

Past Events

9th All-Union Conference on Thermal Analysis

Uzhgorod, September 1985

Plenary lectures

Utilization of high-temperature DTA in the construction of constitutional diagrams for heat-resistant systems of transition metals with carbon *V. N. Dremenko, T. H. Valikanova, L. V. Artyukh, A. A. Bondar, S. V. Sleptsov and O. V. Gordychuk* (Institute of Material Science, Academy of Sciences of the Ukrainian SSR, Kiev)

Thermoanalytical methods of cements *O. P. Mchedlov-Petrosyan* (Southern State Institute of the Cement Industry, Kiev)

Effect of polymer structure on the character of thermal effects in DTA *A. T. Kalashnik, O. I. Romanko, I. N. Andreeva and S. P. Papkov* (Scientific-Design Department Chemical Fibres, Mytishchi)

Utilization of TG under quasi-equilibrium conditions in the chemistry of coordination compounds and in the chemistry of clathrates in mineral investigations *V. A. Logvinenko* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)

Investigation by complex thermal analysis of the analogies and differences between the reactions of highly dispersed solid phases and the reactions catalyzed by intermediate labile phases *N. P. Burminstrova* (State University, Kasan)

Mass spectrometric thermal analysis: a modern method for investigating the thermal transformations in polymers *Yu. N. Sazanov and T. Székely* (Institute of Macromolecular Compounds, Academy of Sciences of the U.S.S.R., Leningrad)

Prospects in the development and application of differential scanning calorimetry *G. K. Demensky* (Baykov Institute of Metallurgy, Academy of Sciences of the U.S.S.R., Moscow)

Characteristic properties, kinetics and mechanism of solid-phase ligand substitution reactions in complex compounds *Yu. N. Shevchenko* (Pisarzhovsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)

Metrological approach to temperature measurements of phase transitions in the 2200–2600 K range on DTA instruments *G. G. Eliseeva, A. D. Krivorotenko, I. V. Seminko, A. N. Fomichev and A. I. Alekhin* (Ukrainian Research Institute of Refractories, Kharkov)

Section 1: Theory and Methods

Theoretical and experimental problems of thermal analysis in pulse processes *V. D. Andreev, I. V. Manzheliev and V. P. Kolomnets* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)

Practical questions in solving reverse kinetic tasks *M. G. Baklanova, A. I. Borovnikova and A. N. Mikheev* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)

- Foundations of the method for determining heat capacity from the view of the gradient theory *V. P. Egunov* (Polytechnical Institute, Kuybyshev)
- Methodological aspects of the kinetic experiment in the thermal analysis of polymers *G. N. Isakov* (Research Institute of Applied Mathematics and Mechanics, Kuybyshev State University, Tomsk)
- Thermoanalytical methods for investigating structural and mass-exchange properties of dispersed materials *R. V. Lutsik* and *A. F. Miglyachenko* (Technological Institute of Light Industry, Kiev)
- Determination of invariant kinetic characteristics *A. N. Lesnikovich* and *S. V. Vyazovkin* (Research Institute of Physico-Chemical Problems of the Lenin Byelorussian State University, Minsk)
- Statistical processing of the results of thermoanalytical experiments *I. V. Arkhangelsky*, *I. A. Savitskaya*, *N. A. Chernova* and *L. N. Komisarova* (Lomonosov State University, Moscow)
- Characteristics of heat and mass transfer in the cell of the differential scanning calorimeter DSc-III *M. Yu. Sinev*, *V. Yu. Bychkov*, *V. N. Rorchak* and *E. I. Aptekar* (Institute of Chemical Physics, Academy of Sciences of the U.S.S.R., Moscow)
- Optimization of the temperature program in thermal analysis *V. A. Bir* and *Ya. A. Belikhmaer* (Kirov Polytechnical Institute, Tomsk)
- Effective activation energy in two remarkable coincidences *L. V. Barkova* and *Z. T. Gevorkin* (All-Union Research Institute for Electromechanics, Istra)
- Development of quantitative thermal analysis *V. K. Klassen* and *V. F. Zhushchev* (Technological Institute of Building Materials, Belgorod)
- A method for detecting evolved gases at DTA carried out in platinum crucibles *S. A. Lauengauer* and *Yu. N. Savanov* (Institute of Macromolecular Compounds, Academy of Sciences of the U.S.S.R., Leningrad)
- Utilization of thermogravimetry for solving the direct task of chemical kinetics *S. V. Karachinsky*, *O. Yu. Pshkova* and *V. V. Draganov* (Mendeleev Chemical-Technological Institute, Moscow)
- Investigation of reaction kinetics in liquids by quantitative DTA *N. D. Topor* and *L. P. Ogorodova* (Lomonosov State University, Moscow)
- Application of DTA for pressure measurement in instruments with quasi-hydrostatic transfer media *S. A. Ivakhnenko*, *I. S. Bolousov* and *V. I. Vitok* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian SSR, Kiev)
- A new method of thermal analysis based on dynamic calorimetry—thermal gradient analysis, DTS particular features and its applications *M. Sh. Yagfarov* (Arbuzov Institute of Organic and Physical Chemistry, Kazan Branch of the Academy of Sciences of the U.S.S.R., Kazan)
- Some aspects of the theory of diathermal calorimetry *Yu. A. Kocherzhinsky* and *V. Z. Turkevich* (Institute of Super-hard Materials, Academy of Sciences of the Ukrainian SSR, Kiev)
- Study by differential thermocouples of heat evolution in the plastic deformation process *T. V. Chernoglazova*, *N. L. Borisenko*, *N. N. Mofa* and *A. A. Presnyakov* (Institute of Organic Catalysis and Electrochemistry, Academy of Sciences of the Kazakh S.S.R, Alma-Ata)
- Steady state in programmed heating and effective kinetic parameters of reverse reactions *M. Yu. Sipev* (Institute of Chemical Physics, Academy of Sciences of the U.S.S.R, Moscow)
- A comparative analysis of the different recordings of thermal curves in DTA instruments *V. A. Vertogradsky* (All-Union Institute for Aviation Materials, Moscow)
- New methods and instruments for DTA of phase transformations of metals *V. A. Vertogradsky* and *L. S. Egorova* (All-Union Institute for Aviation Materials, Moscow)
- A contribution to the thermoanalytical investigation of aggressive substances *L. E. Ugryumova* and *Yu. F. Klyuchnikov* (Institute of Metallurgy and Ore Dressing, Academy of Sciences of the Kazakh S.S.R, Alma-Ata)
- Application of heat-flow calorimeters for studying reactions accompanied by gas evolution *P. S.*

- Gordienko, S. B. Bulanova and E. I. Melnichenko* (Institute of Chemistry, Far-East Center of the Academy of Sciences of the U.S.S.R., Vladivostok)
Application of the electric conductivity method in physico-chemical analysis *V. N. Tsigankov, N. B. Gorilovskaya and A. G. Yakovenko* (Institute of the Technology of Fine Chemicals, Moscow)
Methods for confining peak areas *A. N. Izmailov* (Polytechnical Institute, Kuybyshev)
Characteristic elements of the thermoanalytical curves *L. L. Osechkina* (Polytechnical Institute, Kuybyshev)
On the correctness of using the kinetic equation of one-stage chemical reactions for describing thermal decomposition processes *A. E. Venger and Yu. E. Frayman* (Baykov Institute of Heat and Mass Transfer, Academy of Sciences of the Byelorussian S.S.R., Minsk)
Method for calculating kinetic parameters by thermoanalytical data *P. G. Kudryavtsev and S. V. Bochkarev* (Polytechnical Institute, Perm)
On the character of the dependence of the inflexion point of TG curves on kinetic parameters *E. A. Kolosovskaya* (Institute of Forestry and Wood, Siberian Department of the Academy of Science of the U.S.S.R., Krasnoyarsk)
Method of determining kinetic parameters of thermal decomposition by thermogravimetric data *V. G. Kriger, O. L. Kolpakov, V. G. Borisov, A. T. Govorkov and G. E. Sokolova* (State University, Kemerovo)

Section 2: Scientific instruments

- Programmed temperature control devices for thermal analysis *E. V. Khizhnik, V. P. Titov, A. L. Lukashenko, O. A. Yakovlev, Ya. V. Vasilev and L. E. Gorsh* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
Method for determining the thermal properties of decomposing polymers *V. L. Strakhov and O. M. Gaker*
Differential scanning calorimeter with heat capacity compensation using an optical source *A. V. Zolotukhin* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
Prospects of development and introduction of "AIST" type automated thermoanalytical measurement systems *V. P. Egunov, G. P. Zimin, A. I. Frankov, L. L. Osechkina, A. M. Kudryashov and A. N. Zhidkov* (Polytechnical Institute, Kuybyshev)
Thermal analysis at high temperatures *N. E. Sinitsky and E. A. Shishkin* (Institute of Metallophysics, Academy of Sciences of the Ukrainian S.S.R., Kiev)
High-temperature calorimeter suitable up to 2050 K *V. Z. Turkevich and E. A. Shishkin* (Institute of Superhard Materials and Institute of Metallophysics Academy of Sciences of the Ukrainian S.S.R., Kiev)
Instruments VTA-1 and VTA-2 for DTA at high temperatures *Yu. A. Kocherzhinsky, V. I. Vasilenko, A. V. Zolotukhin, Yu. A. Boyko, A. P. Klimovich, N. G. Gripak and E. A. Kuzmenko* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
Universal annex for studying reduction processes of oxides and catalysts by complex thermal analysis *A. V. Gershum, P. N. Tsibulev, V. D. Parkhomenko and E. S. Smirnova* (Dzerzhinsky Chemical-Technological Institute, Dnepropetrovsk)
Application of the high-pressure thermoanalyzer manufactured by Netzsch (FRG) *N. S. Andrushenko* (Lenin Optical-Mechanical Union, Leningrad)
"KASKAD-05" instrument for attesting the purity of standard samples by cryometry *Yu. I. Aleksandrov, V. P. Varganov and M. B. Limina* (Mendeleev All-Union Research Institute of Metrology, Leningrad)

- Problems of implementation of quantitative standardless and gradientless DTA in thermoanalytical measuring and recording systems *G. P. Zimin* (Polytechnical Institute, Buybyshev)
- Instrument for DTA of polymers with flat holders *E. V. Samardukov, V. S. Bil, V. G. Sherstneva, A. L. Babkin* and *E. I. Mironov* (Research and Design Organization "Plastmassa", Moscow)
- Construction of a temperature controller with programmed power loading for high-temperature thermal analysis and calorimetry *A. V. Zolotukhin* and *A. P. Mantulo* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermoanalytical apparatus with continuous gas chromatographic analysis *S. A. Vidineev* and *Z. A. Konstant* (Institute of Inorganic Chemistry, Academy of Sciences of the Latvian S.S.R., Riga)
- Modernization of the Q-derivatograph and of the DuPont 990 thermoanalyzer *I. T. Efimov, F. N. Vyshnevsky* and *I. I. Skorokhodov* (State Research Institute for the Chemistry and Technology of Organoelemental Compounds, Moscow)
- Method and instrument for high-temperature magnetic thermal analysis *Sh. Sh. Ibraimov* and *A. V. Lyakutkin* (Institute of Nuclear Physics, Academy of Sciences of the Kazakh S.S.R., Alma-Ata)
- Automated mass-spectrometric thermoanalytical instrument *O. P. Korobeynichev, L. V. Kuybida* and *M. G. Marasanov* (Institute of Chemical Kinetics and Combustion, Siberian Department of the Academy of Sciences of the U.S.S.R)
- Utilization of mini-computers in thermal analysis *A. A. Katyakin* and *V. L. Akapev* (Technological Institute of Building Materials, Belgorod)
- Automated instrument for collecting and processing thermogravimetric information, based on the mini-computer "Elektronika DZ-28" *V. G. Guslev* and *E. A. Gunin* (Research Institute for Physico-Chemical Problems, Belorussian State University, Minsk)
- System for studying thermal decomposition processes at high heating rates, operated with an on-line computer *V. G. Smaltser, V. G. Guslev, K. K. Kovalenko* and *G. V. Printsev* (Research Institute of Physico-Chemical Problems, Belorussian State University, Riga)
- Automated system of research of reaction kinetics for the thermal decomposition of condensed substances *A. I. Benin, A. A. Kossoy, I. V. Malinina, P. Yu. Smykalov* and *Yu. V. Sharikov* (State Institute of Applied Chemistry, Leningrad)
- High-temperature thermal analysis utilizing radiation heating *S. A. Azimov, B. S. Nigmanov, R. F. Rumi* and *L. M. Sigalov* (Physico-Technical Institute, Academy of Sciences of the Uzbekh S.S.R., Tashkent)

Section 3: Inorganic Chemistry

3.1 Salts

- Low melting-point melts based on the halide systems $K, Rb, Cd \parallel Br; Li, Na, Cd \parallel Br; Na, Rb, Cd \parallel I; Na, Rb, Pb \parallel I; Li, Na, Pb \parallel Cl; Li, Rb, Cd \parallel Br; Li, Ca, Pb \parallel Br$ *I. I. Ilyasov, I. N. Lepeshkov, T. I. Dunaeva, A. G. Palobekov, Yu. I. Ilyasov* and *M. Davranov* (Correspondence-Course School of Soviet Commerce, Rostov-na-Don)
- Classifying interpretation of thermal decomposition results of iodates obtained by DTA *G. N. Tarasova, E. E. Vinogradov* and *I. B. Kudinov* (Kurnakov Institute of General and Inorganic Chemistry, Moscow)
- Thermogravimetric study of systems containing monosubstituted phosphates and sulfates of alkali and alkali earth metals *U. Zh. Dzhusitsbekov, B. A. Beremzhanov, G. P. Kiatkin, Z. S. Akhatova* and *Zh. M. Shalabaeva* (Kazakh State University, Alma-Ata)

- Thermoanalytical study of the volume and surface area of the catalysts $m\text{Me}_x\text{O}_n\text{P}_2\text{O}_5$ K. Yu. Sekeres, V. A. Borko, V. I. Homonay and A. A. Feyesh (State University, Uzhgorod)
- On the effect of heating conditions on the thermal dehydration of calcium and magnesium dihydrophosphates M. E. Pyldme, Yu. Kh. Pyldme and K. R. Utsal (Polytechnical Institute, Tallin and State University, Tartu)
- Thermal decomposition of transition and heavy metal abietates M. A. Dododzhanov, A. A. Zakharov, V. P. Komarov and I. S. Shaplygin (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Study of the thermal decomposition of silver carboxylates M. Yu. Sinev, B. M. Maevskaya, Yu. N. Simulin, E. P. Babaeva and A. Z. Shabutov (State Research Institute "Khlорproekt", Moscow)
- A study of the thermal decomposition of the aluminium-lithium basic double salts $\text{Li}_n\text{X} \cdot 2\text{Al}(\text{OH})_3 \cdot m\text{H}_2\text{O}$ ($\text{X} = \text{Cl}, \text{Br}, \text{I}, \text{SO}_4, \text{CO}_3$) V. P. Isupov and N. P. Kopupako (Institute of the Chemistry of Solids and of Mineral Raw Material Processing, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Application of thermal analysis for the study of crystallization conditions of calcium nitrate Yu. V. Tsekhanskaya, O. I. Totva, O. S. Novikova and A. M. Filonov (State Research and Design Institute for the Nitrogen Industry and Organic Synthesis Products, Moscow)
- Glass temperature studies in some salt-water systems I. A. Kirilenko, I. B. Kudinov and E. E. Vinogradov (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Phase equilibria in the systems TlCl-PbCl_2 and $\text{Ca}(\text{In})\text{I-GeI}_2$ V. B. Lazarev, E. Yu. Peresh, S. V. Kun, V. V. Tsigika, A. V. Orinchay and I. L. Mikaylo (State University Uzhgorod; Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Thermal analysis of potassium sulfate acid double salts I. N. Lepeshkov, E. A. Konstantinova, V. T. Orlova, A. S. Shenkin and N. A. Buynevich (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- DTA study of the systems $\text{MF-Bef}_2\text{-LnF}_3$ ($\text{M} = \text{K}, \text{Rb}, \text{Ln} = \text{Nd}, \text{Er}$) B. S. Zakharova, L. P. Reshetnikova, A. P. Topshinoyev and A. V. Novoselova (Lomonosov State University, Moscow)
- Thermal decomposition of irradiated and non-irradiated ammonium perchlorate in different disperseness states A. T. Govorkov, V. G. Kriger, I. L. Kolpakov and V. L. Muryshkin (State University Kemerovo)
- Study of phase transformations in systems based on calcium aluminates V. D. Nissenbaum, V. I. Yakerson, V. Ya. Danyushevsky, E. Z. Golosmyan and A. M. Rubinshteyn (Zelinsky Institute of Organic Chemistry, Academy of Sciences of the U.S.S.R., Moscow; Branch of the State Research Institute of the Nitrogen Industry, Novomoskovsk)
- Study of the thermal stability of the wolframates of group II elements V. I. Krivobok, T. T. Gotmanova and V. I. Kononenko (State University Donetsk)
- Thermal properties of new compounds containing formates of alkali, transition and rare earth elements S. M. Portnova, E. V. Petrova, Kh. T. Akhmatova, N. K. Semendyaeva and I. B. Kudinov (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Thermal analysis of the acid etching products of microzinc in non-emulsified solution B. A. Naumov, O. S. Shorina and S. Kh. Papikyan (Polygraphic Institute, Moscow)
- Investigation of the thermal decomposition mechanism of various metal nitrates and determination of the kinetic parameters of the process B. A. Belov and V. N. Efremov (Branch of the State Research Institute for the Nitrogen Industry, Novomoskovsk)
- Thermal study of alkali and alkali earth bromates by the DTA method L. A. Azarova and E. E. Vinogradov (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)

- Production of sodium borofornate and manganese formate and their identification by thermal analysis
G. E. Kim, I. K. Vakurova, E. M. Shvarts, V. G. Kalcheva, M. D. Diarov and S. Zh. Zhumagaliev (Institute of Petroleum and Natural Salts Chemistry, Academy of Sciences of the Kazakh S.S.R., Gurev)
- Thermoanalytical study of the double phosphate $Zn_2Ca(PO_4)_2 \cdot 2H_2O$ *L. N. Shagrov, I. M. Antrptseva and S. V. Gevorkyan* (Ukrainian Agricultural Academy, Kiev)
- Thermal analysis of trisubstituted copper phosphate hydrates *L. N. Shegrov and V. A. Kopilevich* (Ukrainian Agricultural Academy, Kiev)
- Effect of inorganic additives on the thermal stability and modification transitions of aluminium nitrate
O. A. Sireltsov, L. V. Smirnova and O. S. Fedun (Ukrainian Agricultural Academy, Kiev)
- Thermal decomposition of borane derivatives *V. V. Volkov and K. G. Myakishev* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Potentials of the DTA method for optimizing anhydrous salt recovery processes from their hydrates on the example of phosphates *L. N. Shegrov and N. M. Antraptseva* (Ukrainian Agricultural Academy, Kiev)

3.2 Coordination compounds

- Types of solid-phase thermal transformations of coordination compounds *Yu. J. Kukushkin* (Leningrad Technological Institute, Leningrad)
- Multinuclear π -complexes of cobalt(III) based on *o*-carborane derivatives *V. V. Volkov* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Thermal analysis and electron structure of coordination compounds and their solid-phase reaction products with rongalit *C. I. E. Bersuker, N. N. Proskina, L. A. Kazantseva, V. Ya. Ivanova and A. S. Dimoglo* (Institute of Chemistry, Academy of Sciences of the Moldavian S.S.R., Kishinev)
- Thermal transformations of cobalt(II) pivalates *N. V. Gerbeleu, G. A. Timko, V. G. Golovaty, V. P. Shabelnikov, E. N. Korol, K. M. Indrichyan and G. A. Popovich* (Institute of Chemistry, Academy of Sciences of the Moldavian S.S.R., Kishinev; Piszarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Novel chloromolybdates(III) and products of their thermal decomposition *M. G. Felin and N. A. Subbotina* (Technological Institute of the Light Industry, Moscow)
- On the role of the crystal lattice of salts in solid-phase ligand substitution reactions *N. I. Yashchina, I. M. Samodumova, V. A. Nazarenko, K. B. Yatsimirsky and L. I. Kiseleva* (Piszarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of the thermal transformations of the hexacyanoferrates(II) of some organic amines *D. I. Semenishkin, A. Ya. Borovaya, L. N. Krivdyuk and V. S. Badik* (Leninsky Komsomol Polytechnical Institute, Lvov)
- Thermal analysis of the coordination compounds of molybdenum with some amino acids *O. A. Nazarova, N. A. Parpiev, Kh. R. Ismatov and A. Kushakbaev* (Institute of Chemistry, Academy of Sciences of the Uzbek S.S.R., Tashkent)
- Solid-phase ligand substitution reactions in hexamine complexes of chromium(III) with the participation of the tetrahydridoborate(I) anion *E. A. Pisarev, V. A. Nazarenko and Yu. N. Shevchenko* (Piszarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Particular features of dehydration kinetics of metal coordination compounds with thiosemicarbazide-diacetic acid *V. A. Logvinenko, N. V. Gerbeleu, O. A. Bologa and G. V. Gavrilova* (Institute of

- Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk; Institute of Chemistry, Academy of Sciences of the Moldavian S.S.R., Kishinev)
- Investigation of topochemical transformations by scanning calorimetry in the complexes NiX_2 ($\text{X} = \text{NO}_2, \text{NCS}$) *T. P. Shakhitshneyder, E. Yu. Ivanov and A. F. Eremin* (Institute of the Chemistry of Solids and Processing of Mineral Raw Materials, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Thermal stability of the tetrahydridoborates of rare earth elements *U. Mirsaidov, A. Kurbondekov and M. Khikmatov* (Institute of Chemistry, Academy of Sciences of the Tadzhik S.S.R., Dushanbe)
- Kinetic and thermodynamic characteristics of $\text{LnC}_2\text{O}_4\text{F}$ formation and decomposition *L. N. Komissarova, M. R. Kizhlo, G. Ya. Pushkina and V. M. Shatsky* (Lomonosov State University, Moscow)
- Study of the thermal stability of the chlorine complexes of platinum(II) with DNA purine bases *I. I. Volchenskova, N. N. Maydanevich and L. I. Budarin* (Pisarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermogravimetric investigation of biologically active d-metal complexes *V. V. Strashno, E. K. Trupova, N. N. Tananaeva, N. A. Kostromin and V. V. Ivanov* (Pisarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermal decomposition in vacuum of nickel(II) and copper(II) tetraethylborate complexes *A. N. Esaulenko, Yu. N. Shevchenko and V. A. Nazarenko* (Pisarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermally induced transformations of 3d-metal coordination compounds with dicarboxylic acids *V. M. Buzash, G. I. Danilenko, V. Yu. Galla, A. A. Feyesh and N. V. Gerasimenko* (State University Uzhgorod; Institute of Organic Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermogravimetric study of copper(II) coordination compounds with acid hydrazides *P. I. Shmanko* (State University Uzhgorod)
- Thermoanalytical study of chromium(III) complexes with some monooximes *E. M. Ivashkovich and M. Petkanich* (State University Uzhgorod)
- Characteristic features of the thermal decomposition of transition metal hydrazine complexes *A. A. Bobkova, A. N. Mikheev, V. A. Logvinenko and B. F. Litvinova* (Altay State University, Barnaul; Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk; Electrotechnical Institute, Novosibirsk)
- Thermogravimetric analysis of rare earth element *p*-nitrobenzoates *M. S. Khiyalov and F. N. Musaev* (Institute of Inorganic and Physical Chemistry, Academy of Sciences of the Azerbaydzhan S.S.R., Baku)
- Thermal decomposition of scandium aluminohydride etherate *N. N. Maltseva, A. I. Golovanova and N. T. Kuznetsov* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Solid-phase thermal transformations of nickel(II) complexes with ethyleneimine and its derivatives in the internal sphere *V. B. Ukraintsev, S. V. Yakovlev, E. S. Postinkova and R. A. Abdurakhmanov* (Lensoviet Technological Institute, Leningrad)
- Thermal transformations of platinum(II) thiocyanate complexes of the tetramine type *L. V. Vrubevskaya and R. A. Abdurakhmanov* (Lensoviet Technological Institute, Leningrad)
- Thermal and mechanical activation of reactions involving alkali metal tetrahydridoborates *V. V. Volkov, K. G. Myakishv and I. I. Gorbacheva* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Study of the thermal stability of low-molecular biopolymers *N. A. Manorik, M. A. Fedorenko and A. V. Palchik* (Pisarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)

- Thermogravimetric study of cobalt coordination compounds with acid hydrazides *P. I. Shmanko* and *S. S. Butsko* (State University Uzhgorod)
- Thermal deoxygenation of some cobalt complexes with molecular oxygen *T. N. Yakubovich, Yu. I. Bratushko, K.B. Yatsimirsky, G. N. Melnichenko* and *V. A. Pokrovsky* (Pisarzhevsky Institute of Physical Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermal transformations of coordinatively substituted acetamidines *V. M. Buzash* and *L. P. Dobryanskaya* (State University Uzhgorod)
- Thermal decomposition of magnesium borohydride ammoniates *V. N. Konoplev* and *T. A. Silna* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Thermal method to obtain difficultly accessible platinum(II) bisphosphine complexes with cis configuration *D. S. Likhachev, G. N. Sedova* and *M. A. Kirillova* (Leningrad Technological Institute, Leningrad)
- Thermal analysis of indium and gallium diethyldithiocarbamates *M. Ya. Rakhlin* and *A. S. Chernova* (Institute of Semiconductors, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of the thermal stability of molybdates, wolframates and coordinative cyanides of molybdenum(O, II, IV) with organic amines *N. B. Vretsena, B. I. Vhernyak* and *D. I. Semenishin* (Leninsky Komsomol Polytechnical Institute, Lvov)
- Thermal transformations of cobalt(III) complexes with aminofomate in the external sphere *G. A. Lazerno, M. A. Shishko* and *L. N. Neokladnova* (State University, Minsk)
- Thermal transformations of platinum-palladium and platinum-nickel heteronuclear complexes *L. K. Shubochkin, L. D. Bolshakova, E. F. Shubochkina* and *I. I. Smirnov* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow; Kalinin Institute of Non-Iron Metals, Krasnoyarsk)
- Study of the thermal transformations of tungsten(IV) cyanocomplexes *V. V. Dovgey, V. I. Kovbashin* and *B. I. Chernyak* (Leninsky Komsomol Polytechnical Institute, Lvov)
- Thermal transformations of boron complexes with hexoses *G. A. Lezenko, O. P. Vdovenko* and *O. T. Nazarova* (Technological Institute of the Food Industry, Kiev)

3.3. Metals and alloys

- Thermal analysis in the investigation of constitutional diagrams of the systems Ni-V-Me^{IV,V} *V. N. Eremenko, S. B. Prima, E. L. Semenova* and *L. A. Tretyachenko* (Institute for the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Determination of the formation enthalpy of indium-magnesium-tin alloys by quantitative DTA *L. A. Melkovsky, S. E. Alfer, V. V. Sukhval* and *A. G. Voropaev* (State University, Minsk)
- DTA study of interphase interactions of silicon with the elements of group III to V *S. B. Maslenkov, A. N. Kobylkin, A. G. Nikolaev* and *M. D. Bespalova* (Baykov Institute of Metallurgy, Academy of Sciences of the U.S.S.R., Moscow)
- Study of liquidus curves in binary systems containing niobium and vanadium by high-temperature DTA with increased accuracy *M. V. Glazov, G. S. Burkhanov, Yu. V. Efimov, V. G. Ivanenko* and *E. A. Shishkin* (Baykov Institute of Metallurgy, Academy of Sciences of the U.S.S.R., Moscow; Institute of Metallophysics, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Effect of structure and surface processing on the oxidation of molybdenum single crystals *V. A. Lavrenko, T. G. Protsenko* and *A. V. Bochko* ("50th Anniversary of the Great October Revolution" Polytechnical Institute, Kiev; Institute for the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)

- Thermal analysis of tin-containing amalgams *M. V. Nosek, N. M. Atamanova and Z. D. Abisheva* (Institute of Chemical Sciences, Academy of Sciences of the Kazakh S.S.R., Alma-Ata)
- Thermal stability of highly-dispersed modified iron powders *A. G. Zhigotsky, T. M. Shvets and L. N. Lavrinenko* (Institute of Colloid Chemistry and Chemistry of Water, Academy of Sciences of the Ukrainian S.S.R., Kiev; Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Phase equilibria in the ternary systems Al-Sc-Me (Me = Mn, Si, Cu)
M. E. Drits, L. S. Toropova, M. L. Kharakterova and T. V. Dobatkina (Baykov Institute of Metallurgy, Academy of Sciences of the U.S.S.R., Moscow)
- Constitutional diagrams of the systems Al-Ba-La and Al-Sr-Mn *I. N. Pyagay, S. Kh. Khayridinov, A. V. Vakhobov and T. D. Dzhuraev* (Nikitin Institute of Chemistry, Academy of Sciences of the Tadzhik S.S.R., Dushanov)
- P-T-X constitutional diagrams Zn-As and Cd-As *V. N. Guskov, G. D. Nipan, Ya. Kh. Grinberg and B. V. Lazarev* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Thermodynamic properties of liquid binary alloys based on copper, determined by thermal analysis *G. I. Batalin, V. S. Sudavitsova and M. V. Mikhaylovskaya* (Shevchenko State University, Kiev)
- Thermoanalytical determination of the monovariant equilibrium Ni + NbC in the ternary system Ni-Nb-C *O. M. Barabash and T. N. Legkaya* (Institute of Metallophysics, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Utilization of DTA for studying phase transformations in the solid phase of Mo-C alloys *V. Z. Kubly, T. Ya. Velikanova and B. V. Khaenko* (Institute for the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of platinum-hafnium alloys by high-temperature thermal analysis *Yu. D. Seropegin and Yu. I. Konobas* (Lomonosov State University, Moscow)
- Secondary polythermic sections of the system magnesium-yttrium-lanthanum-zinc *M. E. Drits, E. V. Muratova and T. V. Dobatkina* (Baykov Institute of Metallurgy, Moscow)
- Study of the character of phase equilibria in the system Ge-Se by DTA *V. M. Glazov, L. M. Pavlova and D. S. Gaev* (Institute of Electronic Technology, Moscow)
- Study of the alloys of the system Ni-Mo-Hf-C using thermoanalytical methods *G. P. Dmitrieva* (Institute of Metallography, Academy of Sciences of the Ukrainian Academy of Sciences, Kiev)
- Construction on the fusibility diagram of the equiatomic section Ni-Al-Mo in the ternary system Ni-Al-Mo by DTA *O. M. Barabash, I. V. Burya and N. V. Danko* (Institute of Metallography, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermoanalytical and X-ray study of the formation of a high-pressure phase H-Mg₂Si at chilling of the melt *A. F. Belynin and N. A. Bulbenkov* (Moscow)
- High-temperature DTA for constructing the polythermic section Re, Co-WC in the system W-C-Re-Co *I. N. Chaporova, L. M. Yupko, Z. N. Sapronova and V. I. Kudryavtseva* (Moscow; Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)

3.4. Oxides

- Thermal stability of combined oxides on the basis of rare earth elements *A. A. Zakharov, I. A. Konovalova and I. S. Shaplygin* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Combined thermal analysis for studying the solid-phase synthesis of strontium and barium bismuthoniobates *D. A. Shitsa, I. S. Borisova, I. B. Kravale and E. Zh. Freydenfeld* (Pelshe Polytechnical Institute, Riga)

- Utilization of thermal analysis for studying phase formation processes in multicomponent systems *V. A. Fotiev* and *G. V. Bazuev* (Institute of Chemistry, Uralian Scientific Centre of the Academy of Sciences of the U.S.S.R., Sverdlovsk)
- Composition and thermal transformations in the interaction products obtained in the systems $Zr(OH)_2Cl_2[Hf(OH)_2Cl_2] - Na_2SiO_3 - NaOH - H_2O$ *K. I. Arsenin, D. A. Malinko, I. A. Sheka, I. Ya. Pishchay, A. N. Antishko* and *Yu. I. Gornikov* (Institute of General and Inorganic Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- High-temperature thermal analysis in the study of oxide systems *A. V. Shevchenko, V. D. Tkachenko* and *L. M. Lopato* (Institute for the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of phase transitions in the systems ZrO_2-HfO_2-Mg, Ca , rare earth element oxides *E. I. Zoz* and *G. G. Eliseeva* (Ukrainian Research Institute of Refractories, Kharkhov)
- Thermal study of the ternary system bismuth oxide-yttrium oxide-barium oxide *A. F. Poluyan, P. P. Zhuk* and *V. V. Samokhval* (Research Institute for Physico-chemical Problems, Lenin State University, Minsk)
- Study of the interaction of alkali metal pyrophosphates with niobium pentoxide *N. M. Dombrovsky* (State University Chernovits)
- Thermoanalytical study of the formation mechanism of rare earth element and yttrium aluminogarnets from the jointly precipitated hydroxides *V. B. Glushkova, S. Yu. Zinovev, V. A. Krzhizhanovskaya* and *O. I. Egorova* (Grebenshchikov Institute of the Chemistry of Silicates, Academy of Sciences of the U.S.S.R., Leningrad)
- High-temperature studies in the systems $Zr_2(HfO_2)_2-CaO$ and ZrO_2-HfO_2 *S. A. Azimov, B. S. Nigmanov, R. F. Rumi* and *L. M. Sigonov* (Physico-Technical Institute, Academy of Sciences of the Uzbekh S.S.R., Tashkent)
- Study of the systems $CaHfO_3 \cdot Y_2O_3$ and $CaZrO_3 \cdot Y_2O_3$ by the DTA method *E. R. Andrievskaya, L. M. Lopato* and *A. V. Shevchenko* (Institute for the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of defects of non-stoichiometric origin in oxides by dilatometry *V. E. Shvayko-Shvaykovsky* (Grebenshchikov Institute of the Chemistry of Silicates, Academy of Sciences of the U.S.S.R., Leningrad)
- Utilization of thermoanalytical methods for studying the kinetics and mechanism of iron oxide recovery from spent etching solutions in the manufacture of printing plates *V. Yu. Galla, V. M. Buzash, M. V. Kiyak* and *Yu. Sadvary* (State University Uzhgorod)
- High-accuracy thermogravimetry in the study of oxygen diffusion in bismuth germanate single crystals with sillenite structure *A. F. Shimansky, B. B. Mechev, V. A. Kutvitsky, Ya. V. Vasilev* and *V. E. Shvayko-Shvaykovsky* (Kalinin Institute of Non-Iron Metals, Krasnoyarsk)
- The nature of emissions accompanying thermal effects in the phase transformations of oxides *Yu. M. Polezhaev, H. A. Zhelonkin* and *V. G. Teplov* (Kirov Polytechnical Institute, Sverdlovsk)
- Thermoanalytical study of the phase composition genesis of olefin-dehydrogenating zinc-chromium oxide catalysts *I. P. Balomestnykh, N. B. Voikina, T. A. Markova, G. V. Isagulyants, O. N. Krasnobaeva, V. P. Danilov* and *I. N. Lepeshkov* (Zelinsky Institute of Organic Chemistry, Academy of Sciences of the U.S.S.R., Moscow; Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Characteristics of the thermal interaction of arsenic(V) oxide with non-iron and heavy metal oxides *L. G. Gorokhova* and *M. Zh. Makhmetov* (Chemical-Metallurgical Institute, Academy of Sciences of the Kazakh S.S.R., Karaganda)

- The sequence of phase and state transformations in ternary systems containing V_2O_5 *B. V. Slobodin* (Institute of Chemistry, Uralian Scientific Center of the Academy of Sciences of the U.S.S.R., Sverdlovsk)
- Differing thermodynamic functions of cesium borate glasses and crystals *V. M. Ushakov, N. V. Borisov* and *M. M. Shults* (Grebeshnikov Institute of Silicate Chemistry, Academy of Sciences of the U.S.S.R., Leningrad)

3.5. Inorganic substances

- Utilization of thermoanalytical methods for the determination of thermodynamic characteristics of acceptor-type laminated graphite compounds *V. L. Solozhenko, I. V. Arkhangelsky, A. S. Monaenkova* and *N. A. Klashnikov* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev; Lomonosov State University, Moscow)
- Utilization of thermoanalytical methods for studying high-temperature oxidation of refractories *Z. A. Pugach, G. G. Postolova, Ya. V. Ivaskovich, S. F. Korablev, L. N. Lavrinenko, S. I. Filipchenko* and *M. M. Legtyarenko* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Investigation of the interaction in systems containing refractory materials by DTA *S. N. Lakiza* (Institute of the Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Study of the high-temperature oxidation mechanism of refractory materials and ceramics based on them by thermal analysis *V. A. Lavrenko, V. Zh. Shemet, A. B. Goncharuk, A. F. Alekseev, Yu. G. Gogotsi, A. D. Panasyuk* and *T. G. Protsenko* ("50th Anniversary of the Great October Socialist Revolution" Polytechnical Institute, Kiev)
- Thermal dissociation and decomposition enthalpies of Nd and Sm selenates *M. E. Efimov* and *Yu. L. Suponitsky* (Institute of High Temperatures, Academy of Sciences of the U.S.S.R., Moscow; Mendeleev Institute of Chemical Technology, Moscow)
- Study of the thermal stability of the cyclic tetramer of sulfur nitride *V. I. Spitsyn, I. D. Kolli* and *E. M. Orlova* (Lomonosov State University, Moscow)
- Application of combined DTA-TG-DTG for studying niobium diselenide intercalated with zinc and autointercalated niobium diselenide *A. A. Sementsov-Kobzar, L. M. Kulikov, A. A. Yanaki, L. S. Zaletilo* and *O. S. Koshel* (Institute for Problems of Material Science, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Combined thermal analysis of the systems $ZrV_2-H_2(D_2)$ and $HfV_2-H_2(D_2)$ *N. T. Kuznetsov, L. H. Padurets* and *E. I. Sokolova* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Some features of the superionic state of solids presented on the example of the β phase of copper selenide *M. A. Korzhuev, G. K. Lementky, N. Kh. Abrinkosov* and *V. F. Bankina* (Baykov Institute of Metallurgy, Academy of Sciences of the U.S.S.R., Moscow)
- Thermal properties of lanthanoid oxocompounds with elements of group VI *Yu. D. Suponitsky* (Mendeleev Institute of Chemical Technology, Moscow)
- Thermal stability of the systems $(CF_n)_x$ and $[(SF_n)_x-IF_3-HF]_y$ *S. V. Vlasov, A. F. Borobev, D. G. Furenkova* and *Yu. D. Suponitsky* (Mendeleev Institute of Chemical Technology, Moscow)
- Thermoanalytical study of interaction processes between fluorine and its derivatives with abrasive materials *Yu. I. Nikonorov* and *M. S. Medvedeva* ("Leninsky Komsomol" State University, Novosibirsk)
- Thermodynamic properties of $A^I B^III C^IV$ -type compounds *Z. T. Kish, V. B. Lazarev, E. Yu. Peresh* and *E. E. Semrad* (State University Uzhgorod; Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)

- Thermal analysis of chalcogen compounds formed in the systems $\text{Ti—Si(Ge,Sn)—S(Se)}$ and Me—P—S
E. Yu. Peresh, V. B. Lazarev, V. I. Starosta, I. V. Galagovets and V. M. Golovey (State University
 Uzhgorod; Kurnakov Institute of General and Inorganic Chemist, Academy of Sciences of the
 U.S.S.R., Moscow; Laboratory of the All-Union Research Institute of Single Crystals, Uzhgorod)
- Thermal stability of laminated graphite compounds with tin(IV) and titanium(IV) chlorides *V. L.
 Solozhenko* (Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Application of high-accuracy thermogravimetry for studying defects on non-stoichiometric origin in β -
 BN and its oxidation process *A. P. Garshin and V. E. Shvayko-Shvaykovsky* (Kalinin Polytechnical
 Institute, Leningrad; Grebeshnikov Institute of Silicate Chemistry, Academy of Sciences of the
 U.S.S.R., Leningrad)
- Study of the crystallization kinetics of amorphous boron by DTA *N. E. Solovev, V. S. Makarov and Ya.
 A. Ugay* (State University, Voronezh)
- Thermodynamic characteristics of the melting processes in $\text{Cd}_2\text{B}_2^{\text{V}}\text{G}$ and $\text{Cd}_4\text{B}_2^{\text{V}}\text{G}$ compounds
 ($\text{B}^{\text{V}} = \text{P,As}$; $\text{G} = \text{Cl,Br,I}$) *S. M. Gasinets* (State University, Uzhgorod)
- Kinetic analysis of lead sulfate oxidation in non-isothermal conditions *M. A. Lyamina and E. P.
 Semashko* (Research Institute for Non-Iron Metals, Ust-Kamenogorsk)
- Thermogravimetric investigation of the compounds $\text{Cd}_2\text{P}_3(\text{As}_3)\text{Cl}(\text{Br, I})$ and $\text{Cd}_4\text{P}_2(\text{As}_2)\text{Cl}_3(\text{Br}_3, \text{I}_3)$
N. S. Gam and V. M. Chereshnya (State University, Uzhgorod)
- Study of hydrogen adsorption and desorption processes on the hydrides ZrNiH_x and ZrCoH_x by DSC,
 TG and evolved gas analysis *I. E. Nemirovskaya, L. A. Rudnitsky, V. V. Luzhin, A. M. Alekseev and
 P. A. Chernavsky* (State Research Institute of the Nitrogen Industry and Organic Synthesis
 Products, Moscow; Lomonosov State University, Moscow)
- Characteristic features of the oxidation of carbon-containing materials *Z. A. Pugach, V. V. Ogorodnik,
 G. G. Postolova and A. V. Lysenko* (Institute of Superhard Materials, Academy of Sciences of the
 Ukrainian S.S.R., Kiev)
- Quantitative DTA of the formation processes of some binary and ternary chalcogen compounds with
 narrow and broad homogeneity zones *B. I. Valevsky, A. S. Skoroparov, Yu. S. Maslenko and N. V.
 Novikov* (Research Institute of Physico-Chemical Problems, Lenin State University, Minsk;
 Institute of Superhard Materials, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Phase equilibria in the systems Hg—Ge(Sn)—Se *S. F. Motrya, E. E. Semrad, Yu. V. Voroshilov, M. V.
 Potory and I. I. Yatskovich* (State University, Uzhgorod)
- Application of TG for expedient choice of composition for fluxes used in soldering printing plates and
 evaluation of their effectiveness *V. Yu. Galla, S. V. Galla-Bobik, B. M. Buzash and A. A. Feesh* (State
 University, Uzhgorod)
- Thermoanalytical study of the formation reaction of proustite from elemental components *V. V. Mudry, I.
 M. Nekrasov, I. Yu. Roman and M. I. Golovey* (Laboratory of the All-Union Research Institute of
 Single Crystals, Uzhgorod)
- Study of interactions in the system $\text{Ag}_2\text{S—GeS}_2$ by thermoanalytical methods *A. P. Kokhan and Yu. V.
 Voroshilov* (State University, Uzhgorod)
- Study of the liquidus surface in the ternary system $\text{Hg}_3\text{Te}_2\text{Cl}_2\text{—Hg}_3\text{Te}_2\text{Br}_2\text{—Hg}_3\text{Se}_2\text{Cl}_2$ in a
 mathematically planned experiment *V. A. Khudoly, V. V. Panko, O. V. Tomchany and Yu. V.
 Voroshilov* (State University, Uzhgorod)
- Study of the chemical interaction in the system $\text{Cd}_3\text{As}_2\text{—2CdS}$ *M. Yu. Rigan* (State University,
 Uzhgorod)
- Determination of optimum technological conditions for obtaining inorganic coatings by data of thermal
 analysis *O. N. Mittov, E. A. Sysoeva and M. N. Bezryadin* (State University, Voronezh)

- Thermoanalytical study of the thermal decomposition processes of chlorides of group III, IV and V elements (GaCl_3 , InCl_3 , PbCl_2 , SbCl_3 , BiCl_3) *E. A. Sysoeva, N. M. Ponomareva and I. Ya. Mittova* (State University, Voronezh)
- DTA of the ternary system tin-antimony-tellurium *L. A. Mechkovsky, S. A. Alfer, V. E. Ilenkov and A. G. Gusakov* (Lenin State University, Minsk)
- Thermal analysis of systems containing iron and cobalt sulfochromates *E. G. Zhukov, E. S. Polulyak, V. A. Levshin and V. A. Fedorov* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- TG analysis of coke-pitch compounds prepared under different conditions *V. A. Filimonov and P. Ya. Avramenko* (Moscow)
- Study of the kinetics of the recovery of coked alumino-platinum catalysts by multiple thermoanalytical techniques and DSC *E. M. Mikhлина, V. M. Evgrashin, S. B. Kogan, B. N. Vaydin, M. R. Melnikova, E. Yu. Ilina, E. A. Ivunina and N. R. Bursian* (Scientific Design Department "Lenneftkhim", Leningrad)
- Thermoanalytical study of cyclic titanium and zirconium metaphosphimates *A. I. Bortun and V. N. Balakov* (Institute of General and Inorganic Chemistry, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermal decomposition of zinc hydride *Yu. N. Mikhaylov, N. N. Maltseva, N. S. Kedrova and N. T. Kuznetsov* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow; Institute of the Chemistry of Solids and Processing of Mineral Raw Materials, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Complex thermoanalytical study of the oxidation of Ti-C and Ti-B mixtures in air *V. A. Elizarova* (Department of the Institute of Chemical Physics, Academy of Sciences of the U.S.S.R., Chernogolovka)

Section 4: Organic Substances

4.1. Synthetic polymers

- Study of The setting and decomposition processes of epoxy resins and of electroinsulating materials based on them *T. S. Bebchuk, E. Ya. Eroshina, M. N. Muzafarova and V. V. Matyukhin* (All-Union Research Institute of Electroinsulating Materials and Laminated Dielectrics, Moscow)
- Application of TG in the development of polyolefin compounds subjected to ionizing radiation *B. A. Gorelik, N. A. Amelichkina, L. I. Lugova, N. P. Lazareva and E. K. Semenenko* (All-Union Research Institute of Medical Polymers, Moscow)
- DTA study of the decomposition and phase transitions in stabilized polyethylene terephthalate *Yu. I. Magusevich* (Research Institute of Physico-Chemical Problems, Lenin State University, Minsk)
- Determination of the activation energy of the thermooxidative decomposition of stabilized polymers *Yu. I. Matusevich and L. P. Krul* (Research Institute of Physico-Chemical Problems, Lenin State University, Minsk)
- Thermal analysis of tetrazol *G. V. Printsip, A. I. Lesnikovich, O. A. Ivashkevich and P. I. Gaponik* (Research Institute of Physico-Chemical Problems, Lenin State University, Minsk)
- Thermoanalytical study of the pyrolysis of phosphorus-containing polymers *L. N. Mashlyakovsky, V. Yu. Repkin and A. D. Lykov* ("Lensoviet" Technological Institute, Leningrad)
- Study of the thermal stability of polymers by mass spectrometry and thermogravimetry *M. G. Baklanova, A. I. Borovikova, V. A. Logvinenko and A. N. Mikheev* (Institute of Inorganic Chemistry, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)

- Thermal analysis of heterochain polymers and of fire-resistant compounds on their basis *D. V. Gvozdev, A. B. Blyumenfeld, I. R. Gurina, L. V. Bykova, B. Sh. Shteyman, E. L. Sapozhnikova, R. S. Klimanova and V. I. Sezemova* (Scientific Design Department "Plastmassy", Moscow)
- Thermal behaviour of crystallizing polyamide powders intended for coatings *E. V. Samarukov, N. I. Kurina, G. N. Starukhina, I. P. Gladchenko and M. P. Kabalinskaya* (Scientific Design Department "Plastmassy", Moscow)
- Thermal resistance of UV absorbers depending on their structure *I. N. Smolensky, A. D. Kazilyunas, N. I. Ganushchak, N. D. Obushak and Z. P. Borodaykevich* (Franko State University, Lvov; Kauno Audinyay Factory, Kaunas)
- Application of dynamic and isothermal TG for the quantitative analysis of organic stabilizers *I. N. Smolensky, N. D. Obushak and N. I. Ganushchak* (Franko State University, Lvov; Institute of Petroleum and Natural Gas, Ivano-Frankovsk)
- Study of the thermooxidative characteristics of gas-emitting polyester-polydimethylsiloxane block copolymers depending on their composition and phase state *L. K. Burygin, F. N. Vishnevsky, V. D. Sheludyakov and I. I. Busko* (State Research Institute of the Chemistry and Technology of Organoelemental Compounds, Moscow)
- Mass-spectrometric thermal analysis of polyimides subjected simultaneously to uv irradiation *Yu. N. Sazanov, A. Toirov and L. A. Shibaev* (Institute of Macromolecular Compounds, Academy of Sciences of the U.S.S.R., Leningrad; Umarov Physico-Technical Institute, Academy of Sciences of the Tadzhik S.S.R., Dushanbe)
- Investigation of the thermal degradation of phenyl containing polyorganosiloxane resins and syntactic compounds on their basis *F. G. Bulakova, A. E. Venger, A. A. Donskoy, T. V. Tumysheva and Yu. E. Frayman* (Lykov Institute of Heat and Mass Exchange, Academy of Sciences of the Belorussian S.S.R., Minsk)
- On the determination of the thermal stability of polyorganosiloxanes at prolonged heating using thermogravimetry *V. V. Ostrovsky, V. A. Krivov and N. P. Kharitonov* (Grebeshchikov Institute of Silicate Chemistry, Academy of Sciences of the U.S.S.R., Leningrad)
- Application of TG and DTA in elemental analysis of flame-resistant plastics *V. M. Ryabikova, O. G. Utkina and S. I. Sverdllova* (Scientific Design Department "Plastpolymer", Leningrad)
- Thermal analysis of polyethylene in contact with copper and its alloys *A. I. Kuzavkov, M. N. Kapshay and N. I. Egorenkov* (State University Gomel)
- Effect of carbon fibre on the thermooxidative degradation of aromatic polyamide *A. I. Burya, V. I. Lubkova and I. N. Ermolenko* (Agricultural Institute, Dnepropetrovsk; Institute of General and Inorganic Chemistry, Academy of Sciences of the Byelorussian S.S.R., Minsk)
- Thermoanalytical investigation of the effect of modifying additives on chain extension in the synthesis of polyurethane elastomers *V. P. Kuleshov, V. P. Arkhireev and B. Ya. Eytelbaum* (Kirov Chemical-Technological Institute, Kazan)
- DSC study of water crystallization anomalies in ion-exchange resins *K. G. Saldadze, V. S. Bil, E. V. Samrdukov and N. I. Kusina* (Scientific Design Department "Plastmassy", Moscow)
- To the method of thermal analysis of swollen polymer gels *B. N. Teytelbaum, T. A. Yagfarova and L. F. Ovchinnikova* (Arbuzov Institute of Organic and Physical Chemistry, Kazan Section of the Academy of Sciences of the U.S.S.R., Kazan)
- Detection of the main phase in amorphous-crystalline polymers by thermal analysis *M. Sh. Yagfarov* (Arbuzov Institute of Organic and Physical Chemistry, Kazan Section of the Academy of Sciences of the U.S.S.R., Kazan)
- Effect of dispersed modifiers on the thermooxidative degradation of highly-filled epoxy compounds studied by thermal analysis *D. D. Berman, V. V. Efanova and V. M. Kuznetsova* (All-Union Research Institute for Electric Machine Manufacturing Technology, Kharkov)

- Application of thermal analysis for studying modified polyolefins *A. M. Kochnev, V. P. Arkhireev and F. T. Shageeva* (Kirov Chemical-Technological Institute, Kazan)
- Thermal analysis of modified polyethylene *I. F. Osipenko, A. P. Polikarpov, L. D. Krul, Yu. I. Matusevich and N. R. Prokopchuk* (Institute of Physical and Organic Chemistry, Academy of Sciences of the Byelorussian S.S.R., Minsk; Research Institute of Physico-Chemical Problems, Lenin State University, Minsk)
- Thermal transformations in thin polymer layers in contact with metals *S. S. Pesetsky* (Institute of the Mechanics of Metal-Polymer Systems, Academy of Sciences of the Byelorussian S.S.R., Gomel)
- Multiple thermal analysis and study of the chemical composition of volatile products at organoplastics pyrolysis *K. N. Rusakova, R. G. Stroiteleva and N. K. Sklemin* (Moscow)
- Combined utilization of the data of multiple thermal analysis and pyrolytic mass spectrometry in the study of the thermal properties of polymers *G. A. Kalinkevich, I. M. Lukashenko, V. A. Konchits, E. S. Brodsky and R. A. Khmel'nitsky* (Timiryazev Agricultural Academy, Moscow)
- DSC and thermometric study of the setting of unsaturated polyester resins *V. L. Moyseev, A. M. Libenson and T. V. Karelina* (Scientific Design Department "Plastmassy", Moscow)
- Study of the thermal and thermooxidative degradation of polycapromide *Yu. B. Chayki, F. F. Niyazi and I. Ya. Kalontarov* (Nikitin Institute of Chemistry, Academy of Sciences of the Tadzhik S.S.R., Dushanbe)
- Thermoanalytical and kinetic investigation of the inhibitor activity of some phosphines used as polymer stabilizers *M. P. Sianov and V. A. Boychuk* (Engineering-Building Institute, Kazan)

4.2. Natural polymers

- Thermal and spectrochemical study of cation-exchanging cellulose derivatives *V. E. Kaputsky and A. M. Shishko* (Lenin State University, Minsk)
- Low-temperature thermal analysis of hygroscopic moisture-containing wood *E. D. Levin and S. R. Loskutov* (Technological Institute, Krasnoyarsk)
- Effect of substances forming liquid crystal phases with cellulose derivatives on the thermophysical properties of cellulose acetates *G. N. Timofeeva, T. G. Golbina, V. M. Averyanova and V. P. Lozgacheva* (Chernishevsky State University, Saratov)
- Study of the stability of alkalicellulose in the ageing process by multiple thermal analysis *A. V. Oboturov, E. V. Karpinchik, Yu. G. Zonov and E. A. Trilinskaya* (Technological Institute, Mogilev; Institute of General and Inorganic Chemistry, Academy of Sciences of the Byelorussian S.S.R., Minsk)
- Application of multiple thermal analysis in processing natural silk-polyester yarn *F. F. Niyazi, I. Ya. Kalontarov and N. A. Mordasova* (Nikitin Institute of Chemistry, Academy of Sciences of the Tadzhik S.S.R., Dushanbe)
- Thermal decomposition of metal-substituted monocarboxy celluloses differing in structure *I. A. Bashmakov, L. V. Soloveva, F. N. Kaputsky and N. G. Rafalsky* (Research Institute of Physico-Chemical Problems of the Lenin State University, Minsk)
- Initial stages of thermal degradation of celluloses of various origins *A. M. Mishko, B. V. Erofeev, L. G. Pesnyakevich, D. V. Matskevich and I. N. Abrantsalsky* (Institute of Physico-Organic Chemistry, Academy of Sciences of the Byelorussian S.S.R., Minsk)
- On the determination of carbonaceous materials by thermal analysis *N. A. Lapina, E. M. Cherednik and V. S. Ostrovsky* (Moscow)
- Low-temperature thermal analysis of concentrated aqueous protein solutions having anti-nucleating activity *E. D. Levin and P. V. Mironov* (Technological Institute, Krasnoyarsk)
- Thermocatalytical transformations of compounds modelling the lignin-carbohydrate bond *G. V. Dobeleva and G. E. Doburg* (Institute of Wood Chemistry, Academy of Sciences of the Latvian S.S.R., Riga)

- Thermal degradation of cellulose in the presence of boric acid *G. A. Rossinskaya, G. E. Domburg and V. V. Yukryan* (Institute of Wood Chemistry, Academy of Sciences of the Latvian S.S.R., Riga)
- Effect of ammonium chloride on the thermal degradation of wood and cellulose *T. N. Skripchenko, G. E. Domburg and R. V. Luksa* (Institute of Wood Chemistry, Academy of Sciences of the Latvian S.S.R., Riga)

4.3. Organic compounds

- Multiple thermal analysis of benzene polycarboxylic acids *S. M. Dolgikh, L. V. Shishmina, Ya. A. Belikhmaer, and S. I. Smolyaninov* (Kirov Polytechnical Institute, Tomsk)
- Thermal stability of the hydrofluorides of nitrogen-containing organic bases *A. N. Chebotarev, A. A. Ennan and A. N. Rakhaiya* (Mechnikov State University, Odessa)
- Thermogravimetric study of the formation process of alkali cyanates *V. V. Dragalov, X. V. Karachinsky and A. D. Chimishkyan* (Mendeleev Chemical-Technological Institute, Moscow)
- Some aspects of the thermal analysis of mono- and disaccharides *G. A. Levenko, O. P. Vdovenko and L. D. Bobrovnik* (Technological Institute of the Food Industry, Kiev)
- Major features of the thermal decomposition of thioamides and of their compounds with inorganic acids *R. Sh. Erkasov, N. N. Nurakhmetov, B. A. Beremzhanov and A. Tashenov* (Kirov State University, Alma-Ata)
- Dissociation pressure of some (thio)amide compounds with inorganic acids *N. N. Nurakhmetov, G. M. Sekunov, B. A. Beremzhanov, R. Sh. Erkasov and K. G. Khanapin* (Kirov State University, Alma-Ata)
- Effect of the association and orientation of the components on the nematic-isotropic phase transition in liquid-crystalline mixtures *V. A. Burmistrov, V. V. Aleksandrysky and V. I. Klopov* (Chemical-Technological Institute, Ivanovo)
- Effect of the position of the substituent on the thermal characteristics of melting (on the example of chlorine derivatives of aryl carbanilides) *N. P. Lushina* (Polytechnical Institute, Kuybyshev)
- Formation of intermediate smectic phases in binary mixtures of azoxy compounds and cyanophenylbenzoates *G. I. Karpushkina, V. A. Molochko, N. K. Semendyaeva and I. B. Kudinov* (Kurnakov Institute of General and Inorganic Chemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Study of the thermal decomposition of phenolphthalein and related compounds *L. V. Shishmina, S. M. Dolgikh, V. M. Ktskalo, V. A. Bir and A. D. Burov* (Kirov Polytechnical Institute, Tomsk)
- Study of the interaction between n-alkylphthalimides and bases by thermal analysis *E. V. Ganin and V. I. Nikitin* (Mechnikov State University, Odessa)
- Thermal stability of alkali earth benzoates and *p*-chlorobenzoates *V. R. Cherkesova and Z. Sh. Karaev* (Narimanov Medical Institute, Baku)
- DTA and TG study of the drying process of chlorendic anhydride *E. A. Brakhfogel, V. V. Maslennikova, V. Yu. Fatyanov and V. V. Popova* (All-Union Research Institute of Herbicides, Ufa)
- Thermal analysis as the basis for a dynamic thermolysis method of organic compounds *Yu. V. Shurukhin, N. A. Klyuev, M. M. Novikov and I. I. Grandberg* (Timiryasev Agricultural Academy, Moscow)
- Determination of the purity of organic compounds by quantitative DTA *L. V. Melchakova, N. V. Avramneko and N. D. Topor* (Lomonosov State University, Moscow)

Section 5: Building Materials and Metals

- Estimation of the durability of ceramic wall-panelling by thermal analysis *L. G. Shypnova, M. V. Bek, M. G. Pona and A. B. Khomyak* ("Leninsky Komsomol" Polytechnical Institute, Lvov)
- Thermal analysis of expanding cements *T. S. Terlyga* ("Leninsky Komsomol" Polytechnical Institute, Lvov)
- Thermal and x-ray studies of silicate materials with finely dispersed zeolites as additives *Z. A. Chistyakova, E. T. Berezhnenko and B. M. Kuninets* ("Leninsky Komsomol" Polytechnical Institute, Lvov)
- Thermoanalytical study of the structural characteristics of coal tar binders *R. A. Satarina, V. V. Bezrodny, B. K. Zhdanyuk, A. G. Olginsky and V. A. Zolotarev* (Automobile and Road Institute, Kharkov)
- On the nature of the thermal effects on the DTA curves of cement raw material blends *M. V. Kougiya, V. L. Ugolkov and Z. R. Polishuk* (Gidrotsement, Leningrad)
- Thermoanalytical study of the vitrification processes in the system $\text{Na}_2\text{O}_3\text{SiO}_2\text{—MnO} \cdot \text{B}_2\text{O}_3\text{—ZrO}_2 \cdot \text{SiO}_2$ *A. V. Sarukhanishvili and I. G. Berdzenishvili* (Lenin Polytechnical Institute, Tbilisi)
- Thermoanalytical determination of the dependence of vitrification processes on the qualitative composition of the charge *A. B. Sarukhanishvili and I. G. Zedginidze* (Lenin Polytechnical Institute, Tbilisi)
- Thermal analysis in the determination of the vitrification processes in multicomponent enamel charges *A. V. Sarukhanishvili and M. T. Razmadze* (Lenin Polytechnical Institute, Tbilisi)
- Thermoanalytical study of the effect of oxide additives on the hydration and crystallization of cement *E. V. Legtyareva, G. J. Sobol, L. D. Marakina, R. A. Satarina, Chiboza Einsu Zhan and I. T. Grass* (Automobile and Road Institute, Kharkov)
- Study of the thermomechanical properties of basalt composites *M. A. Sokolinskaya, V. V. Efanova, O. V. Tutakov and L. K. Zabava* (Institute of Problems of Material Science, Academy of Sciences of the Ukrainian S. S. R., Kiev)
- Thermal analysis of stabilized forms of zeolites *G. V. Tsetseshvili, L. K. Kvantaliani and L. S. Chipashvili* (Institute of Physical and Organic Chemistry, Academy of Sciences of the Georgian S. S. R., Tbilisi)
- Thermoanalytical investigation of slag-liquid glass binders *G. S. Dibrov, N. V. Shpirko and M. N. Gritsyuk* (Engineering-Building Institute, Dnepropetrovsk)
- Combining thermoanalytical methods and IR spectroscopy for the determination of physically and chemically bound water in rocks with complex composition (*M. A. Belyakov, A. D. Dzyublo, I. G. Melnikov and A. S. Moiseenko*) (Gubkin Institute of the Petrochemical and Natural Gas Industry, Moscow)
- Low-temperature thermal analysis of cement hydration *L. G. Shypnova, M. A. Sanitsky, O. L. Ostrovsky and Kh. S. Sobol* ("Leninsky Komsomol" Polytechnical Institute, Lvov)
- Thermoanalytical investigation of clay raw material with the purpose to forecast structure formation of porous fillers and to perform zonal heat calculations of kilns for the manufacture of ceramic gravel *B. V. Shal and B. V. Skiba* (Keramzit Research Institute, Kuybyshev)
- Determination of the kinetic parameters of sulfate formation by thermal analysis *Z. K. Kairbaeva, B. B., Beysembaev, Kh. G. Mukhtibaev and V. I. Gorkun* (Institute of Metallurgy and Ore Enrichment, Academy of Sciences of the Kazakh S. S. R. Alma-Ata)
- On the reasons of the doubling of the dehydration effect of $\text{Ca}(\text{OH})_2$ on the DTG curves of hydrated portland cement *B. S. Bobrov, T. A. Kretinina and I. G. Zhigun* (Uralian Research Institute for Building and Design, Chelyabinsk)
- Application of thermal analysis for the quality control of limestone used in the manufacture of cellular concrete *V. F. Tetere and L. K. Shpatsa* (Pelshe Polytechnical Institute, Riga)

- Thermoanalytical study of coal processing products utilized for the manufacture of building materials *N. P. Goryunova* (Institute of Combustible Minerals, Moscow)
- Thermoanalytical investigation of alumina-containing cements *T. G. Galchenko, I. F. Usatkov, G. G. Eliseeva, A. G. Karaulov* and *E. V. Degtyareva* (Research Institute of Refractories, Kharkov; Automobile and Road Institute, Kharkov)
- Investigation of the ageing processes of perlite heat-insulating tubes *V. A. Bushmina, N. F. Vasileva, A. A. Kudinova, I. A. Pisarenko, I. G. Timofeeva* and *S. P. Khayner* (Kucherenko Central Research Institute of Building Constructions, Moscow)
- Effect of crystallite size on the inversion temperature of quartz *L. S. Dubrovinsky* and *G. O. Piloyan* (Institute of Ore Deposit Geology, Petrography, Mineralogy and Geochemistry, Academy of Sciences of the U. S. S. R., Moscow)
- On the behaviour of ankerite at heating *T. N. Krasavitsa* and *N. V. Kuznetsova* (Karpinsky Geological Institute, Leningrad)
- Particular features of the dehydration of kaolinite *A. V. Drozdova* (Institute of Ore Deposit Geology, Petrography, Mineralogy and Geochemistry, Academy of Sciences of the U. S. S. R., Moscow)
- Quantitative phase analysis of siderite in rocks *R. N. Yudin* (All-Union Research Institute of Mineral Raw Materials, Moscow)
- A method for the quantitative analysis of isomorphic binary carbonate mixtures *D. M. Goldin* and *G. V. Kurlikova* (Karpinsky Geological Institute, Leningrad)
- Effect of the heating rate on the phase transformations in hydragillite during its thermolysis (*O. P. Krivoruchko, S. M. Taramzin, G. S. Litvak, B. P. Zolotovskiy* and *R. A. Buyanov*) (Institute of Catalysis, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Thermal analysis for studying genesis features of baryte-containing ores *E. N. Shlyapkina, G. G. Akhmanov, V. I. Shulerova, V. F. Krutikov, N. N. Vedernikov* and *R. A. Khaydarov* (All-Union Research Institute of the Geology of Non-Ore Useful Minerals, Kazan)
- Study of the transformations taking place in the thermal decomposition of magnesium hydroxoborates *G. N. Kononova, A. A. Perebeynos* and *S. V. Gonchar* (Lomonosov Institute of the Technology of Fine Chemicals, Moscow)
- Study of perlite dehydration and its swelling power *O. I. Gubanova* and *A. M. Garaev* (Institute of Ore Deposit Geology, Petrography, Mineralogy and Geochemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Study of the thermal behaviour of iron sulfide and bismuth sulfide mixtures *A. S. Tsaruk, N. Z. Baltynova, Yu. M. Kuznetsov* and *A. I. Tverdokhlebov* (Chemical-Metallurgical Institute, Academy of Sciences of the Kazakh S. S. R., Karaganda)
- Study of the thermal decomposition of cobaltine and gersdorffite by DTA *S. M. Isabaev, A. N. Polukarov* and *V. D. Chunaeva* (Chemical-Metallurgical Institute, Academy of Sciences of the Kazakh S.S.R., Karaganda)
- Thermal analysis of natural potassium borates occurring in Western Kazakhstan *G. K. Maylieva, A. N. Zakonov, V. G. Kalacheva* and *M. D. Diarov* (Institute of the Chemistry of Petroleum and Natural Salts, Academy of Sciences of the Kazakh S.S.R., Alma-Ata)
- Thermal investigation of clinoptilolites *I. E. Gorshkova, G. O. Piloyan* and *T. V. Batiashvili* (Institute of Ore Deposit Geology, Petrography, Mineralogy and Geochemistry, Academy of Sciences of the U.S.S.R., Moscow)
- Thermoanalytical study of the swelling and sintering of Karpathian slate and agrillite rocks *N. V. Chubatyuk, R. I. Semegen, P. V. Novosad* and *Ya. B. Maslyakevich* ("Leninsky Komsomol" Polytechnical Institute, Lvov; Zapadnoukrainskaya Geologiya, Lvov)

- On the results of thermoanalytical investigations of pyrite from different ore deposits of Azerbeydzhan *S. A. Bektashi, A. A. Magribi, P. S. Gavriyuk, I. A. Babev and B. V. Mustafadze* (Kirov State University, Baku)
- Combined thermal and gas analysis of the iron-silicon rock formations in the granulite facies of the Ukrainian Blanket *G. A. Malyuk, R. I. Sirosthan and A. Ya. Parfenova* (Institute of Geochemistry and Minerals Physics, Academy of Sciences of the Ukrainian S.S.R., Kiev)
- Thermal investigation of manganese minerals *T. A. Korneva, T. N. Grigoreva and A. I. Vasileva* (Institute of Geology and Geophysics, Siberian Department of the Academy of Sciences of the U.S.S.R., Novosibirsk)
- Effect of structural properties of chrysotile on the thermophysical characteristics of their dehydroxylation process *E. N. Shlyapkina and E. Kh. Ivoyleva* (All-Union Research Institute of the Geology of Non-Ore Useful Minerals, Kazan)
- Application of thermal analysis for the identification of sodalite-type minerals and for the study of their thermal stability *Yu. I. Tarasevich, S. A. Gogolyuk and V. S. Rak* (Dumansky Institute of Colloid Chemistry and the Chemistry of Water, Academy of Sciences of the Ukrainian S.S.R., Kiev; "Leninsky Komsomol" Polytechnical Institute, Lvov)
- Thermoanalytical study of the service time of natural mordenite on its phase and adsorptive properties *M. Kh. Annagiev, Z. D. Guseynova, A. M. Sardarly and A. R. Kasimova* (Institute of Inorganic and Physical Chemistry, Academy of Sciences of the Azerbeydzhan Academy of Sciences, Baku)
- Thermoanalytical study of coal mine waste rock *T. V. Polichkovskaya, M. L. Mishchenko and F. G. Sabo* (State Research Institute Gosdor, Kiev; Pilot Plant "Etalon", Baku)
- Results of the thermoanalytical studies of the magnetic quartzites of the Krivoyrog Basin applicable for thermal reaming of bore holes *L. P. Parkina, B. D. Alymov and V. Ya. Osenny* (Institute of Geotechnical Mechanics, Academy of Sciences of the Ukrainian S.S.R., Dnepropetrovsk)
- Study of the industrial processing of Kovdor apatite using the phosphoric acid-thermal process *M. E. Pyldme and U. A. Raude* (Polytechnical Institute, Tallinn)

The XXIst Conference on Microbalance Techniques, August 1985, at Dijon, France

The 21st MT Conference held at the University of Dijon was organised by Prof. N. Gérard. In his opening address C. Eyraud gave a statistical survey of the previous Conferences on Vacuum Microbalance Techniques. He dated the beginning of thermogravimetry back to the early 19th century, when at Lyon silk was examined for quality. Using 46 milligramme balances, 400 thermogravimetric measurements were made per day and 3000 tons of silk were inspected per year under a French-Chinese joint venture. The steam heaters, which were operated at 110 centigrades, were decorated with chinese enamel pictures.

Scientific programme:

- Amorphous $Zr_{0.7}Pd_{0.3}$ as a temperature reference near 2.5 K. *N. Maene, F. Biermans, J. Cornelis, A. van den Bosch, J. Vansummeren* (Mol, B)
- Applications of vacuum microbalance techniques and thermal balance techniques to coals carbides and nitrides. *S. A. A. Jayaweera* (Middlesborough, GB)

- Automatised balances of the second generation. *C. H. Massen, P. Gieles, H. H. Willems, J. A. Poullis* (Eindhoven, NL)
- Conception of an equipment meant for studying hot processes in dynamic binary gaseous mixtures as hydrogen/water vapour. *P. Raynaud, F. Nardou, M. Billy* (Limoges, F)
- Disturbances in weighing—Part II. *C. H. Massen, J. A. Poullis* (Eindhoven, NL), *E. Robens* (Mainz, F.R.G.), *Th. Gast* (Berlin, F.R.G.)
- Gravimetric calibration of standard gases. *N. Beltz, W. Jaeschke* (Frankfurt a. M., F.R.G.), *F. Meixner* (Jülich, F.R.G.)
- Gravimetric observation of phase transition of adsorbed argon on porous glass. *E. Robens, U. Müller, K. K. Unger* (Mainz, F.R.G.)
- High temperature, high pressure thermogravimetry of coal gasification. Apparatus and numerical data evaluation. *H. J. Mühlen* (Essen, F.R.G.)
- The hydrogen reduction of iron ore sinters. *F. A. Adedeji* (Warri, Nigeria), *F. R. Sale* (Manchester, GB)
- Investigation of the carbonisation of FeMn Fischer Tropsch catalysts with a microbalance. *H. Papp, F. Wiczorek* (Bochum, F.R.G.)
- The influence of convection on weighing. *C. H. Massen, M. J. F. P. Pluijm, J. T. H. Lammers, J. A. Poullis* (Eindhoven, NL), *E. Robens* (Mainz, F.R.G.)
- Influence of thermal noise on the accuracy of mass determination according to the Straubel method. *C. H. Massen, J. A. Poullis* (Eindhoven, NL), *E. Robens* (Mainz, F.R.G.) *H. Straubel* (Vorderhindelang, F.R.G.)
- Investigation of small surface area materials by means of gravimetric nitrogen sorption measurements. *B. Straube* (Mainz, F.R.G.)
- Microbalance application in the primary gravimetric hygrometer of U.K. national humidity standard facility. *A. G. Forton* (Chislehurst, GB), *J. C. C. Day* (Bristol, GB)
- Microbalance techniques and microwaves. *M. Lallemand* (Dijon, F)
- Microgravimetric measurements of water vapour sorption on hardened cement paste. *H. H. Willems, C. H. Massen* (Eindhoven, NL)
- New developments in microweight determination by free magnetic suspension. *Th. Gast* (Berlin, F.R.G.)
- Oxidation of chromium carbide. *J. N. Clarke, D. R. Glasson* (Plymouth, GB), *S. A. A. Jayaweera* (Middlesborough, GB)
- Progress in weighing with a vibrating thin band. *Th. Gast* (Berlin, F.R.G.)
- Quasi-equilibrium nitrogen adsorption gravimetry; comparison with volumetry for the determination of surface areas and pore size distributions. *J. Rouquerol, F. Rouquerol, Y. Grillet, M. Triaca* (Marseille, F)
- The reduction of nickel tungstate and iron tungstate. *J. N. Albiston, F. R. Sale* (Manchester, GB)
- Some results on investigations into relationship between a few elements of nodular graphite cast iron and nodular graphite. *J. Pirs* (Rijeka, YU)
- Surface tension measurements on surface-active material. *A. A. Boonman, P. Gieles, C. H. Massen* (Eindhoven, NL)
- Susceptibilities of superconducting vanadium measured following the Faraday method. *A. van den Bosch, J. Vansummeren* (Mol, B)
- Thermodynamical and morphological aspects of the decomposition of lead dioxide. *G. J. French* (Manchester, GB)
- A two-balance method for prevention of barrier leakage in surface-tension measurements (Langmuir–Wilhelmy-method). *P. Gieles, A. A. Boonman, P. Aernoudts, C. H. Massen, J. A. Poullis* (Eindhoven, NL)
- Use of balances in anemometry. *M. J. F. P. Pluijm, T. H. J. J. v. d. Hagen, C. H. Massen* (Eindhoven, NL)

- Utilisation des techniques microgravimétriques aux études d'adsorption et de mouillage des fibres de carbone par des produits non mouillants. Application aux matériaux composites époxy-carbone. *M. Escoubes* (Villeurbanne, F)
- Vacuum microbalance studies on the combustion of Saraji coal. *K. E. Adams, D. R. Glasson* (Plymouth, GB), *S. A. A. Jayaweera* (Middlesborough, GB),
- The ancient Egyptian balance—Part II. *E. Robens* (Mainz, F.R.G.), *H. R. Jenemann* (Hochheim a. M., F.R.G.)
- Kinetic studies by thermogravimetry: role of heat transfer, sample mass and sample holder design on the results obtained in metal hydride kinetics. *C. Bayane, N. Gérard* (Dijon, F)
- Thermogravimetric study of alcohol adsorption on active charcoal. *R. Boussehain, M. L. Feidt, B. Balesdent* (Nancy, F)
- Accurate thermogravimetric studies of hydrite condensate phosphates involve controlled water vapour pressures. *M. H. Simonot-Grange* (Dijon, F)
- Introduction of a new simultaneous TG—DSC 111. *P. Le Parlouer, J. G. Mercier* (Caluire, F)
- A simple microbalance for investigating the reactions of solids with ammonia and freons at pressures up to 10 bars. *B. Diawara, L.-C. Dufour, R. de Hartoulari, M. Moutaabbid, M. Vareille* (Dijon, F)

Thermische Analysenverfahren in Industrie und Forschung

3

Arbeitstagung der Sektion Chemie der Friedrich-Schiller-Universität Jena MDZ
„Thermische Analyseverfahren“ und der AG Thermoanalyse der Chemischen
Gesellschaft der DDR

Die folgenden Vorträge waren hörbar

- Neuere Vorstellungen über Mechanismen und Reaktionskinetik von Feststoffreaktionen: *V. Jesenak*
On investigation of stages of decomposition and kinetics of thermal dissociation of solids: *J. Pysiak* und
B. Pacewska
- Rechnergeschützte Untersuchung der Zersetzungskinetik von $\text{BeSO}_4 \cdot 4\text{H}_2\text{O}$: *G. Braun, H. Rossbach, K. Henkel, W. Richter* und *S. Boy*
- Datenerfassung und -verarbeitung am Thermoanalyser TA-1: *G. Braun, H. Herberg, H. Rossbach* und
S. Boy
- Realisierung der Entschmierung dynamisch-thermischer Messungen am DSC: *K. Schneider*
Beitrag zum Einfluß der Experiment-Parameter auf die Darstellung einer Phasenumwandlung mittels
eines DSC: *H. Utschick, A. Treffurth* und *H. Müller*
- Thermoanalytical methods in the study of inorganic materials and processes: *L. Niinistö* und *M. Leskelä*
Untersuchung der Zustandsdiagramme quasibinärer Chloridsysteme mit DTA und elektrochemischen
Methoden: *H. J. Seifert*
- Thermoanalytische Untersuchungen an Solvaten und Mischsolvaten des Systems $\text{LiCl} \cdot \text{H}_2\text{O} \cdot \text{DMF}$: *R. Naumann* und *K. Pollmer*
- Ergebnisse der thermischen Analyse von mechanisch-aktiviertem Chalkopyrit: *H.-J. Huhn, G. Ludwig*
und *R. Naumann*
- Kaolinitbestimmung bei Überlagerung der Dehydroxylationsstufe: *K. Böhme* und *S. Boy*

- Änderung des thermischen Verhaltens natürlicher Kaoline nach hydrothormaler Behandlung: *K. O. Backhaus, U. Illgen, J. Scheve und I. W. Schulz*
- Der Zersetzungsdruck der Probe unter den Bedingungen der quasi-isothermen und quasi-isobaren Thermogravimetrie: *H. H. Emons, T. Pohl, R. Naumann und H. Voigt*
- Untersuchungen von Katalysatoren mit thermoanalytischen Methoden: *K. Habersberger*
- Thermoanalytische Untersuchungen zum Redox-Verhalten von Cobaltmolybdat und Co-Fe-Bi-Molybdaten: *E. Alsdorf, K. Jancke, M. Selenina, K. H. Schnabel und D. Vollgraf*
- Thermogravimetrische Untersuchungen zum Reaktivierungsverhalten luftstabilisierter Nickel-Trägerkatalysatoren: *G. Alscher, H. Kinza und I. W. Schulz*
- Untersuchungen zur temperaturprogrammierten Reduktion von Fe(III)Y-Zeolithen: *B. Hunger, A. Nützel, K. Melzer und J. Hoffmann*
- Thermoanalytische und kalorimetrische Untersuchungen von CoOOH(D): *D. Petzold*
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