSKOI
(Institute for High Temperatures of the USSR Academy of Sciences, Moscow, USSR)

The influence of self-irradiation on the conductivity of actidine oxides
H. E. SCHMIDT, J. RICHTER
(European Institute for Transuranium Elements, Karlsruhe, West Germany)

High-temperature thermal conductivity measurements of porous graphite
G. NEURER
(Institute for Nuclear Energy, Stuttgart, West Germany)

Study of the electrical conductivity of ZrO_2 and HfO_2 at high temperature
A. GUILLOT, A. M. ANTHONY
(C.N.R.S.-45, Orléans 02, France)

Influence of vacancy ordering on thermophysical properties of vanadium carbide
W. S. WILLIAMS
(University of Illinois, Urbana, Illinois, USA)

The electrical resistivity of castable zirconia
B. J. MCMAHON*, R. ROTHWELL
(* E. I. DuPont de Nemours, Londonderry, N. Ireland,** University of Sheffield, England)

Thermal characterization of reusable external insulation for the space shuttle
J. P. BRAZEL,* R. P. TYE**
(* General Electric Re-entry and Environmental Systems Division, Philadelphia, Pennsylvania, USA, ** Dynatech R/D Co., Cambridge, Massachusetts, USA)

The exponential temperature dependence of the electrical resistivity of Ti and Zr alloys
F. CLAISSE
(Laval University, Quebec 10, Canada)

The thermal conductivity of neutron-irradiated graphite at temperatures between 50 and 1000 °C
L. BINKELE
(KFA-Institute for Reactor Materials, Jülich, West Germany)

Thermal diffusivity

Thermal diffusivity: its determination by phase shift methods using discs and nonuniform irradiation
J. KASPAR and R. J. CHAMPETIER
(The Aerospace Corp., El Segundo, California, USA)

Measurement of high thermal diffusivity values by a novel method on copper and tungsten
V. V. MIRKOVICH
(Department of Energy, Mines and Resources, Ottawa, Canada)

A laser flash technique for determining thermal diffusity of liquid metals at elevated temperatures
J .T. SCHRIEMPF
(US Naval Research Laboratory, Washington D.C., USA)

X-ray determination of lattice and grain-boundary diffusivities as well as diffusion generated substructures
C. R. HOUSKA
(Virginia Polytechnic Institute, Blacksburg, Va., USA)

High temperature diffusivity of thorium and uranium dioxides
JEAN-CLAUDE WEILBACHER
(Centre d'Etudes Nucléaires de Fontenay-aux-Roses, France)

Thermal diffusivity of low density carbon
R. TAYLOR
(U.M.I.S.T., Manchester, England)

Comparative study of the thermal diffusivities of hafnium, stainless steel and Zircaloy-2
A. J. WALTER,* R. M. DELL,* K. E. GILCHRIST** and R. E. TAYLOR***
(* A.E.R.E., Harwell, ** U.K.A.E.A. Springfields, *** University of Manchester, England)

Multiproperties

Survey on direct heating methods for high temperature thermophysical property measurements of solids
R. E. TAYLOR
(Thermophysical Properties Research Center, West Lafayette, Indiana, USA)

Investigation of thermophysical properties of solids at high temperatures at the Moscow University
L. P. FILIPPOV and R. P. YURCHAK
(Lomonosov State University, Moscow, USSR)

Measurement of melting point, normal spectral emittance (at melting point), and electrical resistivity (above 2650 °K) of niobium by a pulse heating method
A. CEZAIRLIYAN
(National Bureau of Standards, Washington, USA)

A high-speed method for simultaneous measurements of thermophysical properties of electrically conducting solids at high temperatures
M. M. MEABED
(Lomonosov State University, Moscow, USSR)

High-temperature thermophysical properties of tungsten
M. HOCH
(University of Cincinnati, Ohio, USA)

High-temperature specific heat of solids
M. HOCH
(University of Cincinnati, Ohio, USA)

Calculation of the temperature distribution of d.c.-heated conductors
K. H. BODE, P. SPINDLER
(Physikalisch-Technische Bundesanstalt, Brunswick, West Germany)

Measurement of heat capacity, electrical resistivity, and the thermal radiation properties of the alloy tantalum-10w.t. tungsten in the range 1500 to 3200 °K by a pulse heating method
A. CEZAIRLIYAN
(National Bureau of Standards, Washington, D.C., USA)

Plasticity of polycrystalline UO_2 at high temperatures
C. FERRO and F. RUGGERI
(C.N.E.N., Rome, Italy)

Thermal expansion

Thermal expansion of tungsten to 1900 °K
R. K. KIRBY
(National Bureau of Standards, Washington, D.C., USA)

Recent development in high-temperature thermal expansion measurement
G. R. CLUSENER
(Theta Ind. Inc., Port Washington, N.Y., USA)

Anisotropic thermal expansion and compressibility of zircon
T. G. WORLTON,* L. CARTZ,** A. NIRAVATH** and H. OZKAN**
(*Argonne National Lab., Argonne, Ill.; ** Marquette University, Milwaukee, Wi., USA)

Thermal expansion behaviour of fast-neutron-irradiated carbon composites
I. D. PEGGS
(Atomic Energy of Canada, Pinawa, Manitoba, Canada)

Investigation of thermal expansion of molybdenum and tungsten at high temperatures
V. A. PETUKHOV and V. J. CHEKHOVSKOI
(Institute for High Temperatures, Moscow, USSR)

Thermal expansion of some clay minerals and their intercalated complexes with alkali acetates by X-ray diffraction
M. N. BORA, J. HATIBARUAH, P. C. MAHANTA
(Dept. of Physics, Gauhati University, Assam, India)

Thermal expansion of glassy carbon
P. S. GAAL
(Westinghouse El. Corp., Pittsburgh, Pa., USA)

Cooperative thermal expansion measurements between 1000 and 2600 °C
E. FITZER and S. WEISENBURGER
(Institute for Chemical Engineering, University of Karlsruhe, West Germany)

Thermal expansion of titanium monophospide and its relation to bonding
K. A. GINGERICH* and P. J. FICALORA**
(* Texas A and M University, Texas; ** The Pennsylvania State University, Pennsylvania, USA)

Radiation properties

Measurement of the spectral emissivity of tungsten using Fourier transform spectroscopy
J. L. RODGERS
(National Physical Laboratory, Teddington, England)

Tungsten as a standard substance for spectral emissivity
L. N. LATYEV, V. J. CHEKHOVSKOI and E. N. SHESTAKOV
(Institute for High Temperature, Moscow, USSR)

Novel apparatus for automatic emissivity measurement
G. RUFFINO and A. ROSSO
(Istituto di Metrologia "G. Colonetti", Torino, Italy)

Measurement of quartz glass emissivity
V. A. PETROV and V. J. RERNIK
(Institute for High Temperatures, Moscow, USSR)

Apparatus for emissivity measurements at high temperature on condensed materials
M. CAPPELLI-D'ORAZIA and A. FANTINI
(Institute of Technical Physics, Rome University, Italy)

Equation state and phase transitions

The entropy of melting crystalline monatomic crystals to liquid at low and at high temperature
J. G. ASTON
(Pennsylvania State University, Pa. USA)

A simple equation of state for real fluids
L. HAAR
(National Bureau of Standards, Washington, D.C., USA)

Freezing and melting of silver-copper eutectic alloys at very slow rates
G. BONGIOVANNI, L. CROVINI and P. MARCARINO
(Istituto di Metrologia "G. Colonetti", Torino, Italy)

Strain energy effects and melting of Cu—Au alloys
A. FERRO and F. MAZZETTI
(Istituto Nazionale Elettrotecnico G. Ferraris, Torino, Italy)

The melting point of molybdenum as secondary fixed point of the IPTS
M. M. KENISARIN, B. J. BEREZIN and V. J. CHEKHOVSKI
(Institute for High Temperatures, Moscow, USSR)

New determination of the freezing point of copper
F. RIGHINI, A. ROSSO and G. RUFFINO
(Istituto di Metrologia "G. Colonetti", Torino, Italy)

Measurements of eutectic melting points, a possible secondary temperature standard
F. CABENNES,* J. SIMONATO,* M. FOEX** and J. P. COUTURES**
(* C.N.R.S., Orléans, France; ** Laboratoire des Ultra-Refractaires, Odeillo, France)

Thermal analysis

Study of the high temperature reactions by means of a complex thermal method
J. SIMON
(Technical University, Budapest, Hungary)

Simultaneous application of DTA, TG, DTG and emanation thermal analysis
W. D. EMMERICH,* V. BALEZ**
(*Netzsch, Selb, Bayern, West Germany, ** Charles University, Praha, ČSSR)

Differential thermal analysis at high pressures
J. KLINGER
(Netzsch, Selb, West Germany)

Emanation thermal analysis for studying the preparation and properties of ceramic materials
V. BALEK
(Charles University, Praha, ČSSR)

Temperature measurements

High temperature thermometry
R. F. BEDFORD
(National Research Council, Ottawa, Canada)

Optimal utilization of redundant information on thermal radiation in thermophysical measurements
D. YA. SVET
(Institute of Metallurgy, Moscow, USSR)

Apparatus for precise high-temperature measurements in thermophysical investigations of solids
V. E. FINKELSTEIN and V. V. KANDYBA
(Kharkov State Institute of Metrology, Kharkov, USSR)

The ultrasonic thermometer-construction, application, operation
H. A. TASMAN, H. E. SCHMIDT
(Institute for Transuranians, Karlsruhe, West Germany)

Standard equipment for colour pyrometry
I. I. KIRENKOV, E. A. LAPINA, G. A. KRAKHMALNIKOVA and V. V. KANDYBA
(All-Union Research Institute of Metrology, Moscow, USSR)

New two colour pyrometer
M. PASTA,* G. RUFFINO,** P. SOARDO* and G. TOSELLI**
(* Istituto Nazionale Elettrotecnico G. Ferraris, Torino, Leeds **Northup Italiana, Raderno Dugnano, Italy)

System for fast measurement of thermophysical quantities
F. RIGHINI, A. ROSSO and G. RUFFINO
(Istituto di Metrologia "G. Colonetti", Torino, Italy)

Factors affecting the accuracy of response of intrinsic thermocouples in thermal diffusivity measurement
K. D. MAGLIC, B. S. MARŠICANIN
(Boris Kidrič Institute, Vinča, Belgrade, Yugoslavia)

ANALYSIS 72 – A SYMPOSIUM ON ANALYTICAL CHEMISTRY, LONDON, UK

A Symposium on Analytical Chemistry was held at the Imperial College London, UK, on September 18–22, 1972.

The following lectures were delivered dealing with thermal analysis:

A new integral method for analysing thermogravimetric curves
G. GYULAI and E. J. GREENHOW
(Chelsea College, University of London, UK)

Contributions to the field of solid state kinetics
J. SIMON, E. BUZÁGH and S. GÁL
(Institute for General and Analytical Chemistry of the Technical University, Budapest, Hungary)

Studies of polymer degradation using an ionselective method for evolved gas analysis
W. W. WRIGHT and G. J. KNIGHT
(Royal Aircraft Establishment Materials Department, Farnborough, UK)

Some application of differential thermal analysis to studies of liquid crystal systems
G. W. GRAY
(University of Hull, UK)

Some aspects of thermal analysis
J. P. REDFERN
(Stanton Redcraft, London, UK)

A thermal analytical study of the formation and degradation of polybenzoxazoles
K. A. HODD and W. A. HOLMES-WALKER
(Brunel University, Uxbridge, UK)

8TH JAPANESE CALORIMETRY CONFERENCE

The 8th Japanese Calorimetry Conference was held in Okayama Eisei Kaikan, on 28–29 November, 1972.

The following papers were presented:

Rapid heating thermal analysis by infrared image furnace
H. OKAMOTO, M. ICHIHASHI, T. SAKAMOTO and Y. MURAKAMI
(Sinku Riko Co., Ltd., 300, Hakusan-cho, Midori-ku, Yokohama)

Development of a thermobalance with automatic quasistatic heating control
N. TOYOFUKU and T. KOBAYASHI
(Cho Balance Corporation, 376–2, Tsukiyama-cho, Kuze, Minami-ku, Kyoto)

The effect of materials of sample pan for thermal decomposition
T. KOYAMA, K. TAKAHASHI and H. UCHIDA
(Rigaku Denki Co., Ltd., 9–8, 2-chome, Sotokanda, Chiyoda-ku, Tokyo)

Theory and experimental study of thermal analysis
N. KOBAYASHI, K. HIYOSHI and T. IZUKA
(Industrial Research Institute of Kanagawa Prefecture, Yokohama)

Thermal analysis of cellulose treated with ammonium dihydrogen phosphate
Y. UEHARA and S. SUZUKI
(Yokohama National Univ., Faculty of Eng., Ohka 2—31—1, Minamu-ku, Yokohama)

Thermal analysis of polyethylene and chlorinated polyethylene mixtures
Y. UEHARA and E. YANAI
(Yokohama National Univ., Faculty of Eng., Ohka 2—31—1, Minami-ku, Yokohama 233; Fire Research Institute, Nakahara 3, Mitaka, Tokyo)

Use of high pressure DTA apparatus for the determination of the heat of hydrodesulfurization reaction of Heyl
S. UEDA, S. YOKOYAMA, Y. NAKATA, K. MAKINO, T. ISHII and G. TAKEVA
(Government Industrial Development Lab., Hokkaido, 41—2 Higashi-Tsukisamu, Sapporo)

The differential scanning calorimetry of flue-cured "SHIROENSHU" tobacco in various curing conditions
S. ESAKI
(The Hatano Tobacco Experiment Station Japan Monopoly Corp., Hatano, Kanagawa)

Excess enthalpies of mixtures of nonelectrolytes
G. C. BENSON
(Div. of Chem., National Research Council of Canada, Ottawa, Canada)

The realities of thermal analysis
H. G. MCADIE
(Dept. of Physical Chemistry, Ontario Research Foundation, Sheridan Park, Ontario, Canada)

High temperature calorimetry and thermal properties of solids
K. NAITO
(Dept. of Nuclear Eng., Faculty of Eng., Nagoya Univ., Furo-cho, Chikusa-ku, Nagoya)

Study for thermal decomposition of metal oxalates by differential gas analysis
N. MIZUTANI and M. KATO
(Tokyo Inst. of Tech., Ookayama, Meguro-ku, Tokyo)

Thermal decomposition of the light rare earth oxalates
Y. SAITO, K. YOKOTA, Y. SHINATA and H. KANEKO
(Dept. of Metallurgy, Mining College, Akita Univ., 1—1, Tegatagakuencho, Akita 010)

Study on chlorination of complex ores by gas-flow DTA
Y. KOBAYASHI, R. FURUICHI and T. ISHII
(Dept of Applied Chem., Faculty of Eng., Hokkaido Univ., Sapporo)

DTA studies on the thermal deaquation reactions of cis- and trans-$[Co(en)_2(NH_3)(OH_2)]Br_3 \cdot H_2O$ *in solid phase*
C. SATO and R. TAKAHASHI
(Dept. of Chem., Faculty of Sci., Hirosaki Univ., Hirosaki)

Thermal analysis of metal oxalato complexes
K. NAGASE
(Dept. of Chem., Tohoku Univ., Kawauchi, Sendai)

Thermal analysis of alunites
S. TSUTSUMI and R. OTSUKA and K. HAYASE
(Waseda Univ., Nishiokubo, Shinjuku-ku, Tokyo; Universidad Nacional del Sur, Bahia Blanca, Argentina)

Formation and stability of andradite $Ca_3Fe_2Si_3O_{12}$
S. NAKA and Y. SUWA
(Faculty of Eng., Nagoya Univ., Furo-cho, Chikusa-ku, Nagoya)

Measurements of transition point, melting point and their latent heats of Y_2O_3 *by means of DTA*
T. SATA and T. OHTA
(The Research Lab. of Eng. Materials, The Tokyo Inst. of Tech., Ookayama, Meguro-ku, Tokyo)

Freezing point of ZrO_2
T. NOGUCHI, T. YAMADA and M. MIZUNO
(Government Industrial Research Inst., Nagoya 1, Hirate-machi, Kita-ku, Nagoya)

An isothermal dilution calorimeter for measuring enthalpy of mixing and tests on standard systems
T. TOUHARA, M. IKEDA, K. NAKANISHI and N. WATANABE
(Faculty of Eng., Kyoto Univ., Sakyo-ku, Kyoto)

Excess enthalpies of mixing for n-methyl-2-pyrrolidone + water, + methanol mixtures and + water—methanol mixed solvent systems
S. MURAKAMI, R. TANAKA and R. FUHISHIRO
(Dept. of Chem., Faculty of Sci., Osaka Univ., Sugimoto-cho, Sumiyoshi-ku, Osaka 558)

Excess enthalpies of mixing for binary systems of polar liquids + non-polar solvents (1,2)
R. TANAKA, S. MURAKAMI and R. FUJISHIRO
(Dept. of Chem., Faculty of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, Osaka 558)

Excess enthalpies of mixing for a series of substituted n,n-dialkylamides + non-polar solvent systems
H. UKIBE, R. TANAKA and R. FUJISHIRO
(Dept. of Chem., Faculty of Sci., Osaka City Univ., Sugimoto-cho, Sumiyoshi-ku, Osaka 558)

Thermochemical properties of some 2-alkoxyethanols and dialkoxyethanes in aqueous solution
K. KUSANO,* I. WADSÖ** and J. SUUBRKUUSK**
(*Faculty of Eng., Miyazaki Univ., Nishi-Maruyama-cho, Miyazaki-Shi; **Thermochemistry Lab., Lund Univ., Chemical Center, Lund, Sweden)

The heats of solution of vitamins in acid, and alkali solutions
T. YAMADA and A. KAGEMOTO and H. YAMAGUCHI
(Dept. of General Education, Osaka Inst. of Tech., Omiya Asahi-ku, Osaka; Research Lab., Tanabe Seiyaku Co., Ltd.)

Effect of grinding on heat of solution
S. TAKAGI, K. NORIMATSU and S. MARUO
(Kinki Univ., Faculty of Sci. and Tech., Dept. of Chem., Kowakae, Higashi-Osaka)

The heats of dilution of the polymer solutions
Y. IKEGAMI, H. KATAYAMA, T. SHIBA and A. KAGEMOTO
(Dept. of General Education, Osaka Inst. of Tech., Omiya Asahi-ku, Osaka)

Heat of immersion of $Na_2O - B_2O_3$ *glasses in n-butylamine and benzene*
M. HATTORI, S. HIROSE and M. TANAKA
(Dept. of Applied Chem., Univ. of Osaka Prefecture, Mozu-Umemachi, Sakai, Osaka)

Field strength of metal oxide surface by heat of wetting method
T. MORIMOTO, M. NAGAO, and M. IMANAKA
(Faculty of Sci., Okayama Univ., Tsushima, Okayama)

Calorimetry and engineering properties of fine grained soils
H. KUZUGAMI and K. TAKAHASHI
(Land Reclamation Eng. Lab., College of Agr., Univ. of Osaka Prefecture, Sakai, Osaka)

The thermodynamics of the complex formation between ethyleneglycol-(bis-aminoethylether)--N,N,N′,N′-tetraacetic acid and the lanthanide ions
T. NOHMI, A. CHIBA and T. OGAWA
(Faculty of Eng., Yokohama National Univ., 2 - 31 - 1, Ohka, Minami-ku, Yokohama-shi)

Heats of combustion of organic compounds containing nitrogene
M. SAKIYAMA and S. SEKI
(Dept. of Chem., Faculty of Sci., Osaka Univ., Toyonaka, Osaka)

Heats of hydrolysis of cyclohexa-, cyclohepta-, and cyclooctamyloses and thermodynamic considerations on the cyclization process
K. TAKAHASHI and S. ONO
(Lab. of Biophysical Chem. College of Agr., Univ. of Osaka Prefecture, Sakai, Osaka)

Calorimetry on growth dynamics of microbial system
S. ITO, M. HASHIMOTO and K. TAKAHASHI
(Lab. of Biophysical Chem., College of Agr., Univ. of Osaka Prefecture, Sakai, Osaka)

The trial production of a twin conduction microcalorimeter using a rocking method and heat of solution of stretched polymer
Y. TAKASHIMA, K. MIASA, I. SHIMAZU and S. MIYATE
(Tokyo Univ. of Agr. and Tech., Faculty of Eng., 2 - 24 - 16, Naka-cho, Koganei-shi, Tokyo)

A newly designed thermal analyzer for simultaneous DTA and TG
K. YAMADA, T. OKINO and S. OHURA
(Analytical Instrument Plant, Shimazu Seisakusho Ltd., 1 Kuwabara-cho, Nishinokyo, Nakagyoku, Kyoto)

The measurement of surface tension of fused metal by thermobalance
T. SENDA H., UCHIDA and I. HAGINOYA
(Rigaku Denki Co., Ltd., 9 - 8, 2-chome, Sotokanda, Chiyoda-ku, Tokyo; The Tokyo Metropolitan Industrial Tech. Center, 3 - 13 - 10, Nishigaoka, Kita-ku, Tokyo)

High pressure differential thermal analyzer and its applications
K. TOSHIMA and H. UCHIDA
(Rigaku Denki Co., Ltd., 9—8, 2-chome, Sotokanda, Chiyoda-ku, Tokyo)

Measurement of energy above 500 °C by quantitative DTA
M. MOMOTA and H. UCHIDA
(Rigaku Denki Co., Ltd., 9—8, 2-chome, Sotokanda, Chiyoda-ku, Tokyo)

Trial production of low temperature DSC
T. SUGIYAMA and H. UCHIDA
(Rigaku Denki Co., Ltd., 9 - 8, 2-chome, Sotokanda, Chiyoda-ku, Tokyo)

The application of a computer for DSC
M. HONJO and A. SHIMURA
(Thoshiba Research & Development Center, Tokyo Shibaura Electric Co., Ltd., 1 Komukai Thoshiba-cho, Kawasaki, 210)

A few comments on the measurements of differential scanning calorimetry
H. TAKAGI, Y. BABA and A. KAGEMOTO
(Dept. of General Education, Osaka Inst. of Tech., Omiya Asahi-ku, Osaka)

Recent developments in calorimetry and thermochemistry at the NBS
G. T. ARMSTRONG
(Physical Chem. Div., Inst. for Materials Research, NBS, Washington, D.C., 20334 USA)

A system of microcalorimeters for use in biological sciences
I. WADSÖ
(Thermochemistry Lab., Chemical Center, Univ. of Lund, Sweden)

Elimination of the output voltage of a bridge due to unbalanced characteristics of thermistors
M. NAKANISHI
(Dept. of Chem., Ochanomizu Univ., Bunkyo-ku, Tokyo)

Studies on polyanion formation reactions by thermometric titration. 1. Polymolybdate formation reactions by acidification of molybdate
T. TAKEUCHI and N. KIBA
(Dept. of Synthetic Chem., Faculty of Eng., Nagoya Univ. Chikusa-ku, Nagoya)

Melting, recrystallization and remelting of polyethylene prepared from stirred xylene solution
S. ICHIHARA and A. NOBUTA
(Mitsubishi Petrochemical Co., Tohocho, Yokkaichi, Mie Prefecture)

Crystallization behaviour of PEG under high electric field
T. NAOI, K. EHARA and T. KAWAI
(Tokyo Inst. of Tech., 2−12−1, Ohkayama, Meguro-ku, Tokyo)

Effects of heating rate on melting behaviours of bulk crystallized polyamide
T. IKAWA, K. MURAKAMI and K. NOBUKIYO
(Faculty of Sci., Okayama College of Sci., 957−10 Shuku, Okayama)

Thermo-photometry and differential thermal analysis of dielectric loss
R. KANEKO
(Tokyo Univ. of Agr. and Tech., Faculty of Tech., 2−24, Koganei-shi, Tokyo)

Automated apparatus of torsional braid analysis
Y. TAKAHASHI, N. NOZAKI and T. OZAWA
(Electrotechnical Lab., 4−1, 5-chome, Mukodai, Tanashi, Tokyo)

Design and construction of a thermomechanical analyzer
K. YAMADA, M. MARUTA and Y. KUNIMATSU
(Analytical Instrument Plant, Shimazu Seisakusho Ltd., 1, Kuwabara-cho, Nishinokyo, Nakagyo-ku, Kyoto)

A differentiator and its application
K. ITO
(Analytical Instrument Plant, Shimazu Seisakusho Ltd., 1 Kuwabara-cho, Nishinokyo, Nakagyo-ku, Kyoto)

Study of thermal shrinkage of high polymer by thermo-mechanical analysis
H. KAMBE, T. KATO and T. MORI
(Inst. of Space and Aeronautical Sci, Univ. of Tokyo, 6—1, 4-chome, Komaba, Meguro-ku, Tokyo)

Analysis of solid state high polymer by measuring thermal shrinkage force
K. EHARA
(Tokyo Inst. of Tech., 2—12—1 Ohkayama, Meguro-ku, Tokyo)

The phase equilibrium of aqueous neutral polysaccharide solutions determined by differential thermal analysis method
S. TAGIGAWA, K. YOSHIDA, Y. BABA, A. KAGEMOTO and K. TADA
(Dept. of General Education, Osaka Inst. of Tech., Omiya Asahi-ku, Osaka)

The phase equilibrium of the atactic polystyrene—MEK systems determined by differential thermal analysis method
Y. FUJITA, Y. BABA and A. KAGEMOTO
(Dept. of General Education, Osaka Inst. of Tech., Omiya Asahi-ku, Osaka)

Relaxational phase transition in hexagonal ice
O. HAIDA, T. MATSUO, H. SUGA and S. SEKI
(Dept. of Chem., Faculty of Sci., Osaka Univ., Toyonaka, Osaka 560)

Heat of fusion and heat of crystallization of beryllium fluoride
S. TAMURA, T. YOKOKAWA and K. NIWA
(Dept. of Chem., Faculty of Sci., Hokkaido Univ., Sapporo)

Thermal studies on phase transitions of crystalline $K_4Fe(CN)_6 \cdot 3H_2O$ and its deuterate
T. MATSUO, M. OGUNI, H. SUGA and S. SEKI
(Dept. of Chem., Faculty of Sci., Osaka Univ., Toyonaka, Osaka 560)

Measurement of heat capacity by the Laser Flash Method
Y. TAKAHASHI, M. KAMIMOTO, H. YOKOKAWA, M. GOTO and T. MUKAIBO
(Dept. of Nuclear Eng., Univ. of Tokyo, Hongo, Bunkyo-ku, Tokyo)

Construction of an adiabatic calorimeter for high resolution measurement
M. TATSUMI, T. MATSUO, H. SUGA and S. SEKI
(Dept. of Chem., Faculty of Sci., Osaka Univ., Toyonaka, Osaka)

An adiabatic scanning calorimeter
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Electrical resistance measurement apparatus from 4.2 °K to 300 °K.
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Measurement of thermal properties of boron carbide. I. Thermal expansion and specific heat
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Measurement of thermal properties of boron carbide. II. Thermal diffusivity
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Thermal diffusivity measurement by the scanning temperature method
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The measuring method of mixing efficiency by the thermal pulse
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A study on exothermic catalytic reaction
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Preparation of eutectic type ternary solid-liquid phase equilibrium by electronic computer
K. NAKANISHI and Z. MORIMI
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Differential thermal analysis on the softening of glasses
H. SEKI and H. UCHIDA
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Heat capacity of OHMBBA liquid crystal and new finding of glassy liquid crystal of the nematic phase
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Thermodynamic properties of p-methoxybenzylidene-p'-n-butylaniline (MBBA)
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Thermodynamical investigation on glassy liquid and glassy crystal of ethanol
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DTA study on the radiation-induced polymerization of the plastic crystalline state
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