



## Subject index

### AAC

On the applicability of optical depth-atomic absorption relationship to measurements of alkali seeded combustion flames 107

### AC calorimetry

Application of dynamic differential scanning calorimetry to study of phase transitions 83

### ACC

Development of the light heating dynamic DSC 75

### Acoustic emission

A study on phase transition of CsCl  $\rightleftharpoons$  NaCl in CsCl, NH<sub>4</sub>Cl and NH<sub>4</sub>Br by simultaneous AE-DTA measurement 405

### Alginate films

Thermal properties of water insoluble alginate films containing di- and trivalent cations 343

### Alkali metal

On the applicability of optical depth-atomic absorption relationship to measurements of alkali seeded combustion flames 107

### Amorphous polymer

Effect of chemical structure of amorphous polymers on heat capacity difference at glass transition temperature 249

### Anhydrous $\gamma$ -FeO(OH)

A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma$ -FeO(OH) 195

### Aromatic polyformal

Thermal degradation of aromatic polyformals derived from bisphenol A and bisphenol AF 231

### Artificial kidney

Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169

### *Aspergillus niger*

Differential scanning calorimetric studies of the thermal unfolding of acid proteinase A from *Aspergillus niger* at various pHs 373

### Belousov-Zhabotinskii reaction

Thermal behavior of Belousov-Zhabotinskii reactions with Ce(IV) salts measured by heat exchange calorimetry of flow type involving simultaneous observation of potentiometric oscillations 95

### Benzene

Excess thermodynamic properties of mixtures of cyclohexanone and benzene at 298.15 and 308.15 K and the effect of excess expansion factor 323

### Binary mixture

Thermal diffusivity in a binary mixture of poly(phenylene oxide) and polystyrene 289

### Biological material

Isothermal microcalorimetry for the characterization of interactions between drugs and biological materials 45

### Capillary condensed liquid

Phase transition of capillary condensed liquids in porous silica: effect of surface hydroxyl groups 159

### Cations

Thermal properties of water insoluble alginate films containing di- and trivalent cations 343

### Ce(IV) salts

Thermal behavior of Belousov-Zhabotinskii reactions with Ce(IV) salts measured by heat exchange calorimetry of flow type involving simultaneous observation of potentiometric oscillations 95

### Chalcogenide

Thermochemical studies of inorganic chalcogenides by fluorine-combustion calorimetry: binary compounds of germanium and silicon with sulfur, selenium and tellurium 1

### Chromium deficiency

Simultaneous thermogravimetry-mass spectrometry for a solid oxide fuel cell interconnect, (La<sub>0.7</sub>Ca<sub>0.32</sub>)CrO<sub>3</sub> 129

- Circular dichroism  
Heat denaturation and cold denaturation of *Escherichia coli* RNase HI investigated by circular dichroism 379
- Cobalt(II) bromate hexahydrate  
Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Cold denaturation  
Heat denaturation and cold denaturation of *Escherichia coli* RNase HI investigated by circular dichroism 379
- Crystallization  
Activation energy for crystallization of low molecular weight poly(ethylene oxide) and low molecular weight poly(ethylene oxide)/poly(methyl methacrylate) blends determined by DSC and polarized optical microscopy 259
- Crystallization kinetics  
Crystallization kinetics of zirconia-yttria gels 181
- Crystallization kinetics  
The applicability of Johnson-Mehl-Avrami model in the thermal analysis of the crystallization kinetics of glasses 61
- CsCl and NaCl type structure  
A study on phase transition of CsCl  $\rightleftharpoons$  NaCl in CsCl, NH<sub>4</sub>Cl and NH<sub>4</sub>Br by simultaneous AE-DTA measurement 405
- Cyclohexanone  
Excess thermodynamic properties of mixtures of cyclohexanone and benzene at 298.15 and 308.15 K and the effect of excess expansion factor 323
- Debye temperature  
Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Dissolve in eutectic mixture  
Observation of the melting process for ethyl *p*-aminobenzoate doped with eutectic mixture 313
- Dopentacontane  
Freezing-in phenomena of high-temperature structures and their structural determination for henpentacontane and dopentacontane 297
- Drug  
Isothermal microcalorimetry for the characterization of interactions between drugs and biological materials 45
- DSC  
Activation energy for crystallization of low molecular weight poly(ethylene oxide) and low molecular weight poly(ethylene oxide)/poly(methyl methacrylate) blends determined by DSC and polarized optical microscopy 259
- DSC  
Application of dynamic differential scanning calorimetry to study of phase transitions 83
- DSC  
Crystallization kinetics of zirconia-yttria gels 181
- DSC  
Development of the light heating dynamic DSC 75
- DSC  
Differential scanning calorimetric studies of the thermal unfolding of acid proteinase A from *Aspergillus niger* at various pHs 373
- DSC  
Effect of Na<sup>+</sup> concentrations on both size and multiplicity of multilamellar vesicles composed of negatively charged phospholipid as revealed by differential scanning calorimetry and electron microscopy 365
- DSC  
Effects of salts on the gel-sol transition of gelatin gum by differential scanning calorimetry and thermal scanning rheology 269
- DSC  
Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169
- DSC  
Thermal properties of water insoluble alginate films containing di- and trivalent cations 343
- DSC/X-ray diffraction  
Dynamic analysis of the melting behavior of polymers showing polymorphism observed by simultaneous DSC/X-ray diffraction measurements 239
- DTA  
A study on phase transition of CsCl  $\rightleftharpoons$  NaCl in CsCl, NH<sub>4</sub>Cl and NH<sub>4</sub>Br by simultaneous AE-DTA measurement 405
- Dynamic DSC  
Development of the light heating dynamic DSC 75
- Einstein temperature  
Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Electrical conductivity  
High temperature heat capacities and electrical conductivities of UO<sub>2</sub> doped with Nd and Mg 389

- Electrochemical doping  
  Electrochemical Peltier heat in the polypyrrole-electrolyte system 139
- Electrolyte  
  Electrochemical Peltier heat in the polypyrrole-electrolyte system 139
- Electron microscopy  
  Effect of Na<sup>+</sup> concentrations on both size and multiplicity of multilamellar vesicles composed of negatively charged phospholipid as revealed by differential scanning calorimetry and electron microscopy 365
- Enthalpy  
  Excess enthalpies of some halogenized aromatic compounds + methyl methylthiomethyl sulfoxide or + dimethyl sulfoxide at 298.15 K XI. Thermodynamics of liquid mixtures containing methyl methylthiomethyl sulfoxide 333
- Entropy change  
  Electrochemical Peltier heat in the polypyrrole-electrolyte system 139
- Escherichia coli* RNase HI  
  Heat denaturation and cold denaturation of *Escherichia coli* RNase HI investigated by circular dichroism 379
- Evolved gas  
  Study of fire-retardant polymers using temperature jump/Fourier transform infrared spectroscopy 223
- Excess expansion factor  
  Excess thermodynamic properties of mixtures of cyclohexanone and benzene at 298.15 and 308.15 K and the effect of excess expansion factor 323
- Fire-retardant polymer  
  Study of fire-retardant polymers using temperature jump/Fourier transform infrared spectroscopy 223
- Flame  
  On the applicability of optical depth-atomic absorption relationship to measurements of alkali seeded combustion flames 107
- Fluorine-combustion calorimetry  
  Thermochemical studies of inorganic chalcogenides by fluorine-combustion calorimetry: binary compounds of germanium and silicon with sulfur, selenium and tellurium 1
- Fluorine-containing polymer  
  Thermal degradation of aromatic polyformals derived from bisphenol A and bisphenol AF 231
- Freezing-in  
  Freezing-in phenomena of high-temperature structures and their structural determination for henpentacontane and dopentacontane 297
- FT-IR  
  Study of fire-retardant polymers using temperature jump/Fourier transform infrared spectroscopy 223
- Ganglioside  
  Calorimetric and small angle X-ray and neutron scattering studies of mixing gangliosides and methylated albumin 355
- Gel-sol transition  
  Effects of salts on the gel-sol transition of gellan gum by differential scanning calorimetry and thermal scanning rheology 269
- Gellan gum  
  Effects of salts on the gel-sol transition of gellan gum by differential scanning calorimetry and thermal scanning rheology 269
- Germanium  
  Thermochemical studies of inorganic chalcogenides by fluorine-combustion calorimetry: binary compounds of germanium and silicon with sulfur, selenium and tellurium 1
- Glass  
  The applicability of Johnson-Mehl-Avrami model in the thermal analysis of the crystallization kinetics of glasses 61
- Glass transition temperature  
  Effect of chemical structure of amorphous polymers on heat capacity difference at glass transition temperature 249
- Hafnium-oxygen alloy  
  Heat capacity measurements of hafnium-oxygen solid solutions at high temperatures 397
- Halogenized aromatic compounds  
  Excess enthalpies of some halogenized aromatic compounds + methyl methylthiomethyl sulfoxide or + dimethyl sulfoxide at 298.15 K XI. Thermodynamics of liquid mixtures containing methyl methylthiomethyl sulfoxide 333
- Heat capacity  
  Effect of chemical structure of amorphous polymers on heat capacity difference at glass transition temperature 249
- Heat capacity  
  Heat capacity measurements of hafnium-oxygen solid solutions at high temperatures 397
- Heat capacity  
  High temperature heat capacities and electrical conductivities of UO<sub>2</sub> doped with Nd and Mg 389

- Heat capacity  
 Low temperature heat capacities of zirconia and yttria-doped zirconia ( $\text{ZrO}_2$ )<sub>1-x</sub>( $\text{Y}_2\text{O}_3$ )<sub>x</sub> ( $x = 0, 0.0200, 0.0396$ ) 415
- Heat capacity  
 Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Heat capacity  
 Very low-temperature heat capacities and magnetic thermal anomalies of the organic free radical magnet, 4-methacryloylamino-2,2,6,6-tetramethylpiperidine-1-oxyl (MATMP) 435
- Heat denaturation  
 Heat denaturation and cold denaturation of *Escherichia coli* RNase HI investigated by circular dichroism 379
- Heat exchange calorimetry  
 Thermal behavior of Belousov-Zhabotinskii reactions with Ce(IV) salts measured by heat exchange calorimetry of flow type involving simultaneous observation of potentiometric oscillations 95
- Heat of dissolution  
 Observation of the melting process for ethyl *p*-aminobenzoate doped with eutectic mixture 313
- Heat of mixing  
 Observation of the melting process for ethyl *p*-aminobenzoate doped with eutectic mixture 313
- Henpentacontane  
 Freezing-in phenomena of high-temperature structures and their structural determination for henpentacontane and dopentacontane 297
- High resolution TG  
 A combined thermogravimetric-gas chromatographic/mass spectrometric analysis (TG-GC/MS) using a high resolution TG technique 209
- High-temperature structures  
 Freezing-in phenomena of high-temperature structures and their structural determination for henpentacontane and dopentacontane 297
- Hydrated  $\gamma$ -FeO(OH)  
 A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma$ -FeO(OH) 195
- Hydrogel  
 Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169
- Hydrogen insertion  
 Application of macro-TG (Shimadzu TGA-51) to hydrogen spillover in a tungsten(VI) oxide system 117
- Interaction  
 Isothermal microcalorimetry for the characterization of interactions between drugs and biological materials 45
- IR spectrum  
 Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Isothermal microcalorimetry  
 Isothermal microcalorimetry for the characterization of interactions between drugs and biological materials 45
- Johnson-Mehl-Avrami model  
 The applicability of Johnson-Mehl-Avrami model in the thermal analysis of the crystallization kinetics of glasses 61
- Kinetics  
 A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma$ -FeO(OH) 195
- Kinetics  
 Thermal analysis and kinetics of solid state reactions 29
- Lanthanum calcium chromite  
 Simultaneous thermogravimetry-mass spectrometry for a solid oxide fuel cell interconnect, ( $\text{La}_{0.7}\text{Ca}_{0.32}$ )CrO<sub>3</sub> 129
- Latent heat  
 Application of dynamic differential scanning calorimetry to study of phase transitions 83
- Light heating  
 Development of the light heating dynamic DSC 75
- Linear heat capacity  
 Application of dynamic differential scanning calorimetry to study of phase transitions 83
- Low energy excitations  
 Low temperature heat capacities of zirconia and yttria-doped zirconia ( $\text{ZrO}_2$ )<sub>1-x</sub>( $\text{Y}_2\text{O}_3$ )<sub>x</sub> ( $x = 0, 0.0200, 0.0396$ ) 415
- Magnetic thermal anomalies  
 Very low-temperature heat capacities and magnetic thermal anomalies of the organic free radical magnet, 4-methacryloylamino-2,2,6,6-tetramethylpiperidine-1-oxyl (MATMP) 435
- Melting  
 Dynamic analysis of the melting behavior of polymers showing polymorphism observed by

- simultaneous DSC/X-ray diffraction measurements 239
- Melting process  
Observation of the melting process for ethyl *p*-aminobenzoate doped with eutectic mixture 313
- 4-Methacryloyl-amino-2,2,6,6-tetramethylpiperidine-1-oxyl  
Very low-temperature heat capacities and magnetic thermal anomalies of the organic free radical magnet, 4-methacryloylamino-2,2,6,6-tetramethylpiperidine-1-oxyl (MATMP) 435
- Methylated albumin  
Calorimetric and small angle X-ray and neutron scattering studies of mixing gangliosides and methylated albumin 355  
Mg doped UO<sub>2</sub>  
High temperature heat capacities and electrical conductivities of UO<sub>2</sub> doped with Nd and Mg 389
- Mixing heat  
Calorimetric and small angle X-ray and neutron scattering studies of mixing gangliosides and methylated albumin 355
- Multilamellar vesicle  
Effect of Na<sup>+</sup> concentrations on both size and multiplicity of multilamellar vesicles composed of negatively charged phospholipid as revealed by differential scanning calorimetry and electron microscopy 365  
Nd doped UO<sub>2</sub>  
High temperature heat capacities and electrical conductivities of UO<sub>2</sub> doped with Nd and Mg 389
- Neutron scattering  
Calorimetric and small angle X-ray and neutron scattering studies of mixing gangliosides and methylated albumin 355
- Nitrogen gas adsorption-desorption  
Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169
- Non-electrolyte mixtures  
Structure and the thermodynamics of non-electrolyte mixtures 15
- Non-linear heat capacity  
Application of dynamic differential scanning calorimetry to study of phase transitions 83
- Optical depth  
On the applicability of optical depth-atomic absorption relationship to measurements of alkali seeded combustion flames 107
- Order-disorder transition  
Heat capacity measurements of hafnium-oxygen solid solutions at high temperatures 397
- Peltier heat  
Electrochemical Peltier heat in the polypyrrole-electrolyte system 139
- Phase transition  
A study on phase transition of CsCl = NaCl in CsCl, NH<sub>4</sub>Cl and NH<sub>4</sub>Br by simultaneous AEDTA measurement 405
- Phase transition  
Application of dynamic differential scanning calorimetry to study of phase transitions 83
- Phase transition  
Phase transition of capillary condensed liquids in porous silica: effect of surface hydroxyl groups 159
- Phospholipid  
Effect of Na<sup>+</sup> concentrations on both size and multiplicity of multilamellar vesicles composed of negatively charged phospholipid as revealed by differential scanning calorimetry and electron microscopy 365
- Polarized optical microscopy  
Activation energy for crystallization of low molecular weight poly(ethylene oxide) and low molecular weight poly(ethylene oxide)/poly(methyl methacrylate) blends determined by DSC and polarized optical microscopy 259
- Poly(ethylene oxide)  
Activation energy for crystallization of low molecular weight poly(ethylene oxide) and low molecular weight poly(ethylene oxide)/poly(methyl methacrylate) blends determined by DSC and polarized optical microscopy 259
- Poly(ethylene oxide)/poly(methyl methacrylate) blends  
Activation energy for crystallization of low molecular weight poly(ethylene oxide) and low molecular weight poly(ethylene oxide)/poly(methyl methacrylate) blends determined by DSC and polarized optical microscopy 259
- Poly(phenylene oxide)  
Thermal diffusivity in a binary mixture of poly(phenylene oxide) and polystyrene 289
- Polymer  
Dynamic analysis of the melting behavior of polymers showing polymorphism observed by simultaneous DSC/X-ray diffraction measurements 239
- Polypyrrole  
Electrochemical Peltier heat in the polypyrrole-electrolyte system 139

- Polystyrene  
Thermal diffusivity in a binary mixture of poly(phenylene oxide) and polystyrene 289
- Pore size distribution  
Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169
- Potentiometric oscillations  
Thermal behavior of Belousov-Zhabotinskii reactions with Ce(IV) salts measured by heat exchange calorimetry of flow type involving simultaneous observation of potentiometric oscillations 95
- Powder samples  
Thermoanalytical characterization of powder samples I. Wet pretreated samples 149
- Power spectra  
A study on phase transition of  $\text{CsCl} \rightleftharpoons \text{NaCl}$  in  $\text{CsCl}$ ,  $\text{NH}_4\text{Cl}$  and  $\text{NH}_4\text{Br}$  by simultaneous AEDTA measurement 405
- Prigogine-Flory theory  
Structure and the thermodynamics of non-electrolyte mixtures 15
- Proteinase A  
Differential scanning calorimetric studies of the thermal unfolding of acid proteinase A from *Aspergillus niger* at various pHs 373
- Purity determination  
Observation of the melting process for ethyl *p*-aminobenzoate doped with eutectic mixture 313
- Pyrolysis  
Study of fire-retardant polymers using temperature jump/Fourier transform infrared spectroscopy 223
- Raman spectrum  
Low temperature thermal properties of cobalt(II) bromate hexahydrate 421
- Salt  
Effects of salts on the gel-sol transition of gelatin gum by differential scanning calorimetry and thermal scanning rheology 269
- Silica  
Phase transition of capillary condensed liquids in porous silica: effect of surface hydroxyl groups 159
- Silicon  
Thermochemical studies of inorganic chalcogenides by fluorine-combustion calorimetry: binary compounds of germanium and silicon with sulfur, selenium and tellurium 1
- Sinusoidal modulation  
Development of the light heating dynamic DSC 75
- Solid solution  
Heat capacity measurements of hafnium-oxygen solid solutions at high temperatures 397
- Solid state reaction  
Thermal analysis and kinetics of solid state reactions 29
- Spectroscopy  
On the applicability of optical depth-atomic absorption relationship to measurements of alkali seeded combustion flames 107
- Surface hydroxyl group  
Phase transition of capillary condensed liquids in porous silica: effect of surface hydroxyl groups 159
- TA  
The applicability of Johnson-Mehl-Avrami model in the thermal analysis of the crystallization kinetics of glasses 61
- TA  
Thermal analysis and kinetics of solid state reactions 29
- TA  
Thermoanalytical characterization of powder samples I. Wet pretreated samples 149
- Temperature dependence  
Excess thermodynamic properties of mixtures of cyclohexanone and benzene at 298.15 and 308.15 K and the effect of excess expansion factor 323
- TG-DTG  
A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma\text{-FeO}(\text{OH})$  195
- TG-GC/MS  
A combined thermogravimetric-gas chromatographic/mass spectrometric analysis (TG-GC/MS) using a high resolution TG technique 209
- TG-MS  
Simultaneous thermogravimetry-mass spectrometry for a solid oxide fuel cell interconnect,  $(\text{La}_{0.7}\text{Ca}_{0.32})\text{CrO}_3$  129  
TGA-51  
Application of macro-TG (Shimadzu TGA-51) to hydrogen spillover in a tungsten(VI) oxide system 117
- Thermal degradation  
Thermal degradation of aromatic polyformals derived from bisphenol A and bisphenol AF 231

## Thermal dehydration

A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma$ -FeO(OH) 195

## Thermal dehydroxylation

A kinetic study of the thermal decomposition of iron(III) hydroxide-oxides 2. Preparation and thermal decomposition of  $\gamma$ -FeO(OH) 195

## Thermal diffusivity

Thermal diffusivity in a binary mixture of poly(phenylene oxide) and polystyrene 289

## Thermal scanning rheology

Effects of salts on the gel-sol transition of gelatin gum by differential scanning calorimetry and thermal scanning rheology 269

## Thermodynamic properties

Excess thermodynamic properties of mixtures of cyclohexanone and benzene at 298.15 and 308.15 K and the effect of excess expansion factor 323

## Thermodynamics

Structure and the thermodynamics of non-electrolyte mixtures 15

## Time-resolve

Study of fire-retardant polymers using temperature jump/Fourier transform infrared spectroscopy 223

## Transition entropy

Heat capacity measurements of hafnium-oxygen solid solutions at high temperatures 397

## Tungsten(IV)

Application of macro-TG (Shimadzu TGA-51) to hydrogen spillover in a tungsten(VI) oxide system 117

UO<sub>2</sub>

High temperature heat capacities and electrical conductivities of UO<sub>2</sub> doped with Nd and Mg 389

## Very low temperature

Very low-temperature heat capacities and magnetic thermal anomalies of the organic free radical magnet, 4-methacryloylamino-2,2,6,6-tetramethylpiperidine-1-oxyl (MATMP) 435

## Water

Pore size distribution measurements of polymer hydrogel membranes for artificial kidneys using differential scanning calorimetry 169

## Wet pretreatment

Thermoanalytical characterization of powder samples I. Wet pretreated samples 149

## X-Ray

Calorimetric and small angle X-ray and neutron scattering studies of mixing gangliosides and methylated albumin 355

## Yttria-doped zirconia

Low temperature heat capacities of zirconia and yttria-doped zirconia (ZrO<sub>2</sub>)<sub>1-x</sub>(Y<sub>2</sub>O<sub>3</sub>)<sub>x</sub> ( $x = 0, 0.0200, 0.0396$ ) 415

## Zirconia

Low temperature heat capacities of zirconia and yttria-doped zirconia (ZrO<sub>2</sub>)<sub>1-x</sub>(Y<sub>2</sub>O<sub>3</sub>)<sub>x</sub> ( $x = 0, 0.0200, 0.0396$ ) 415

## Zirconia-yttria gels

Crystallization kinetics of zirconia-yttria gels 181