

International Symposium
on
New Frontier of Thermal Studies of Materials

October 26-27, 1998



Tokyo Institute of Technology
Founded 1881

The 80th Anniversary Memorial Center
Nagatsuta Campus
(Sogo-Kenkyu-Kan)
Tokyo Institute of Technology
Nagatsuta-cho, Midori-ku, Yokohama, Japan

2nd Announcement

International Symposium on New Frontier of Thermal Studies of Materials

Organized by

Materials and Structures Laboratory, Tokyo Institute of Technology

Under the Auspices of

The Japan Society of Calorimetry and Thermal Analysis
and
The Society of Promotion for Calorimetry and Thermal Analysis, Japan

With the Consent of

Food Preservation Science
Japan Society of Cookery Science
Japan Society for Safety Engineering
Japan Society of Polymer Processing
Kinki Chemical Society, Japan
The Atomic Energy Society of Japan
The Carbon Society of Japan
The Chemical Society of Japan
The Crystallographic Society of Japan
The Japan Institute of Metals
The Japan Petroleum Institute
The Japan Society of Home Economics
The Japan Society of Applied Physics
The Japanese Biochemical Society
The Mineralogical Society of Japan
The Pharmaceutical Society of Japan
The Physical Society of Japan
The Society of Polymer Science, Japan
The Society of Rubber Industry, Japan
The Society of Materials Science, Japan

Japan Oil Chemists' Society
Japan Society for Bioscience, Biotechnology, and Agrochemistry
Japan Society of Refrigerating and Air Conditioning Engineers
Japan Society of Thermophysical Properties
Japanese Conference on the Biochemistry of Lipids
The Biophysical Society of Japan
The Ceramic Society of Japan
The Clay Science Society of Japan
The Iron and Steel Institute of Japan
The Japan Federation of Engineering Societies
The Japan Society for Analytical Chemistry
The Japan Society of Waste Management Experts
The Japanese Society for Food Science and Technology
The Japanese Society for Biomaterials
The Mining and Materials Processing Institute of Japan
The Protein Engineering Society of Japan
The Society of Chemical Engineers, Japan
The Society of Fiber Science and Technology, Japan
The Society for Fermentation and Bioengineering, Japan
The Surface Science Society of Japan

Organizing Committee

Chairman

Tooru Atake (Mater. & Struct. Lab., Tokyo Inst. of Technol.)

Executive Committee

Mitsuru Itoh (Mater. & Struct. Lab., Tokyo Inst. of Technol.)

Hitoshi Kawaji (Mater. & Struct. Lab., Tokyo Inst. of Technol.)

Toshimasa Hashimoto (Fac. of Eng., Tokyo Inst. of Technol.)

Hirofumi Hinode (Fac. of Eng., Tokyo Inst. of Technol.)

Masaharu Oguni (Fac. of Sci., Tokyo Inst. of Technol.)

Masataka Wakihara (Fac. of Eng., Tokyo Inst. of Technol.)

Scope

The symposium will consider new frontier of thermal studies of materials. The principles of new functional materials such as high temperature superconductors, solid state ionics, fullerenes and other inorganic and organic substances will be discussed on the relationship between the structure and the physical properties, especially on the phase transition and glass transition mechanisms. The invited lectures given by distinguished scientists will cover also the thermal stabilities and new process of synthesis for the materials.

The symposium will be organized by the Materials and Structures Laboratory (Director: Akira B. Sawaoka), and be held under the auspices of The Japan Society of Calorimetry and Thermal Analysis (Chairman: Yoichi Takahashi) and The Society of Promotion for Calorimetry and Thermal Analysis, Japan (Chairman: Sachio Murakami).

Symposium Site

The 80th Anniversary Memorial Center in Nagatsuta Campus
(Sogo-Kenkyu-Kan)

Tokyo Institute of Technology
4259 Nagatsuta-cho, Midori-ku
Yokohama, 226-8503 JAPAN

Tentative Time Table

Oct. 26 (Mon)	Oct. 27 (Tue)
8:30 Registration 9:30 Opening ceremony 10:00 Plenary lectures	9:30 Plenary lectures
10:50-11:10 coffee break	10:20-10:40 coffee break
11:10 Plenary lectures	11:40 Plenary lectures
12:00-13:00 lunch	11:55-13:00 lunch
13:00 Poster preview (odd number) Poster session	13:00 Poster preview (even number) Poster session
15:30 Plenary lectures	15:30 Plenary lectures
16:20-16:40 coffee break	16:20-16:40 coffee break
16:40 Plenary lectures	16:40 Plenary lectures
18:30-20:30 Banquet	18:00-19:00 Plenary discussion 19:00 Closing ceremony

Symposium Registration

On Monday, October 26, the conference registration desk will be located in the convention place of The 80th Anniversary Memorial Center (Sogo-Kenkyu-Kan), Nagatsuta Campus, Tokyo Institute of Technology and open from 9 AM. The desk will be open also during the symposium.

Each participant will receive the abstracts booklet, a name badge and information about the area. Please wear your name badge at all the symposium events.

Registration Fees

	by Sept. 30, 1998	[after Sept. 30, 1998]
Active participant:	¥10,000	[¥12,000]
Student:	¥ 5,000	[¥6,000]

The registration covers:

- Admission to the scientific sessions
- Abstracts booklet
- Coffee, soft drinks during the breaks
- Banquet

Please send the registration form by September 30.

International Symposium on
New Frontier of Thermal Studies of Materials

Registration Form

Name of participant: _____

Title: _____

Address: _____

Tel: _____ Fax: _____

E-mail: _____

Registration fee Per person

Active participant: ¥10,000

Student: ¥ 5,000

¥ _____

The registration fees are paid through bank transfer

熱国際シンポジウム

阿竹 徹

第一勧業銀行 青葉台支店

口座番号 395-1711518

are paid through postal transfer

熱国際シンポジウム

口座番号 00110-1-39176

or will be paid at the registration desk.

Signature _____ Date _____

Please Return to Professor Tooru Atake, Symposium Chairman
Materials and Structures Laboratory
Tokyo Institute of Technology
4259 Nagatsuta-cho, Midori-ku
Yokohama, 226-8503 JAPAN
TEL: +(81) 45-924-5343
FAX: +(81) 45-924-5339
E-mail: sympo@thermo.rlem.titech.ac.jp

By September 30, 1998

Accommodation

"Seminar Plaza - Suzukakedai" will be available; 1 min walk from Suzukakedai station of Tokyu Den'entoshi Line and 5 min walk from the Symposium Site. ¥6,930 for single per one night including tax and service charge (TEL: 81-427-99-1121, FAX: 81-427-99-1171).

"Livable Square Minami Machida" will be available; 15 min walk from the Symposium Site, or 5 min walk from the next station (Minamimachida station of Tokyu Den'entoshi Line) of the Symposium Site (Suzukakedai station). ¥6,825 for single per one night including tax and service charge (TEL: 81-427-99-0109, FAX: 81-427-99-0281).

"Central Hotel Machida" will be available; 20 min railway from the Symposium Site (Suzukakedai station). 5 min walk from Machida station of JR Yokohama Line (transfer at Nagatsuta station from Tokyu Den'entoshi Line). ¥6,500 for single per one night including tax and service charge (TEL: 81-427-20-3011, FAX: 81-427-20-3022).

Social Event

A banquet will be held in the evening of October 26th (18:30 ~ 20:30) at Seminar Plaza - Suzukakedai . It will be free for participation.

Climate

Weather in Yokohama in October is normally dry with temperatures between 15 - 25 .

How to Reach the Symposium Site

Participants from abroad are recommended to fly into Tokyo International Airport (Narita), and then make the connection to TIT Nagatsuta campus.

Many trains (Keisei Line and JR Line) and airport limousine buses connect Narita airport to downtown Tokyo. The recommended routes are

(1) Airport limousine bus from Airport to Tokyo City Air Terminal (TCAT)
2,900 Yen, 70 min.

+

Walk from TCAT to Suitenguumae station (Subway Hanzomon Line): about 5 min.

+

Subway Hanzomon Line from Suitenguumae station to Suzukakedai station. (Tokyu Den'entoshi Line connected directly to the Subway Hanzomon Line). Please get off at Suzukakedai station of Tokyu Den'entoshi Line. (Express for Chuo-Rinkan passes Suzukakedai station. Please change to a local train at Nagatsuta station.). Seminar Plaza - Suzukakedai is only 1 min walk from Suzukakedai station.

490 Yen, 60 min

(2) Keisei Narita Line from Narita station to Ueno station.

Limited Express-reserved seat (Skyliner) 1,920 Yen, 60 min
or Express 1,000 Yen, 80 min

+

Walk from Ueno station (Keisei Line) to Ueno station (Subway Ginza Line): about 5 min.

+

Subway Ginza Line from Ueno station to Omotesando station.
Change the Subway Line from Ginza Line to Hanzomon Line at Omotesando station.

Subway Hanzomon Line from Omotesando station to Suzukakedai station (Tokyu Den'entoshi Line connected directly to the Subway Hanzomon Line). Please get off at Suzukakedai station of Tokyu Den'entoshi Line. (Express for Chuo-Rinkan passes Suzukakedai station. Please change to a local train at Nagatsuta station.). Seminar Plaza - Suzukakedai is only 1 min walk from Suzukakedai station.

490 Yen, 70 min (Ueno to Suzukakedai)

Presentation

Contributed papers will be presented by means of both oral and poster. These will be allow further in-depth discussion and should display the major visual aids and data of the contribution. The time given for the oral presentation of a contributing paper is no longer than 2 minutes. Therefore, please use less than 2 of slides, transparencies and/or a PC projector.

Plenary lectures will be also presented by poster.

The official language of the symposium is English.

Slides

The 35 mm slides for presentation should be handed to the reception in front of the oral presentation room at least 15 min before the beginning of the session in which the presenter is scheduled to give a talk. The presentation code, the name of the presenter and the serial number for showing in the talk should be written on the right upper corner on each slide.

Transparencies

The transparencies for the overhead projector have to be handled by the presenter her- or himself.

PC projector

The LCD projector which can be connected to personal computers is available. The presenter who want to use it should contact to the organizing committee before the symposium.

Poster

All the posters should be designed to fit an area, 180 cm (height) × 120 cm (width), and easily readable from a distance of 2 m. Poster room will be open at 9:00 AM. All the posters should be presented all time during the symposium (2 days). The presence of one of the authors is required at least one hour during the designated poster session.

Proceedings

Full-length paper will be published by Kluwer Academic Publishers in Journal of Thermal Analysis and Calorimetry. Those who present paper(s) are invited to submit manuscript(s) for the proceedings. All the manuscript will be carefully reviewed in regular manner by two independent referees. Please submit your contribution to the Symposium Chairman by October 20, 1998.

Related Meeting

After the Symposium period, the 34th Japanese Conference on Calorimetry and Thermal Analysis will be held in downtown Yokohama, 50 min by train from the Symposium site.

Those who wish to attend the meeting should contact the chairman.

The 34th Japanese Conference on Calorimetry and Thermal Analysis

October 28(Wed)-30(Fri)

Yokohama-shi Kyoiku Bunka Hall (Education & Culture Center)

1-1 Bandai-cho, Naka-ku, Yokohama 231-0031

TEL: +81-45-671-3717

and

Yokohama-shi Ginou Bunka Kaikan (Skill & Cultural Hall)

2-4-7 Bandai-cho, Naka-ku, Yokohama 231-0031

TEL: +81-45-681-6551

Chairman of the conference: Prof. Tooru Atake

Materials and Structures Laboratory

Tokyo Institute of Technology

4259 Nagatsuta-cho, Midori-ku

Yokohama, 226-8503 JAPAN

TEL: +(81) 45-924-5343

FAX: +(81) 45-924-5339

E-mail: conf@thermo.rlem.titech.ac.jp

URL: <http://thermo.rlem.titech.ac.jp/jccta34/>

Tentative Program

Oct. 26 (Mon)

8:30-9:30 Registration

9:30-10:00 Opening ceremony T. Atake, presiding

Akira B. Sawaoka (Director, Materials and Structures Laboratory, Tokyo Institute of Technology)

Yoichi Takahashi (Chairman, The Japan Society of Calorimetry and Thermal Analysis)

Hiroo Inokuchi (Professor Emeritus, The University of Tokyo; National Space Development Agency of Japan)

Edgar F. Westrum, Jr. (Professor, Department of Chemistry, The University of Michigan)

10:00-10:25 Plenary lecture 1 chair M. Wakihara & T. Atake

Modeling Sub- and Super-ambient Heat Capacities with the Lanthanide Contraction and Group IVA Compounds

Edgar F. Westrum, Jr. (Dept. Chem., Univ. Michigan, USA)

10:25-10:50 Plenary lecture 2 chair M. Wakihara & T. Atake

Redox Thermochemistry of Non-stoichiometric Oxides Related to the Perovskite-, Brownmillerite- and K_2NiF_4 -type

Svein Stølen (Dept. Chem., Univ. Oslo, Norway)

10:50-11:10 coffee break

11:10-11:35 Plenary lecture 3 chair A. Navrotsky

Thermal Behavior of Surfactant CTAB Containing Aromatic Compounds

Hiroshi Suga (Res. Inst. Sci. Tech., Kinki Univ., Japan)

11:35-12:00 Plenary lecture 4 chair A. Navrotsky

Phase Transitions Arising from Spin Crossover Phenomena (tentative title)

Michio Sorai (Microcalorimetry Res. Center, Osaka Univ., Japan)

12:00-13:00 lunch

**13:00-15:30 Poster preview (odd numbers)
and Poster Presentation**

15:30-15:55 Plenary lecture 5 chair M. Itoh & H. Kawaji

Janusz Nowotny (Australian Nucl. Sci. & Tech. Org., Australia)

15:55-16:20 Plenary lecture 6 chair M. Itoh & H. Kawaji
High Temperature Reaction Calorimetry Applied to Metastable and Nanophase Oxides and Oxyhydroxides
Alexandra Navrotsky (Dept. Chem. Eng. & Mater. Sci., Univ. California Davis, USA)

16:20-16:40 coffee break

16:40-17:05 Plenary lecture 7 chair J. Nowotny & K.L. Ngai
Generalized Chemical Potential Diagram and Its Utilization in Materials Chemistry
Harumi Yokokawa (Natioanl Inst. Mater. Chem. Res., Japan)

17:05-17:30 Plenary lecture 8 chair J. Nowotny & K.L. Ngai
High Tc Superconductivity in Electron-doped Layered Metal Nitrides
Shoji Yamanaka (Dept. Appl. Chem., Hiroshima Univ., Japan)

17:30-17:55 Plenary lecture 9 chair J. Nowotny & K.L. Ngai
Study of Defect Chemistry of Lithium-based Oxide Ceramics with Vapor Pressure and Work Function Measurements
Michio Yamawaki (School Eng., Univ. Tokyo, Japan)

17:55-18:20 Plenary lecture 10 chair J. Nowotny & K.L. Ngai
High-precision Heat Capacity Measurement of Liquid with Joule-heating AC Calorimetry I.
Ichiro Hatta (Dept. Appl. Phys, Nagoya Univ., Japan)

18:30-20:30 Banquet (Stand-up buffet dinner)

Oct. 27 (Tue)

9:30-9:55 Plenary lecture 11 chair T. Hashimoto & H. Hinode
Thermal Conductivities of Molecular Materials
Mary Anne White (Dept. Chem., Dalhousie Univ., Canada)

9:55-10:20 Plenary lecture 12 chair T. Hashimoto & H. Hinode
Calorimetric Methods for the Determination of Fragility in Liquids from Both Thermodynamic and Kinetic Approaches
C. Austen Angell (Dept. Chem. & Biochem., Arizona State Univ., USA)

10:20-10:40 coffee break

10:40-11:05 Plenary lecture 13 chair T. Mitsuhashi
Enthalpy and Relaxation in Non-crystalline Solids
Jili Málek (Joint Lab. Solid State Chem, Acad. Sci. Czech Repub. Univ. Pardubice, Czech)

- 11:05-11:30 Plenary lecture 14 chair C.A. Angell**
Deuteration-induced Phase Transitions in Hydrogen-bonded Crystals
Takasuke Matsuo (School Sci., Osaka Univ., Japan)
- 11:30-11:55 Plenary lecture 15 chair C.A. Angell**
Study on Phase Transitions of Functional Materials, Doped CeO_2 and Ti-isotope Controlled PbTiO_3 by Heat Capacity Measurement
Tsuneo Matsui (Dept. Quantum Eng., Nagaya Univ., Japan)
- 11:55-13:00 lunch**
- 13:00-15:30 Poster preview (even numbers)
and poster presentation**
- 15:30-15:55 Plenary lecture 16 chair M. Oguni & S. Kidokoro**
Decoupled Molecular Dynamics of Small Molecule Glass-forming Liquids Confined in Nano-pores
K.L. Ngai (Naval Research Laboratory, USA)
- 15:55-16:20 Plenary lecture 17 chair M. Oguni & S. Kidokoro**
Dynamics and Thermodynamics of Protein Folding
Hans-J. Hinz (Inst. Phys. Chem., Westfaelische Wilhelms Univ., Germany)
- 16:20-16:40 coffee break**
- 16:40-17:05 Plenary lecture 18 chair H.J. Hinz & J. Malek**
Thermodynamic Properties of Formyltransferase from Hyperthermophilic *Methanopyrus Kandleri*
Katsutada Takahashi (Lab. Biophys. Chem., Osaka Prefecture Univ., Japan)
- 17:05-17:30 Plenary lecture 19 chair H.J. Hinz & J. Malek**
Heat Capacity of Intercalated Layered Materials Fe_xNbS_2 at Low Temperature
Toshihide Tsuji (Japan Advanced Inst. Sci. Tech., Hokuriku, Japan)
- 17:30-17:55 Plenary lecture 20 chair H.J. Hinz & J. Malek**
Heat Capacity of One-dimensional $\text{Na}_2\text{Ru}_4\text{O}_9$
Takahumi Mitsuhashi (National Inst. Res. Inorg. Mater., Japan)
- 18:00-19:00 Plenary discussion M.A. White and S. Stølen, presiding**
- 19:00 Closing ceremony T. Atake, presiding**

Posters

p-1

Molecular Aggregation State of Acrylic and Methacrylic Acid Esters Containing Long Fluorocarbon Chains and Their Polymarizability

A. Fujimori, H. Saitoh and Y. Shibasaki (Saitama Univ.)

p-2

Calorimetric Investigation of the Monolayers Formed at Solid-liquid Interface

A. Inaba (Osaka Univ.)

p-3

High Temperature Reaction Calorimetry Applied to Metastable and Nanophase Oxides and Oxyhydroxides

A. Navrotsky (Univ. California Davis, USA)

p-4

Modeling Sub- and Super-ambient Heat Capacities with the Lanthanide Contraction and Group IVA Compounds

E.F. Westrum, Jr. and B.H. Justice (Univ. Michigan, USA)

p-5

Dynamics and Thermodynamics of Protein Folding

H. Hinz (Wilhelms Univ., Germany)

p-6

Thermal Behavior of Surfactant CTAB Containing Aromatic Compounds

H. Suga (Kinki Univ.)

p-7

Generalized Chemical Potential Diagram and Its Utilization in Materials Chemistry

H. Yokokawa, K. Yamaji, T. Horita and N. Sakai (National Inst. Mater. Chem. Res.)

p-8

Structure Relaxation of n-alkanes Observed by the Simultaneous DSC-FTIR Method

H. Yoshida (Tokyo Metropolitan Univ.)

p-9

High-precision Heat Capacity Measurement of Liquid with Joule-heating AC Calorimetry I

I. Hatta, H. Yao and K. Ema (Nagoya Univ.)

p-10

High-precision Heat Capacity Measurement of Liquid with Joule-heating AC Calorimetry II

H. Yao, K. Ema and I. Hatta (Tokyo Inst. Technol.)

p-11

Phase Transition and Thermal Property of the Synthesized Leucite-type Compounds

I. Yanase, H. Kobayashi and T. Mitamura (Saitoma Univ.)

p-13

Enthalpy and Relaxation in Non-crystalline Solids

J. Malek (Univ. Pardubice, Czech)

p-14

Analysis of High Order Harmonics in Temperature Wave for Fourier Transform Thermal Analysis

J. Morikawa and T. Hashimoto (Tokyo Inst. Technol.)

p-15

Enhancement of Thermal Dissociation of DNA in Aqueous Solution by Ceramic Treatment of Water

K. Amaya (J.B.I. Co. Ltd.)

p-16

Toluene in Liquid, Supercooled-liquid and Glass States: Raman-spectroscopic Studies

K. Ishii, H. Nakayama, T. Hosokawa, M. Watanabe and C. Abematsu (Gakushuin Univ.)

p-17

Calorimetric Methods for the Determination of Fragility in Liquids from Both Thermodynamic and Kinetic Approaches

K. Ito, L. Martinez, J. Fan and C. A. Angell (Arizona State Univ., USA)

p-18

High Oxygen Ion Conductivity of Perovskite Related Oxide Sustem ($\text{Ba}_{1-x}\text{La}_x$)₂

($\text{In}_{1-y}\text{Ga}_y$)₂O_{5+x/2}

K. Kakinuma, H. Yamamura, H. Haneda and T. Atake (Kanagawa Univ.)

p-19

Deuteration-induced Phase Transitions in Hydrogen-bonded Crystals

K. Kohno, T. Maekawa, M. Fukai, O. Yamamuro, A. Inaba, T. Matsuo and M. Ichikawa (Osaka Univ.)

p-20

Decoupled Molecular Dynamics of Small Molecule Glass-forming Liquids Confined in Nano-pores

K.L. Ngai (Naval Res. Lab., USA)

p-21

Structure of a Lamellar Phase Formed by Nonionic Surfactant and Water

K. Minewaki, T. Kato, H. Yoshida and M. Imai (Tokyo Metropolitan Univ.)

p-22

Intramolecular Motional Dedrees of Freedom and Phase Behavior of Molecular Systems

K. Saito (Osaka Univ.)

p-23

Thermal Studies of Intermolecular Magnetic Interactions of Genuine Organic Compounds under Pressure

K. Takeda, M. Mito, K. Mukai, F. A. Neugebauer and M. Kinoshita (Kyushu Univ.)

p-24

Excess Thermal Expansion Coefficients of Polar Mixtures and Aqueous Solution

K. Tamura (Osaka City Univ.)

p-25

Thermal Conductivities of Molecular Materials

M. A. White (Dalhousie Univ. , Canada)

p-26

Formation of Amorphous AgI Aggregates Dominating Fast Ion Conductivity in AgI-based Glasses

M. Hanaya, A. Hatake and M. Oguni (Tokyo Inst. Technol.)

p-27

Borate Anomaly in Lithium Borate Glasses with Special Reference to Their Densities and Ultrasonic Velocities

M. Kodama, S. Feller and M. Affatigato (Kumamoto Inst. Technol.)

p-28

Thermal Control of Growth Mode in Laser MBE of SrTiO₃ Film

M. Lippman, S. Ohashi, M. Kawasaki and H. Koinuma (Tokyo Inst. Technol.)

p-29

Relationship Between Calorimetric Entropy and Statistical Entropy of the Nonequilibrium System with Heat Exchange

M. Ochiai, R. Ozao and Y. Yamazaki (North Shore College SONY Inst.)

p-30

Phase Transitions Arising from Spin Crossover Phenomena

M. Sorai (Osaka Univ.)

p-31

Neutron Inelastic Scattering Study of Ferroelectric Phase Transition in Li₂Ge₇O₁₅

M.W. Takeda, Y. Noda, T. Yamaguchi and Y. Iwata (Shinshu Univ.)

p-32

Study of Defect Chemistry of Lithium-based Oxide Ceramics with Vapor Pressure and Work Function Measurements

M. Yamawaki, A. Suzuki, T. Yokota and K. Yamaguchi (Univ. Tokyo)

p-33

J. Nowotny (Australian Nucl. Sci. & Tech. Org., Australia)

p-34

Magnetic Heat Capacity and Monte Carlo Simulation of LiNiO₂

O. Fujishima, H. Kawaji, T. Atake, A. Hirano and R. Kanno (Tokyo Inst. Technol.)

p-35

Commercial Apparatus for Measuring the Heat Capacity of Small Samples from 1.9 K to 350 K

R. Black, J. Diederichs, S. Spagna, M. Simmonds and S. Tripp (Quantum Design)

p-36

Heat of Formation for Solid Solution LiM_yMn_{2-y}O₄ (M=Mg, Ni) Spinel

R. Yamaguchi, H. Ikuta and M. Wakihara (Tokyo Inst. Technol.)

p-37

pH Dependence of Enthalpy Change Accompanying the Thermal Transition of Small Globular Proteins

S. Kidokoro (Sagami Chem. Res. Center)

p-38

Survey of Chalcogenide Superconductors

S. Nagata and T. Atake (Muroran Inst. Technol.)

p-39

Thermodynamic Properties of Formyltransferase from Hyperthermophilic Methanopyrus Kandleri

S. Shima, U. Ermler, H. Fukada, K. Takahashi and R.K. Thauer (Osaka Prefecture Univ.)

p-40

Redox Thermochemistry of Non-stoichiometric Oxides Related to the Perovskite-, Brownmillerite- and K_2NiF_4 -type

S. Stølen (Univ. Oslo, Norway)

p-41

High Tc Superconductivity in Electron-doped Layered Metal Nitrides

S. Yamanaka (Hiroshima Univ.)

p-42

Thermal Investigation of Monoclinic Hydroxyapatite Prepared by Wet and Dry Methods

T. Ikoma, Y. Kubo, S. Nakamura, M. Akao and A. Yamazaki (Waseda Univ.)

p-43

Thermal Properties of Three Hydrate Crystals (A,M and H) of Guanosine

T. Kimura, M. Unetani, Y. Sugawara, H. Urabe and S. Takagi (Kinki Univ.)

p-44

Study on Phase Transitions of Functional Materials, Doped CeO_2 and Ti-isotope Controlled $PbTiO_3$ by Heat Capacity Measurement

T. Matsui, H. Shigematsu, Y. Arita, S. Yamazaki, T. Futatsugi and T. Ohashi (Nagoya Univ.)

p-45

Heat Capacity of One-dimensional $Na_2Ru_4O_9$

T. Mitsuhashi, A. Watanabe and Y. Onoda (National Inst. Res. Inorg. Mater.)

p-46

Improvement of Electrical Conductivity in Fluorite CeO_2 and Fluorite Related Y_2O_3

Systems Based on a Unique Effective Index

T. Mori, T. Ikegami, H. Yamamura and T. Atake (National Inst. Res. Inorg. Mater.)

p-47

Phase Transition and Structural Changes in $CaFeO_3$

T. Takeda, R. Kanno, Y. Kawamoto, M. Takano and T. Kamiyama (Kobe Univ.)

p-48

Heat Capacity Measurement of $(Cr_{1-x}M_x)_3Te_4$ (M=Fe,Ni) at High Temperature

T. Tsuji, K. Yasui and K. Ishida (Japan Advance Inst. Sci. Technol., Hokuriku)

p-49

Heat Capacity of Intercalated Layered Materials Fe_xNbS_2 at Low Temperature

T. Tsuji, Y. Yamamura, H. Watanabe, K. Saito and M. Sorai (Japan Advance Inst. Sci. Technol., Hokuriku)

p-50

Identification of Kind of Polyethylene by DSC -Application to Forensic Science-

T. Tsukame, M. Kutsuzawa, H. Sekine, H. Saitoh and Y. Shibasaki (Saitama Prefecture Police H. Q.)

p-51

Thermal Diffusivity Measurement of CVD Diamond Films Using a Laser-heating AC Calorimetric Method

T. Yamane, S. Katayama and M. Todoki (Toray Res. Center, Inc.)

p-52

Temperature-related Phase Transitions in CuO

X.G. Zheng et al. (Saga Univ.)

p-53

Correlation of Thermal Stability and Corrosion Property in High-temperature Superconductors

X.G. Zheng et al. (Saga Univ.)

p-54

Ultra Slow Relaxation Dynamics Studied by Impulsive Stimulated Thermal Scattering

Y. Tsujimi, M. Kobayashi, T. Matsui, H. Furuta and T. Yagi (Hokkaido Univ.)

p-55

Combustion Calorimetry of Carbons

Y. Nagano, M. Gouali, T. Sugimoto and Y. Achiba (Osaka Univ.)

p-56

Properties of $\text{Ln}_{1-x}\text{Sr}_x\text{MnO}_3$ ($\text{Ln}=\text{La-Gd}$) as the Cathode Material for Solid Oxide Fuel Cells

Y. Sakaki, Y. Takeda, A. Kato, N. Imanishi, O. Yamamoto, M. Hattori, M. Iio and Y. Esaki (Mie Univ.)

p-57

Journal of Thermal Analysis and Calorimetry; Past, Present and Future

J. Simon (Tech. Univ. Budapest)

p-58

Dopant Mass Effect on the Lattice Vibrations of Scandia- and Yttria-doped Zirconia

T. Tojo, T. Atake, O. Yamamoto, T. Mori and H. Yamamura (Tokyo Inst. Technol.)

Deadlines

Abstract: September 30, 1998

Registration and Payment: September 30, 1998

Manuscript for Proceedings: October 20, 1998

Further Inquiries

Professor Tooru Atake, Symposium Chairman

Materials and Structures Laboratory

Tokyo Institute of Technology

4259 Nagatsuta-cho, Midori-ku

Yokohama, 226-8503 JAPAN

TEL:+(81) 45-924-5343

FAX:+(81) 45-924-5339

E-mail: sympo@thermo.rlem.titech.ac.jp

URL: <http://thermo.rlem.titech.ac.jp/sympo/>