Journal of Thermal Analysis, Vol. 36 (1990) 413-427

Events

25th JAPANESE CONFERENCE ON CALORIMETRY AND THERMAL ANALYSIS

The following lectures were presented:

Recent development in adiabatic microcalorimetry.
T. Matsuo
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University, Toyonaka, Osaka 560, Japan.)

Calorimetry of phase transitions and melting in silicates,
A. Navrotsky
(Department of Geological and Geophysical Science, Princeton University.)

Thermodynamic studies of the insertion and folding of membrane proteins: yeast cytochrome coxidase.
E. Freire
(Department of Biology and Biocalorimetry Center, The Johns Hopkins University.)

Thermodynamics of protein structures: heat and cold denaturations.
P.L. Privalov
(Inst. Protein Res., Pushchino, U.S.S.R.)

John Wiley & Sons, Limited, Chichester
Akadémiai Kiadó, Budapest

A general view of biocalorimetry; with special reference to cellular phenomena.
K. Takahashi
(Laboratory of Biohysical Chemistry, College of Agriculture, University of Osaka Prefecture, Sakai, Osaka 591, Japan.)

Controlled transformation rate thermal analysis: its analytical, kinetical and preparative applications and its fields of expected developments.
J. Rouquerol
(Centre de Thermodynamique et de Microcalorimetrie du CNRS.)

High-temperature thermal analysis of compound metals.
K. Itagaki
(Touhoku University.)

Heat capacity and magnetic thermal anomaly of $R(NCS)_3.7H_2O$ (R = Ce, Pr, Nd) at very low temperatures.
T. Hashigurchi, Tan Zhi-cheng, M. Nakano, M. Sorai and H, Suga
(Osaka University.)

Superconducting phase transition and the heat capacity anomaly of the Bi-Pb-Sr-Ca-Cu-O Superconductors.
T. Mifune, T. Atake and Y. Saito
(Research Laboratory of Engineering Materials, Tokyo Institute of Technology.)

Thermodynamic evidence of the incommensurate phase transitions in bis(4-chlorophenyl)sulfone (BCPS).
K. Saito, H. Kamio, K. Kikuchi and I. Ikemoto
(Department of Chemistry, Faculty of Science, Tokyo Metropolitan University.)

Thermodynamic properties of dicarboxylic acids. Part I. Malonic acid.
M. Fukai, T. Matsuo and H. Suga
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University.)

Thermodynamic Study of Thiourea Inclusion Compounds.
M. Sekii, T. Matsuo and H. Suga
(Department of Chemistry and Microcardiometry Research Center, Faculty of Science, Osaka University.)

New device of the evolved gas detection by an odor sensor.
T. Hitomi, F. Akiko, O. Sizuze and E. Katuo
(Nihon Joshi Daigaku, Tokyo Institute of Technology.)

Thermal methods for cermic characterization.
L. Benoist (SETARAM), S. Kaneko
(Rigaku Corp.)

Theory of power-compensated DSC.
S. Tanaka
(National Chemical Laboratory for Industry)

Determination of non-freezing water content in inorganic-water system by DSC, TG.
K. Takahashi
(Rigaku Corporation.)

Development of a New DSC for high heating and cooloing rates measurements and its application to materials science.
T.Ohshima and Ken-ichi Hirano
(Tohoku Univ.)

Developments of high temperature differential scanning calorimeter.
M. Fujii, T. Sugiyama
(MAC Science Co.)

Some problems in thermal diffusivity measurements by the flash method.
T. Mitsuhashi, *T. Arii, *F. Muta and Y. Fujiki
(National Institute for Research in Inorganic Materials and *Rigakuden nki Ltd.)

Examination of the methods for Evaluating Kinetic Parameters by heat-flux DSC.

M. Iida, T. Matsunaga, Y. Nakayama, S. Oinuma, N. Ishikawa and K. Tanaka

(National Chemical Laboratory for Industry.)

The examination and the reliability of specific heat capacity by the DSC measurement.

Y. Ichimura, R. Kinoshita, N. Ookubo, Y. Nishimoto

(Seiko Instruments Inc., Kanagawa Univ.)

Development of adiabatic calorimeter for long time - measurement.

S. Hagiwara, S. Hagiwara and K. Amaya*

(Tokyo Riko, University of Gunma*)

Construction of differential thermal conductivity meter for detecting thermodynamical bifurcation point of the "Benard" cell system.

K. Amaya

(Faculty of General Studies, Gunma Univ.)

Interaction between base pair of DNA and cis-platin.

M. Aramata, H. Irie, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Education, Osaka Institute of Technology.)

Liquid crystal of hydroxypropylcellulose-poly(ethylee oxide)-water system [II].

Y. Yamamoto, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Education, Osaka Institute of Technology.)

Intramolecular Interactions between aqueous gelatin and hydroxypropylcellulose solutions.

M. Maeda, Y. Yamamoto, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Education, Osaka Institute of Technology.

Thermal behaviour of chemical oscillations estimated by heat exchange calorimetry.

J. Kawahito and S. Fujieda

(Department of Chemistry, Faculty of Science, Ochanomizu University.)

Conformational change of DNA in aqueous alcohol solutions containing metallic ions determined from adiabatic differential scanning calorimetry and CD spectra.

Y. Matsuoka, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Education, Osaka Institute of Technology.)

Mechanism of formation of biopolyneric liquid crystal (V) -DNA-poly(amino acid)s systems.

Y. Okada, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Education, Osaka Institute of Technology.)

Thermal and Optical behaviours of liquid crystal formation of multiple components of the concentrated biopolymer solutions -DNA-phosphatidyl choline system.

M. Nakazaki, Y. Okada, M. Oka, Y. Baba and A. Kagemoto

(Laboratory of Chemistry, Department of General Educations, Osaka Institute of Technology.)

Calorimetric studies on the state of water in aerosol OT reversed micelles.

A. Goto, H. Yoshioka and T. Fujita

(University of Shizuoka, Faculty of Liberal Arts and Sciences, School of Food and Nutritional Sciences, and School of Pharmaceutical Science.)

Measurements of the isobaric heat capacity for liquid HCFC-123.

S. Nakagawa, H. Sato and K. Watanabe

(Department of Science and Technology Keio University.)

Temperature and pressure dependence of densities of solutions (1) -A measuring apparatus).

H. Ogawa, A. Arimoto and S. Murakami

(Department of Chemistry, Faculty of Science, Osaka City University.)

Temperature and Pressure dependence of densities of solutions (2) - Temperature dependence of excess volumes for aromatics + cyclohexane systems.

A. Arimoto, H. Ogawa and S. Murakami
(Department of Chemistry, Faculty of Science, Osaka City University.)

Relation between enthalpic virial coefficient and the size of alkyl group in dilute aqueous solution of alcohols.

R. Kadowaki and K. Nakanishi
(Division of Molecular Engineering, Graduate School of Engineering, Kyoto University)

Excess Enthalpy of water + meso-2,3-butanediol at 298.15 K.

T. Kimura and S. Takagi
(Department of Chemistry, Faculty of Science and Technology, Kinki University.)

Excess enthalpies of methyl methylthiomethyl sulfoxide and each of mono-, di- and tri-methylbenzenes at 298.15 K.

T. Kimura, H. Tsuzi and S. Takagi
(Department of Chemistry, Faculty of Science and Technology, Kinki University.)

Residual entropy of thiophene + benzene solid solution.

T. Kimura*, Y. Usui*, S. Takagi, N. Okamoto** and H. Suga**
(*Kinki Univ., **Osaka Univ.)

The phase diagram and the heat capacity of a monolayer of methyl chloride adsorbed on graphite.

A. Inaba and H. Chihara
(Department of Chemistry, Osaka University.)

The vibrational state deduced from the heat capacity of Kr monolayer adsorbed on graphite surface.

T. Shirakami, A. Inaba and H. Chihara
(Department of Chemistry, Faculty of Science, Osaka University.)

The heat capacity and entropy of nitrogen absorbed in mordenite.
K. Kawagishi, A. Inaba and H. Chihara
(Department of Chemistry, Faculty of Science Osaka University.)

Interaction energy between metal-oxide surface and water.
M. Nagao, Y. Murata and N. Ueno
(Faculty of Science, Okayama University.)

Thermodynamic behavior of the system of a cobalt-schiff base complex with ethoxy groups and oxygen.
N. Kuriyama, M. Sakiyama*
(Government Industrial Research Institute, Osaka, Osaka University*.)

Heat capacity measurement of $Ba_2YCu_3O_{7-x}$ ($x=0.18$, 0.35 and 0.60) from room temperature to 680 K.
T. Matsui, T. Fujita, K. Naito and T. Takeshita*
(Department of Nuclear Engineering, Faculty of Engineering, Nagoya University, *Central Research Institute, Mitsubishi Metal Mining Coorporation.)

Phase diagram of tantalum sulfides and Combustion calorimetry of the sulfides.
A. Oshima, T. Yoneyama, T. Uchida, M. Wakihara and M. Taniguchi*
(Department of Chemical Engineering, Tokyo Institutte of Technology, *Department of Industrial Chemistry and Chemical Engineering, Kanagawa Institute of Technology.)

Heat capacity measurement of α-Ti-O solid solution doped with aluminium and vanadium from room temperature to 900 K.
M. Sato, T. Tsuji and K. Naito
(Department of Nuclear Engineering Faculty of Engineering, Nagoya University.)

Heat capacity of zirconium from 100 to 1000 K.
H. Shimada, T. Terai and Y. Takahashi
(Department of Nuclear Engineering, University of Tokyo.)

Evaluation on the derivation methods of heat capacity from accurate high-temperature enthalpy data - heat capacity of Li_4SiO_4 from 300 to 1000 K.

M. Asou, T. Terai and Y. Takahashi
(Department of Nuclear Engineering, University of Tokyo.)

Thermodynamic investigation of liquid III-V systems by the use of drop-calorimeter.

K. Yamaguchi*, K. Itagaki* and A. Yazawa**
(*Research Institute of Mineral Dressing and Metallurgy, SENKEN, Tohoku University, **Miyagi National College of Technology.)

Dehydration and Structure change of fibrous clay minerals.

K. Kato, A. Yamazaki, *T. SAkamoto and R. Otsuka
(School of Science and Engineering Waseda University, *Okayama University os Science.)

Effect of atmosphere on thermal decomposition of $CaSO_3^-$. $1/2H_2O$.

M. Yamada, H. Matsui and G. Hashizume
(Industrial Research Institute of Hyogo Prefecture)

The effect of water vapor pressure on the kinetics of the thermal dehydration of magnesium formate dihydrate.

K. Nagagata, Y. Ito and Y. Masuda*
(Department of Chemistry, Faculty of Science, Niigata University, *General Education Department, Niigata University.)

Dehydration peak of water of crystallization by sealed cell.

T. Kimura, M. Ohta, S. Harasawa and M. Suzuki
(Shibaura Institute of Technology.)

Kinetics of the non-isothermal dehydration of crushed crystals of potassium copper(II) chloride dihydrate.

H. Tanaka and N. Koga
(Chemistry Laboratory, Faculty of School Education, Hiroshima University.)

A kinetic study of the thermal dehydration of lithium sulfate monohydrate I. Polarizing microscopy and thermogravimetry.

H. Tanaka and N. Koga

(Chemistry Laboratory, Faculty of School Education, Hiroshima University.)

A kinetic study of the thermal dehydration of lithium sulfate monohydrate II. Electron microscopy and measurements of the pressure of evolved product water.

A. K. Galwey*, N. Koga and H. Tanaka

(*Chemistry Department, The Queen's University of Belfast Faculty of School Education, Hiroshima University.)

Thermal decomposition of silver carbonate part III: High-pressure DTA.

Y. Sawada, N. Kanou and Nobuyasu Mizutani*

(Faculty of Engineering, Tokyo Institute of Polytechnics, Faculty of Engineering, Tokyo Institute of Technology*.)

A study on the thermal decomposition of $KClO_4$ and $NaClO_4$ by the acoustic emission thermal analysis.

S.Shimada and R. Furuichi

(Faculty of Engineeering, Hokkaido University.)

Thermal analysis of Co-precipitated Zr-Y mixed hydroxide.

H. Narita, H. Takeuchi, J. Mizusaki and H. Tagawa

(Akebono Break Research and Development Center, Ltd. Yokohama National University, Institute of Environmental Science and Technology.)

Thermal analysis for the debinding process of green hard alloy compacts.

M. Yano Kiyoshi Terayama, T. Ishiguro

(Department of Metallurgy, Faculty of Engineering, Toyama University.)

Effects of water and alcohol on molecular motion of perfluorinated inomer membranes.

Y. Miura and H. Yoshida

(Department of Industrial Chemistry, Tokyo Metropolitan University.)

Dynamic mechanical analysis of glass fiber reinforced polypropylene.
N. Oukubo, Y. Teramoto and H. Yoshida
(Seiko Instruments Ltd., *Tokyo Metropolitan University.)

Crystallization of PEO in PEO/PMMA blend systems II. Effect of molecular weight of PMMA.
M. Takahashi, N. Harasawa and H. Yoshida
(Department of Industrial Chemistry, Tokyo Metropolitan University.)

Measurement of thermal diffusivity of polymer films by using AC joule-heating.
Y. Matsui, A. Hagiwara, T. Hashimoto, A. Miyamoto*
(Tokyo Institute of Technology Mitsui Toatsu Chemicals, Inc.*)

Thermal history estimation on crosslinked polyethylene by DSC.
K. Kobayashi and T. Niwa
(Fujikura Ltd.)

A study for the crystallization of polypropylene containing glass-fiber by DSC measurements.
A. Ito
(MAC Science Co.)

Specific heat capacity of water in PMMA hydrogel for artificial kidney.
K. Ishikiriyama and M. Todoki
(Toray Research Center, Inc.)

Pressure effect on relationship between glass transition temperature and frozen-in rate for polymers.
K. Takamizawa and H. Toratini
(Faculty of Engineering, Kyushu University.)

Effect of thermal history on glass transition of the water-polysaccharide systems.
H. Yoshida, T. Hatekeyama*, K. Nakamura** and H. Hatekeyama***
(Tokyo Metropolitan University, *Research Institute for Polymers and Textiles, **Otsuma Women University, ***Industrial Products Research Institute.)

Glass transition of linear aromatic polyethers and polyesters.
T. Hatakeyama, H. Yoshida*, S. Hirose and H. Hatakeyama**
(Research Institute for Polymers and Textiles, *Tokyo Metropolitan University, **Industrial Products Research Institute.)

Effect of the DSC cell on glass transition of acid anhydride cured epoxy resin.
K. Nishida
(Matsushita Communication Industrial Co., Ltd.)

Glass transition temperature of acid anhydride cured epoxy resin. Correlation of derivative method to JIS method.
K. Nishida and K. Ito
Matsushita Communication Industrial Co., Ltd.)

Heat capacity spectroscopic study of glass transition in glycerol and propyleneglycol.
T. Inada, T. Atake and Y. Saito
(Research Laboratosy of Engineering Materials, Tokyo Institute of Technology.)

Thermodynamic study on a glass transition of 3-methylpentane by high-pressure calorimetry.
S. Takahara, O. Yamamuro and H. Suga
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University.)

Glass transition in isocyanocyclohexane studied by adiabatic electrocalorimeter.
I. Kishimoto, J.-J. Pindvic, T. Matsuo and H. Suga
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University, Toyonaka, Osaka.)

Phase transition and glass transition in $(RbCN)_{1-x}(KCN)_x$ (II).
T. Shoda, T. Matsuo, H. Suga and F. Luty
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University, Toyonaka, Osaka, Department of Physics, University of Uta.)

Thermal phase transitions of lithium, sodium and potassium formate.
K. Hashimoto, Y. Ito and Y. Masuda*
(Department of Chemistry, Faculty of Science, Niigata University, *General Education Department, Niigata University.)

Phase transitions of the metallocinium Salts.
Y. Kaneko, M. Sorai, R.J. Webb and D.N. Hendrickson
(Osaka University, University of Illionis.)

Phase behavior of anilinium halides and methylammonium trihalogenoplumbates observed by a high pressure DTA.
N. Yamamuro, O. Yamamuro, T. Matsuo and H. Suga
(Department of Chemistry, Faculty of Science, Osaka University.)

Heat capacity and phase transition of trimethylolethane.
K. Suenaga, T. Matsuo and H. Suga
(Department of Chemistry and Microcalorimetry Research Center, Faculty of Science, Osaka University, Toyonaka, Osaka.)

Phase transition of thermochromic complex $[Ni(dieten)_2][(ClO_4)_2$.
A. Nishimori, M. Sorai and D.N. Hendrickson*
(Osaka Univ., UCSD*.)

The swelling of n-butylammonium-vermiculite.
S. Kurokowa, T. Matsuo, H. Suga and R.K. Thomas*
(Department of Chemistry, Faculty of Science, Osaka University, *Physical Chemistry Laboratory Oxford University.)

Thermal properties of nematic main-chain polyesters with azoxybenzene esogen.
Y. Maeda
(Research Institute for Polymers and Textiles.)

Pressure effect on phase transitions of compound having two mesogenic groups on both ends of flexibile chain.
K. Takamizawa, K. Kobayashi, *Y. Ogawa
(Faculty of Engineering, Kyushu University, *Faculty of General Education, Kumamoto University.)

A study on the crystal phase transitions of polytetrafluoro-ethylene by ac calorimetry.

M. Futatsugi and Y. Sarayama
(Kyoto Inst. of Tech.)

Phase transitions and thermal conductivities of fluoropolymers.

Y. Nagano, K. Tashiro and M. Kobayashi
(Faculty of Science, Osaka University.)

Effect of hydration of sugar groups on the phase transition of the alkyl glycoside-water system.

H. Yoshioka, T. Ohmura, A. Goto and T. Fujita
(University of Shizuoka, School of Pharmaceutical Science, School of Liberal Arts and Sciences, School of Food and Nutritional Sciences.)

Measurement of heat capacity associated with phase transitions inmicellar liquid crystal CsPFO.

S. Imaizumi, C.W. Gerland*
(Department of Industrial Sociology, Faculty of Social Research, Nara University, *Department of Chemistry and Center for Materials Science and Engineering, Massachusetts Institute of Techmology.)

Characterization of sheet molding compound during thickening and cure.

G. Dallas, N. Urayama.
(E.I. Du Pont, Hakuto Co., Ltd.)

TG/DTG/DTA studies of the pyrolysis of chlorinated coals.

A.I. Gonzales de Andres, J. Bermejo, S.R. Moinelo and J.M.D. Tascon
(Instituto Nacional del Carbòn y sus Derivados, C.S.I.C., Apartado 73, 33080 Oviedo, Spain.)

International Mini-Symposium - Biocalorimetry

Thermal methods for ceramic characterization.

L. Benoist, S. Kaneko*
(Setaram, *Rigaku Corp.)

Melting of water sorbed in the phospholipid bilayers: effect of a highly unsaturated hydrocarbon chain.

T. Takizawa, H. Mitomo* and K. Hayashi**
(Department of Physics, Faculty of Genarela Studies, Gunma University, *Department of Biochemical Engineering, Faculty of Engineering, Gunma University, **Department of Physiology, Faculty of Educaton, Ibraki University.)

Thermal investigation of cell fusion with lipid-liposomal system (Calorimetric investigation on fusion of liposomal membranes induced by polyelthyleneglycol [PEG]-derivative- having a double-hydrocarbon chain).

M. Kodama, S. Tsuchiya, K. Nakayama, K. Akiyoshi*, J. Sunamoto*, H. Mizuno** and M. Sakiyama**
(Okayama Univ. of Science, Kyoto Univ.* and Osaka Univ.**)

Thermal transition of mutated dihydrofolate reductases.

H. Jedaira, S. Kidokoro*, M. Iwakura and S. Ohashi
(Res. Inst. for Polymers and Textiles, Tshukaba, Ibaraki Pref. 305, *Fac. Sci., Univ. of Tokyo, Bunkyo-ku, Tokyo, 113 Japan.)

Calorimetric studies of mutant -Subunits of Tryptophan Synthase.

K. Yutani and K. Ogasahara
(Institute for Protein Research, Osaka University.)

A differntial scanning calorimetric study of thermal conformational transitions of (1→3)-β-D-glucans in mixtures of water and dimethylsulfoxide.

S. Kitamura, C. Hara*, S. Ukai** and T. Kuge
(Department of Agricultural Chemistry, Kyoto Prefectural University, *Shotoku Gakuen Women's Junior College, and **Gifu Pharmaceutical University.)

Interaction of plasmid dna and drugs.

Y. Maeda, K. Nunomura and E. Ohtsubo
(Institute of Applied Microbiology, University of Tokyo, Bunkyo-ku, Tokyo 113.)

Stopped-flow calorimeter with a thermocouple array sensor for studies of energetic aspects of enzymic reactions.

T. Kodama and K. Kometani*
(Department of Biochemistry, Okayama University Dental School, Okayama 700 and *Faculty of Computer and System Engineering, Kyushu Institute of Tchnology, Iizuke 820)

Binding and reaction calorimeters in Na, K-ATPase - ATP system.

S. Morimot, Y. Hara* and M. Nakao*
(Research Institute for Polymers and Textiles and *Tokyo Medical and Dental University School of Medicine.)