

HEAT AND MASS TRANSFER BIBLIOGRAPHY-- SOVIET WORKS

O. G. MARTYNENKO

Heat and Mass Transfer Institute, Byelorussian Academy of Sciences, Minsk, BSSR, U.S.S.R.

(Received 17 June 1976)

BOOKS

- I. P. Bazarov, *Thermodynamics*, 2nd rev. Edn., Vyssh. Shkola, Moscow (1976).
I. A. Kazantsev and I. S. Liber, *Thermal Protection and Engineering Equipment of Buildings in the North*. Stroizdat, Leningrad (1975).
Yu. I. Krokhin (editor), *Heat and Mass Transfer Processes and Apparatuses. Collected Papers*. MEI, Moscow (1975).
T. L. Perelman et al. (editors), *Kinetics of Heat and Mass Transfer Processes. Collected Papers*. ITMO, Minsk (1975).
A. N. Piven, N. A. Grechanaya and I. I. Chernobylsky, *Thermophysical Properties of Polymers*. Handbook, Vyssh. Shkola, Kiev (1976).
V. G. Popovsky et al., *Sublimation Drying of Vegetable Food Products*. Edited by V. G. Popovsky. Pishchev. Prom., Moscow (1975).
N. V. Tyabin (editor) et al., *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd (1975).

GENERAL

- M. S. Raizman, Conference on metrology means of measurements of unsteady temperatures, *Teplofiz. Vysok. Temper.* **14**(2), 434-435 (1976).
O. A. Sergeev, All-Union conference on radiative conductive heat transfer, *Teplofiz. Vysok. Temper.* **14**(2), 433-434 (1976).
M. G. Slinko, Some ways of developing methods of simulating chemical processes and reactors. *Teoret. Osnovy Khim. Tekh.* **10**(2), 171-183 (1976).

THERMODYNAMICS

- V. A. Abovsky, The thermodynamic disturbance theory for a gas and a liquid of a "simple" substance, *Teplofiz. Vysok. Temper.* **14**(2), 437 (1976).
P. G. Bleek, V. A. Voronin and A. V. Klymkiv, Some thermodynamic properties of Zn_3AS_2 , *Zh. Fiz. Khim.* **50**(3), 812 (1976).
G. S. Denisov and V. M. Shraiber, Thermodynamic characteristics of complexes in chlorophenol-amine systems. *Vestn. Leningr. Un-ta*, No. 4. *Fiz. Khim. vyp.* I, 61-63 (1976).
K. K. Eshonov, A. V. Vakhobov and T. D. Dzhuraev, Calculation of thermodynamic properties of elements in liquid barium alloys, *Zh. Fiz. Khim.* **50**(3), 813-814 (1976).
Ya. Kh. Grinberg, V. A. Boryakova and V. F. Shevelkov, Thermodynamic properties of indium iodides, *Izv. Akad. Nauk. SSSR. Neorgan. Mater.* **12**(3), 402-407 (1976).
A. S. Guzei and L. A. Reznitsky, Thermodynamic properties of strontium and barium metatitanates, *Izv. Akad. Nauk. SSSR. Neorgan. Mater.* **12**(3), 373-383 (1976).
L. S. Karpenko, A. A. Savitsky et al., Enthalpies of mixing in the indium-bismuth-tellurium system, *Zh. Fiz. Khim.* **50**(3), 623-625 (1976).
N. A. Kopylova, Yu. D. Semchikov and L. M. Terman, Thermal-oxidative decay of polymethylmethacrylate in the presence of zinc chloride, *Vysok. Soedin. Ser. B*, **18**(3), 198-201 (1976).
L. I. Kholokhonova and T. N. Rezukhina, Thermodynamic properties of cerium, neodymium, gadolinium, terbium and lutecium fluorides, *Zh. Fiz. Khim.* **50**(3), 767-769 (1976).

G. A. Krestov and V. I. Vinogradov, Solubility and thermodynamics of dissolving argon in water-ethylene, glycol-glycerin mixtures, *Izv. Vuzov. Khim. i Khim. Tekh.* **19**(3), 412-416 (1976).

V. Ya. Krivnov, B. N. Provotorov and V. L. Eidus, Characteristics of thermodynamic functions at condensation points, *Teoret. Mat. Fiz.* **26**(3), 352-357 (1976).

L. A. Marinova and V. N. Yaglov, Thermodynamic properties of lanthanide phosphates, *Zh. Fiz. Khim.* **50**(3), 802-803 (1976).

L. E. Nagibina, A. V. Vakhobov and T. D. Dzhuraev, Calculation of thermodynamic activity of components in liquid strontium alloys, *Zh. Fiz. Khim.* **50**(3), 806 (1976).

T. I. Novikova and A. I. Osipov, Thermodynamic description of vibratory relaxation in a binary mixture of diatomic molecules, *Teplofiz. Vysok. Temper.* **14**(2), 270-276 (1976).

N. P. Novoselov, O. I. Ryabzhenko and K. P. Mishchenko, Study of thermodynamic properties of NaI and CsI solutions in dimethylsulfoxide at different temperatures, *Zh. Fiz. Khim.* **50**(3), 615-619 (1976).

G. P. Popov and S. F. Strokatova, Synthesis and thermodynamic properties of solid $Fe_{1-x}O-ZnO$ solutions, *Zh. Fiz. Khim.* **50**(3), 810 (1976).

I. A. Rat'kovsky, L. N. Novikova et al., Thermodynamic study of vapour generation in MnFeCo and Ni dichlorides, *Izv. Vuzov. Khim. i Khim. Tekh.* **19**(3), 407-411 (1976).

I. A. Vasilieva, L. P. Ogorodova and L. I. Stepanets, Thermodynamic properties of WO_2 and $W_{18}O_{49}$ oxides at high temperatures, *Vest. Mosk. Univ. Ser. II. Khim.* **17**(1), 47-51 (1976).

R. K. Veliev, K. K. Mamedov et al., Heat capacity and thermodynamic properties of $ZnGa_2Se_4$ and $ZnIn_2Se_4$ semiconductors at low temperatures, *Zh. Fiz. Khim.* **50**(3), 746-748 (1976).

G. F. Voronin, Thermodynamic properties of intermediate phases with narrow regions of homogeneity. IV. Relative stability of compounds in an alloy, *Zh. Fiz. Khim.* **50**(3), 607-611 (1976).

THERMOPHYSICAL (TRANSPORT) PROPERTIES OF SUBSTANCES

A. A. Aleksashenko, Errors in determining thermal diffusivity by the regular regime methods, *Izv. Vuzov. Priporostr.* **19**(2), 108-113 (1976).

G. S. Ambrok, E. A. Lapina et al., State special standards of a temperature unit in a range of 600-2300K for infrared radiation and of 1800-3000K for ultraviolet radiation, *Izmerit. Tekh.* No. 3, 35-37 (1976).

S. S. Bakulin, S. A. Ulybin and E. P. Zherdev, Experimental study of thermal conductivity of CO_2 and SF_6 within 350-1300K, *Teplofiz. Vysok. Temper.* **14**(2), 391-392 (1976).

V. S. Batalov, V. S. Batmanov and Yu. S. Grigoriev, An effect of temperature-dependent thermophysical characteristics on results of dilatometric determination of heat transfer parameters, *Teplofiz. Vysok. Temper.* **14**(2), 437-438 (1976).

M. A. Eronian, R. G. Avarbe and I. N. Danisina, An effect of equilibrium pressure of nitrogen on melting temperature

- of $TiIV_n$ and $HiNn$. *Teplofiz. Vysok. Temper.* **14**(2), 398–399 (1976).
- M. L. Kachanov. On anisotropy of electrical and thermal conductivity of a cracked medium. *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 141–144 (1976).
- V. I. Kofanov. Anisotropy of thermal conductivity of composite materials. *Izv. Vuzov. Mashinostr.* No. 7, 25–30 (1975).
- V. B. Kokshenov. To the theory of anomalous heat capacity of solid hydrogen with neon admixture. *Fiz. Nizk. Temper.* **2**(2), 236–247 (1976).
- A. I. Kovalev, A. V. Logunov et al. Thermal conductivity and electrical resistance of molybdenum in the temperature range of 300–2600 K. *Teplofiz. Vysok. Temper.* **14**(2), 299–302 (1976).
- A. N. Kovryanov and Yu. R. Chashkin. A state special standard for unit of specific heat of solids in a temperature range of 90–273.15 K. *Izmerit. Tekh.* No. 3, 31–35 (1976).
- V. S. Lebedev, A. I. Savatimsky and M. A. Sheindlin. On heat capacity of refractory rapid-heated metals near a melting point. *Teplofiz. Vysok. Temper.* **14**(2), 285–289 (1976).
- B. M. Mirzoev, K. D. Guseinov et al. Thermal conductivity of brom- and iodo-benzene at different temperatures and pressures. *Izv. Vuzov. Neft i Gaz.* No. 2, 50–62 (1976).
- R. A. Mustafaev and D. M. Gabulov. Experimental study of cumene thermal conductivity at high temperatures and pressures. *Izv. Vuzov. Neft i Gaz.* No. 1, 46 (1976).
- R. A. Mustafaev and T. P. Musaev. A formula for calculating heat capacity of hydrocarbons in a wide range of temperatures and pressures. *Izv. Vuzov. Energetika* No. 3, 92–95 (1976).
- V. E. Peletsky. On interpretation of temperature-dependent thermal and electrical conductivity of transition metals in a high temperature range. *Teplofiz. Vysok. Temper.* **14**(2), 295–298 (1976).
- A. S. Pleshakov. Concerning the relaxation theory for heat conduction and diffusion. *Teplofiz. Vysok. Temper.* **14**(2), 307–311 (1976).
- N. P. Rybkin, M. N. Orlova et al. The state special standard for a unit of specific heat capacity of solids in a temperature range of 4.2–90 K. *Izmerit. Tekh.* No. 3, 37–40 (1976).
- L. I. Safir and B. A. Grigoriev. Experimental study of isobaric heat capacity of cyclohexane in a vapour phase. *Izv. Vuzov. Neft i Gaz.* No. 2, 28, 46 (1976).
- Yu. I. Shishatsky, V. A. Fedorov et al. Thermophysical properties of yeast concentrations. *Izv. Vuzov. Pishchev. Tekh.* No. 1, 156–157 (1976).
- V. V. Slyusarev and P. M. Kesselman. Thermal conductivity of toluene and some difluoro-ethanes at high pressures. *Izv. Vuzov. Neft i Gaz.* No. 2, 109 (1976).
- E. V. Smirnov. Determination of thermal conductivity, electrical conductivity, emissivity of an electroconducting cylinder with internal heat sources. *Teplofiz. Vysok. Temper.* **14**(2), 438 (1976).
- L. P. Zarkova and V. I. Stefanov. Measurement of thermal conductivity of gases and vapours up to 2500 K. Mercury and cesium vapours. *Teplofiz. Vysok. Temper.* **14**(2), 277–284 (1976).
- V. A. Zhdanovich and Yu. R. Chashkin. The state special standard for a unit of heat conductivity of solids in a temperature range from 60 up to 300 K. *Izmerit. Tekh.* No. 3, 28–31 (1976).
- ### HEAT CONDUCTION
- V. N. Akimov, A. P. Rydzevsky and B. I. Fedorov. Description of unsteady-state thermal processes at micro-welding by means of quasi-stationary approximation. *Izv. Akad. Nauk. BSSR. Ser. Fiz.-Energ. Nauk.* No. 1, 107–112 (1976).
- V. A. Baum and O. Bekmuratov. Steady and unsteady temperature fields of liquid in heated channels filled with a lump material. Communication 2. *Izv. Akad. Nauk. TSSR. Ser. Fiz.-Tekh. Khim. i Geolog. Nauk.* No. 3, 3–8 (1975).
- L. E. Belousova. Temperature and stress fields in a hollow cylinder with a periodical heat flux on its internal surface. *Teplofiz. Vysok. Temper.* **14**(2), 345–352 (1976).
- I. S. Efremova and M. S. Smirnov. A problem on a temperature field inside an evaporating drop. In *Heat and Mass Transfer*. Vol. 5, pp. 238–241. Minsk (1976).
- L. D. Komyshnik, A. P. Zhuravlev et al. Thermal conductivity of a grain buckwheat bed. *Trudy Nauchno-Issled. Insta Zerna i Produkt. Pererabotki* (VNIIZ) Vol. 81, 24–26 (1975).
- G. I. Levchenko, I. D. Liseikin and A. M. Kopeliovich. The methods for calculating a temperature regime of membrane convective heating surfaces in terms of dimensionless temperatures. *Energomashinostr.* No. 2, 4–8 (1976).
- N. T. Romanenko, G. N. Arzyutov et al. Experimental study of temperature fields in a gas thermoelectrical drive. *Izv. Vuzov. Mashinostr.* No. 11, 180–181 (1975).
- A. A. Samarsky, N. V. Zmitrenko et al. Thermal structures and fundamental length in a medium with non-linear thermal conductivity and volumetric heat sources. *Dokl. Akad. Nauk. SSSR* **227**(2), 321–324 (1976).
- A. L. Satanovsky. Temperature fields in thin envelopes contacting with liquid drops. In *Heat and Mass Transfer*. Vol. 3(1), pp. 271–276. Minsk (1976).
- V. I. Shakhurdin and V. A. Narygin. A temperature field in a finite hollow cylinder with inductive sector heating. *Fiz. i Khim. Obrab. Mater.* No. 2, 29–34 (1976).

HYDROMECHANICS

1. Boundary layer

- A. N. Antonov. Calculation of interaction between a turbulent boundary layer and an external supersonic flow over a concave angle and spherical stern section of a body. *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 53–61 (1976).
- N. M. Belyanin and E. Yu. Shalman. A laminar boundary layer in a swirled flow. *Izv. Akad. Nauk. SSSR. Mekh. Zhidk. i Gaza* No. 1, 43–49 (1976).
- D. K. Burenkov, V. I. Zalkind et al. Study of electrical characteristics of a boundary layer on metal surfaces in channels of the MHD open cycle generator. *Teplofiz. Vysok. Temper.* **14**(2), 359–364 (1976).
- Yu. A. Demyanov and V. V. Feoktistov. Numerical solution of a problem on boundary layer development over a plate behind a moving shock wave. *Izv. Akad. Nauk. SSSR. Mekh. Zhidk. i Gaza* No. 1, 32–42 (1976).
- A. S. Dryzhov. Characteristics of unstable localized disturbance in a compressible boundary layer. *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 50–53 (1976).
- S. Ya. Gertsenshtain and Yu. M. Shtomler. On finite amplitude disturbances in a boundary layer. *Izv. Akad. Nauk. SSSR. Mekh. Zhidk. i Gaza* No. 1, 150–153 (1976).
- A. P. Girol and Ya. A. Mikitin. On the effect of a transverse velocity on the parameters of a wall boundary layer. *Prikl. Mekh.* **12**(3), 132–136 (1976).
- S. N. Shkarbul, N. P. Avdeev et al. An influence of boundary-layer control in centrifugal wheels on their efficiency. *Energomashinostr.* No. 2, 16–18 (1976).

2. Turbulent flows

- B. C. Baranovsky and A. E. Zaryankin. Distribution of turbulence intensity in a constant-section developed-flow channel. *Izv. Sib. Otd. Akad. Nauk. SSSR* No. 3. Ser. Tekhn. Nauk. Vol. 1, 62–65 (1976).
- L. A. Bikina, P. V. Mironov and N. K. Shelkovnikov. On the structure of a turbulent viscosity coefficient in an open flow. *Vest. Mosk. Un-ta. Ser. 3. Fiz., Astronom.* **16**(5), 583–587 (1975).
- N. I. Buleev. Practical use of a spatial turbulent-exchange model. *Teplofiz. Vysok. Temper.* **14**(2), 312–320 (1976).
- M. A. Goldshtik and M. Kh. Pravdina. On interaction between external disturbance and a turbulent flow. *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 61–66 (1976).
- A. S. Gurvich, V. Kan and B. P. Potapov. Measurements of the four-point function of laser radiation field coherence in a turbulent medium. *Izv. Vuzov. Radiofiz.* **13**(3), 393–400 (1976).

F. B. Kaplansky and A. M. Epshtein, A turbulent vortex pair in an incompressible liquid, *Izv. Akad. Nauk. SSSR, Mekh. Zhidk. i Gaza* No. 1, 21–25 (1976).

I. G. Shekriladze, Concerning interaction of light with a turbulent liquid, *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 160–163 (1976).

I. G. Yakushkin, Strong fluctuations of light beam field intensities in a turbulent atmosphere, *Izv. Vuzov. Radiofiz.* No. 19(3), 384–391 (1976).

FORCED CONVECTION

V. N. Afanasiev, V. M. Belov *et al.*, Experimental study of heat transfer in the stepwise varying heat flux region, *Izv. Vuzov. Mashinostr.* No. 11, 96–99 (1975).

V. T. Buglaev, M. M. Andreev *et al.*, Heat transfer and resistance of a staggered tube bundle at different directions of condensing vapour supply, *Energomashinostr.* No. 2, 42–44 (1976).

V. I. Chernatynsky, On convective motion regimes in a thin layer between horizontal coaxial cylinders, *Izv. Akad. Nauk. SSSR. Mekh. Zhidk. i Gaza* No. 1, 134–136 (1976).

M. R. M. Drizhysus, S. I. Bartkus and A. A. Shlanchauskas, Effect of the roughness-type on heat transfer of a plate with $Pr \geq 1$, *Trudy Akad. Nauk. Litovsk. SSR, Khim. Tekh. Fiz. Geogr.* No. 5, 121–133 (1975).

E. B. Georg and M. I. Yakushin, A temperature boundary layer on models attacked by a high-enthalpy gas flow, *Izv. Akad. Nauk. SSSR. Mekh. Zhidk. i Gaza* No. 1, 26–31 (1976).

I. V. Kalganova and V. S. Klubnikin, Heat transfer in an ionized argon flow around a sphere, *Teplofiz. Vysok. Temper.* No. 14(2), 408–410 (1976).

O. A. Kremnev, A. V. Shurchkov *et al.*, Unsteady-state heat transfer in liquid flowing through underground permeable layers, in *Heat and Mass Transfer—5*, Vol. 5, pp. 177–186. Minsk (1976).

V. K. Migai and I. V. Zhitomirskaya, On the effect of Prandtl numbers on heat transfer in rough tubes, *Teplofiz. Vysok. Temper.* No. 14(2), 418–421 (1976).

I. N. Moisheev, V. I. Goryachev and A. P. Mugalev, The methods of experimental investigation of internal thermal-stressed structural element cooling by a liquid–metal heat transfer agent, *Teplofiz. Vysok. Temper.* No. 14(2), 436–437 (1976).

A. A. Pyadishus, A. B. Zhalyauskas and A. A. Shlanchauskas, A turbulent boundary layer structure with flow acceleration, *Trudy Akad. Nauk. Litovsk. SSR, Ser. B. Khim. Tekh. Fiz. Geogr.* No. 6, 93–103 (1975).

O. V. Remizov, V. A. Vorobiev and N. G. Shurkin, Heat transfer crisis and dynamics of its development in a tube with cosine heat release along the length, *Teplofiz. Vysok. Temper.* No. 14(2), 328–332 (1976).

S. Kh. Rozenfeld, Concerning estimation of thermal accommodation coefficients by data on heat transfer of rarefied gas, *Teplofiz. Vysok. Temper.* No. 14(2), 400–404 (1976).

V. K. Shchukin, A. A. Khalatov *et al.*, Flow and internal heat transfer in porous fibrous materials, *Teplofiz. Vysok. Temper.* No. 14(2), 412–415 (1976).

M. M. Tamonis, L. I. Dagis and A. A. Zhukauskas, An analysis of a turbulent boundary layer with variable physical flow properties, (I. Theoretical study), *Trudy Akad. Nauk. Litovsk. SSR, Ser. B. Khim. Tekh. Fiz. Geogr.* No. 6, 105–113 (1975).

E. P. Volchkov, E. I. Sinaiko and V. I. Terekhov, Heat and mass transfer in a turbulent boundary layer with suction under nonisothermal conditions, in *Heat and Mass Transfer—5*, Vol. 2, pp. 62–72. Minsk (1976).

A. A. Zhukauskas and R. V. Ulinskas, An analysis of tube bundles in a transverse water flow with heat transfer at critical Re numbers, *Trudy Akad. Nauk. Litovsk. SSR, Ser. B. Khim. Tekh. Fiz. Geogr.* No. 5, 93–99 (1975).

A. A. Zhukauskas, R. B. Ulinskas and K. F. Martsinauskas, An effect of the tube bundle geometry on local heat transfer in a critical flow region, *Trudy Akad. Nauk. Litovsk. SSR, Ser. B. Khim. Tekh. Fiz. Geogr.* No. 6, 115–126 (1975).

FREE CONVECTION

T. G. Akimova, V. V. Alekseev and A. M. Gusev, On thermal convection in a field of centrifugal forces. (To investigation of an atmosphere.) *Izv. Akad. Nauk. SSSR, Fiz. Atmosf. i Okeana* No. 11(8), 787–793 (1975).

E. A. Shtessel and L. V. Kalashnikova, An effect of free convection on mass transfer involving chemical transport, in *Heat and Mass Transfer—5*, Vol. 2, pp. 176–183. Minsk (1976).

PHASE CONVERSIONS

1. Boiling, evaporation

V. K. Andreev, V. I. Deev and V. I. Petrovichev, An effect of heating surface orientation and pressure on a critical heat flux in helium pool boiling, *Teplofiz. Vysok. Temper.* No. 14(2), 436 (1976).

G. Bartau, Experimental study of boiling in an ammonia flow at high pressures, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 220–225. Minsk (1976).

G. N. Danilova, E. I. Guigo *et al.*, Enhancement of low-temperature liquid boiling heat transfer with a small density heat flux, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 22–31. Minsk (1976).

V. F. Dunskey and Yu. V. Yatskov, Evaporation of drops in a turbulent gas jet, *Zh. Prikl. Mekh. i Tekh. Fiz.* No. 1, 73–79 (1976).

L. F. Fedorov and E. N. Voropayeva, Ascending vapour-water flow in heated tubes, *Izv. Vuzov. Energetika* No. 3, 69–74 (1976).

L. A. Felberg, A. L. Dobkes *et al.*, A mechanism of water boiling inside a vertical channel under different under-heating, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 239–245. Minsk (1976).

N. I. Gelperin, B. M. Gurovich *et al.*, Boiling heat transfer of aqueous electrolyte solutions, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 51–55. Minsk (1976).

Z. R. Gorbis and M. I. Berman, Liquid boiling heat transfer of a dispersed fluidized bed, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 56–60. Minsk (1976).

L. N. Gorokhov, A. M. Emelyanov *et al.*, Microinhomogeneous structure of liquid nickel aluminate and mass-spectrometric study of its evaporation, *Teplofiz. Vysok. Temper.* No. 14(2), 395–398 (1976).

M. A. Gotovsky, A. V. Borishanskaya and G. P. Danilova, Correlation of the boiling characteristics by the thermodynamic similarity method, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 14–21. Minsk (1976).

E. K. Kalinin, I. I. Berlin *et al.*, Transient boiling heat transfer of cryogenic liquids, *Teplofiz. Vysok. Temper.* No. 14(2), 410–412 (1976).

Yu. A. Kirichenko, M. L. Dolgoi *et al.*, Study of cryogenic liquid boiling, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 137–146. Minsk (1976).

S. A. Kovalev, D. Ya. Derevyanko *et al.*, Subcooled water boiling heat transfer crisis on a finned surface under forced motion conditions, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 162–169. Minsk (1976).

V. A. Kravchenko, Yu. N. Ostrovsky and L. F. Tolubinskaya, Boiling of the light hydrocarbons and ethylene–ethane mixture, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 66–69. Minsk (1976).

V. G. Leitsina, N. V. Pavlyukevich and G. I. Rudin, Binary gas mixture flow with evaporation in a capillary, in *Heat and Mass Transfer—5*, Vol. 5, pp. 242–246. Minsk (1976).

E. V. Lykov, Acoustic spectra in the liquid-boiling crisis region, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 266–270. Minsk (1976).

E. I. Nesis and V. V. Chekanov, The fundamental problems of boiling physics and ways of enhancement of heat transfer involving phase conversions, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 32–40. Minsk (1976).

R. I. Nigmatulin, B. I. Nigmatulin *et al.*, An effect of interphase heat and mass transfer on unsteady efflux of a boiling-up liquid, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 179–183. Minsk (1976).

- V. S. Novikov. Vapour bubbles growth on a heated surface, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 70–76. Minsk (1976).
- E. M. Puzyrev, A. D. Gorbunov et al. The theory of formation and evaporation of a microlayer, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 82–86. Minsk (1976).
- V. G. Rifert, P. A. Barabash et al. Mechanism and heat transfer intensity with steam generation in a liquid film flowing down a profiled surface, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 184–187. Minsk (1976).
- E. E. Shpilrain, K. A. Yakimovich et al. Experimental study of the diagram of lithium–lithium hydride evaporation at high hydride concentrations in a liquid phase. *Teplofiz. Vysok. Temper.* 14(2), 405–407 (1976).
- V. N. Slesarenko, G. A. Gudakov et al. Heat transfer of the sea water with thermal distillation in thin-film distillers, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 188–192. Minsk (1976).
- G. F. Smirnov. Maximum heat fluxes under some particular boiling conditions, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 277–282. Minsk (1976).
- G. F. Smirnov, A. L. Koba et al. Boiling heat transfer in slots, capillaries and under other restricted conditions, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 193–197. Minsk (1976).
- V. M. Tokarev. Fundamentals of collective phenomena kinetics and an analytical model of the “Nukiyama curve” (heat flux versus heat-liberating surface temperature) with liquid boiling on technical surfaces, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 41–45. Minsk (1976).
- V. M. Tokarev. Thermal dynamics of heat-producing and heat-transmitting elements, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 283–287. Minsk (1976).
- V. I. Tolubinsky. Boiling heat transfer intensity and crisis under free motion conditions, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 321–330. Minsk (1976).
- E. G. Tutova, G. A. Kuvshinov and T. V. Kuchko. Evaporation of drops in a two-component flow, in *Heat and Mass Transfer* 5, Vol. 5, pp. 231–237. Minsk (1976).
- I. P. Vishnev. Molecular aspects of liquids boiling, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 2–13. Minsk (1976).
- V. D. Yusufova and A. I. Chernyakhovsky. Boiling heat transfer in mixtures, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 92–97. Minsk (1976).
- A. F. Zaletnev, A. F. Akselrod and A. V. Tikhonov. On calculation of surface boiling heat transfer of water in tubes, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 170–173. Minsk (1976).
- Yu. A. Zeigarnik and V. D. Litvinov. Experimental study of sodium boiling heat transfer and pressure losses in a vertical tube, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 147–156. Minsk (1976).
- ### 2. Condensation
- A. F. Gandelsman, S. I. Vainshtein et al. A choice of optimum diffuser throat sizes of a condensing injector, *Teplofiz. Vysok. Temper.* 14(2), 365–371 (1976).
- V. G. Rifert and G. G. Leontiev. An analysis of heat transfer involving vapour condensation on a vertical surface with wire intensifiers of a process, *Teploenergetika* No. 4, 78–80 (1976).
- I. A. Shemagin and R. M. Lapshin. Prediction of critical parameters of laminar condensate flow over a vertical surface, *Izv. Vuzor. Energetika* No. 3, 75–78 (1976).
- G. G. Shklover and M. D. Rodivilin. Condensation on water jets with transverse vapour motion, *Teploenergetika* No. 4, 48–51 (1976).
- ### 3. Sublimation
- N. N. Sevryugova, V. A. Malyusov and N. M. Zhavoronkov. Continuous countercurrent sublimation, *Teoret. Osnovy Khim. Tekh.* 10(2), 297–298 (1976).
- ### 4. Crystallization, solidification, freezing
- G. G. Devyatkh, V. M. Vorotyntsev et al. An effect of crystal coarsening on mass transfer mechanism involving substances purification by the method of countercurrent crystallization from a melt, *Teoret. Osnovy Khim. Tekh.* 10(2), 302–304 (1976).
- V. A. Dozorov and S. V. Makarov. To the theory of countercurrent recrystallization in a column, *Teoret. Osnovy Khim. Tekh.* 10(2), 299–302 (1976).
- A. A. Gogolin. Saturated air cooling, *Kholod. Tekh.* No. 3, 30–33 (1976).
- V. A. Kudryavtsev, E. D. Ershov et al. Moisture transfer and ice segregation in freezing and thawing dispersed rocks, in *Heat and Mass Transfer* 5, Vol. 5, pp. 115–124. Minsk (1976).
- B. Ya. Lyubov and E. N. Sobol. Evaporation of a material attacked by a concentrated energy flow with an elliptical cross-section, *Fiz. i Khim. Obrabotki Materialov* No. 2, 12–16 (1976).
- A. S. Prutkovsky and O. B. Tsitovich. Concerning the analysis of dispersity with mass crystallization from solutions, *Teoret. Osnovy Khim. Tekh.* 10(2), 305–307 (1976).
- E. R. Remennik, O. B. Tsitovich and G. A. Nosov. Study of lincomycin crystallization, *Khim.-Farmatser. Zh.* 10(3), 127–131 (1976).
- A. M. Shammasov, E. A. Armentsky and B. N. Mastobaev. Experimental study of oil and oil products solidification in tubes, *Izv. Vuzor. Neft i Gaz.* No. 1, 54–62 (1976).
- A. M. Shevtsov. Change in structural viscosity of suspensions during cooling and crystallization involving oil deparaffination, *Neftepererab. Neftekhim. Slantsipererab.* No. 2, 12–13 (1976).
- G. S. Shubin. Calculation of heat and mass transfer processes accompanied by the motion of a boundary of phase changes, in *Heat and Mass Transfer* 5, Vol. 5, pp. 207–216. Minsk (1976).
- ### 5. Fusion, melting
- A. A. Erokhin, A. F. Rozov and V. I. Sayapina. On the melt surface temperature in plasma-arc metal melting, *Fiz. Khim. Obrab. Mater.* No. 2, 136–141 (1976).
- Yu. V. Naidich, V. M. Perevertailo and N. F. Grigorenko. Peculiarities of surface melting of solids, *Zh. Fiz. Khim.* 50(3), 735–736 (1976).
- I. A. Sundyrev, M. S. Makunin and E. V. Margulis. Macrokinetics of molybdenum refining under electron-beam and vacuum-arc meltings, *Fiz. Khim. Obrab. Mater.* No. 2, 35–41 (1976).
- ### 6. Heat pipes
- I. I. Abarzhii, E. S. Malkin and S. S. Dukhin. On solute redistribution in a porous body with water evaporation, *Kolloid. Zh.* 38(2), 321–325 (1976).
- N. V. Antonishin and V. S. Nikitin. Water evaporation from a capillary-porous plate surface at elevated temperatures, in *Heat and Mass Transfer* 5, Vol. 5, pp. 40–43. Minsk (1976).
- M. K. Bezrodny, S. N. Fainzilberg et al. A heat and mass transfer crisis in closed two-phase thermosiphons as applied to cooling conditions of metallurgic furnace units, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 256–261. Minsk (1976).
- N. A. Buchko, I. K. Lebedkin and N. Yu. Zelenova. An approximate unified method to calculate and compare efficiencies of vapour and liquid thermal piles, *Kholod. Tekh.* No. 3, 25–29 (1976).
- V. V. Kudryavtsev, I. I. Rats and A. I. Surovov. Analytical and experimental study of air-evaporative cooling of cylindrical channels, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 316–320. Minsk (1976).
- G. A. Savchenkov and Z. R. Gorbis. Boiling heat transfer in low-temperature evaporative thermosiphons, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 87–91. Minsk (1976).
- B. M. Smolsky, P. A. Novikov et al. Heat and mass transfer in a condensable vapour–gas mixture flowing through porous

- materials, in *Heat and Mass Transfer—5*, Vol. 5, pp. 12–19. Minsk (1976).
- I. P. Vishnev, I. A. Filatov et al., Boiling heat transfer of helium on surfaces with different orientation, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 262–265. Minsk (1976).

RADIATION

- I. L. Dunin, V. V. Ivanov and A. I. Korenkov, Heat transfer in a turbulent transparent gas flow around a radiating plate, *Teplofiz. Vysok. Temper.* **14**(2), 416–418 (1976).
- A. B. Kukanov and N. D. Naukov, On one application of the tetrad method in the classical radiation theory, *Vestn. Mosk. Un-ta. Ser. III. Fiz. Astronom.* **17**(1), 102–105 (1976).
- B. S. Mastryukov, N. P. Kuznetsova and V. A. Krivandin, An effect of selectivity of radiative characteristics on radiation heat transfer in systems with a diathermal medium, *Teplofiz. Vysok. Temper.* **14**(2), 333–338 (1976).
- V. I. Shcherbinin, F. R. Shklyar and A. Kh. Bokovikova, Generalized angular coefficients for wall elements and gas volumes in a cylindrical channel, *Teplofiz. Vysok. Temper.* **14**(2), 339–344 (1976).
- Yu. B. Sokolova, G. Ya. Umarov et al., Experimental determination of radiative flux attenuation by a gaseous layer with products of material destruction by radiation, in *Heat and Mass Transfer—5*, Vol. 2, pp. 111–118. Minsk (1976).
- Yu. A. Surinov and V. E. Fedyanin, Numerical study of local characteristics of radiative heat transfer in a conical chamber filled with an absorbing medium, *Izv. Vuzov. Energetika* No. 3, 134–138 (1976).
- D. Ya. Svet, Optimum pyrometry of substance radiation in solid and liquid phases, *Dokl. Akad. Nauk. SSSR* **227**(2), 341–343 (1976).

COMBINED HEAT AND MASS TRANSFER

- M. A. Barsky and N. I. Kuplenov, Heat and mass transfer in an absorption air conditioner, *Kholod. Tekh.* No. 3, 33–37 (1976).
- A. A. Dolinsky, G. K. Ivanitsky et al., A mathematic model of internal heat and mass transfer involving dehydration of solution drops, in *Heat and Mass Transfer—5*, Vol. 5, pp. 217–220. Minsk (1976).
- S. A. Efimova, E. V. Karus et al., An acoustic effect upon heat and mass transfer in rocks and living tissues, in *Heat and Mass Transfer—5*, Vol. 5, pp. 157–164. Minsk (1976).
- A. S. Ginzburg, Heat and mass transfer involving phase separation under interaction of external and internal fields, in *Heat and Mass Transfer—5*, Vol. 5, pp. 3–11. Minsk (1976).
- P. P. Lutsik, An analysis of fundamental kinetics equations of intensive heat and mass transfer, in *Heat and Mass Transfer—5*, Vol. 5, pp. 31–35. Minsk (1976).
- S. G. Romanovsky, Yu. M. Martinchik and T. V. Rabchuk, Heat and mass transfer in multicomponent coatings on heat transfer surfaces, in *Heat and Mass Transfer—5*, Vol. 5, pp. 147–151. Minsk (1976).

RHEOPHYSICS

- V. A. Balashov and L. A. Kondakova, Experimental study of elastic properties of concentrated polymer solutions within a wide range of strain rates, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 3–8 (1976).
- V. A. Balashov and L. A. Kondakova, Peculiarities of viscoelastic liquids filtration through a granular bed, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 9–16 (1975).
- A. A. Bogdanov and M. I. Listopad, Determination of a heat transfer coefficient of suspension flow in circular tubes, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 166–170 (1975).
- A. A. Bogdanov, M. I. Listopad and A. E. Uklisty, Study of rheological properties of adhesive compositions, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 166–170 (1975).

- V. I. Bukhalter, V. V. Gromov et al., Rheological characteristics of polyvinylacetates and polyvinyl alcohol, *Plast. Massy* No. 4, 69–70 (1976).
- A. S. Damov, P. K. Efremov et al., Non-Newtonian fluid flow in a gap between spheres in the presence of pressure drop, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 50–54 (1975).
- V. A. Danilin, A. T. Serkov and N. P. Kruchinin, On mechanism of jet formation. Shorter Communications, *Khim. Volokna* No. 2, 60–61 (1976).
- E. A. Frolova, T. I. Zatsepina and A. A. Trapeznikov, Rheological properties of baron, zinc and cobalt-containing polyheterosiloxanes melts, *Vysokomolek. Soedin. Ser. A* **18**(4), 879–884 (1976).
- B. E. Geller, V. K. Pschedetskaya et al., Rheological properties of secondary acetylcellulose solutions in 13-dioxane and its derivatives, *Zh. Prikl. Khim.* **49**(3), 614–617 (1976).
- L. P. Gilyazetdinov and R. S. Zholtolsynova, Rheological properties of organic pigments suspensions in oligomers, *Zh. Fiz. Khim.* **50**(3), 817 (1976).
- V. M. Gorelik and N. V. Tyabin, Flow of a non-linear viscous medium in a gap of a radial sliding bearing, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 28–35 (1975).
- R. S. Gurbanov and S. I. Bakhtiyarov, Non-Newtonian fluid flow around a hollow cylindrical body in a vertical tube column, *Izv. Vuzov. Neft i Gaz.* No. 1, 51–53 (1976).
- Yu. V. Karavaev, S. A. Trusov and N. V. Tyabin, Viscoelastoplastic fluid flow in a spherical rotary viscometer, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 76–81 (1975).
- I. M. Kochnov and A. D. Ageev, Extrusion of film from polymer compositions, *Plast. Massy* No. 4, 36–37 (1976).
- V. I. Lapitsky, An experimental set-up for investigation of developed spherical particle velocity in a viscoplastic medium, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 101–109 (1975).
- V. I. Lapitsky, Sphere motion in a viscoplastic medium, in *Rheology in Processes and Apparatuses in Chemical Engineering*. Volgograd, 101–109 (1975).
- G. I. Lepekhin, G. V. Ryabchuk and N. V. Tyabin, Temperature distribution in a non-Newtonian fluid film when heated by a rotating flat disc, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 92–100 (1975).
- V. M. Mekhtiev, Inverse problem solution-based determination of hydraulic characteristics of viscoplastic media, *Izv. Vuzov. Neft i Gaz.* No. 1, 33–36 (1976).
- A. Kh. Mirzadzhanzade, R. M. Mamedzade et al., Kinetic effects of viscoelastic systems, *Izv. Vuzov. Neft i Gaz.* No. 2, 53–58 (1975).
- M. A. Mukhamedzyanov, M. L. Fridman and K. D. Vachagin, Thermoplasts melts flow in channels of a complex cross-section, *Plast. Massy* No. 4, 31–33 (1976).
- F. N. Nurmukhametov, A. A. Askadsky et al., Dynamic mechanical properties of a series of aromatic polymers, *Vysokomolek. Soedin. Ser. A* **18**(4), 812–820 (1976).
- B. S. Sazhin and N. E. Shadrina, Heat and mass transfer in polymer materials with a rigid capillary-porous structure, in *Heat and Mass Transfer—5*, Vol. 5, pp. 135–141. Minsk (1976).
- N. S. Shibitov and V. M. Shapovalov, Rheological properties of highly concentrated mineral polymer-base suspensions, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 17–20 (1975).
- Yu. L. Shklyar, K. D. Vachagin et al., Operation of a screw-spiral conveyor with quasi-viscous liquid transportation, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 158–162 (1975).
- L. V. Tsimermanis and F. Kh. Tsimermanis, Heat and mass transfer between a rheologically complex thin-wall capillary-porous body and environment, in *Heat and Mass Transfer—5*, Vol. 5, pp. 44–47. Minsk (1976).
- N. V. Vasilieva, G. E. Prozorova et al., An effect of the

- solvent nature and temperature on viscous properties of polysulfonamide solutions. *Khim. Volokna* No. 2, 53-55 (1976).
- E. L. Vinogradov, L. I. Godunova et al., Prediction of polymer properties and working ability of polymer materials in commercial products. *Plast. Massy* No. 4, 44-46 (1976).
- A. L. Volynsky, V. D. Smirnov et al., A dynamometer for studying mechanical polymer properties in active liquid media. *Vysokomolek. Soedin. Ser. A*, **18**(4), 940-942 (1976).
- A. S. Yurchenko and A. Ya. Malkin, Determination of rheological characteristics of rubber stocks, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 153-157 (1975).
- V. V. Zametalin, Stability of a laminar boundary layer of a power-law non-Newtonian fluid. *Zh. Prikl. Mekh. Tekh. Fiz.* No. 1, 101-106 (1976).
- A. G. Zhirnov and Yu. B. Skrobin, A mathematical model for coating roller machine parts with polymer materials, in *Rheology in Processes and Apparatuses in Chemical Engineering*. Volgograd, 55-63 (1975).
- A. G. Zhirnov and Yu. B. Skrobin, A mathematical model for isothermal flow of generalized nonlinear viscoplastic medium in operating units of roller machines, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 64-71 (1975).

HEAT AND MASS TRANSFER IN TECHNOLOGICAL PROCESSES

1. Drying

- I. E. Babaev, V. I. Tsyupa and E. F. Yausheva, An effect of vibration regimes on heat transfer involving continuous sublimation drying of granulated food-stuffs. *Kholod. Tekh.* No. 3, 37-40 (1976).
- A. F. Bulyandra, P. V. Berezhnoi et al., Study of moisture content and temperature fields in thermoradiative drying of fancy rusks. *Izv. Vuzor. Pishchev. Tekh.* No. 1, 95-97 (1976).
- A. S. Ginzburg, V. A. Rezhikov et al., Study of recirculation grain drying on a pilot drier. *Trudy Nauchn.-Issled. In-ta Zerna i Produkt. Ego Pererabotki* (VNIIZ) Vol. 81, 13-23 (1975).
- A. S. Ginzburg, V. I. Syroedov et al., Peculiarities of sublimation drying of liquid materials in a "thick" layer with radiant infrared energy supply. *Elektr. Obrab. Mater.* No. 1, 72-75 (1976).
- L. D. Komyshnik and A. P. Zhuravlev, Barley drying and substantiation of drying regimes in gas recirculation grain driers. *Trudy Nauchn.-Issled. In-ta Zerna i Produkt. Ego Pererabotki* (VNIIZ) Vol. 81, 7-13 (1975).
- Yu. V. Kosmodemiansky, A. S. Ginzburg et al., On drying of colloidal solution drops. *Izv. Vuzor. Pishchev. Tekh.* No. 1, 101-105 (1976).
- N. G. Krokhin, B. S. Sazhin et al., Kinetics of drying some dispersed materials produced by chemical and pharmaceutical industries. *Khim.-Farmatsevt. Zh.* **10**(3), 116-118 (1976).
- A. M. Levin, A. K. Rodin et al., Variation of air parameters in a drying chamber of raw-smoked sausages. *Kholod. Tekh.* No. 3, 40-41 (1976).
- B. D. Matveev and S. M. Siroko, Drying of pigments by nozzle-blowing. *Khim. i Neft. Mashinostr.* No. 4, 15-16 (1976).
- E. A. Mikhailovsky, G. P. Tikhomirova and V. I. Belyakov, Mathematical representation of milk spray drying at the "Nema-500" plant. *Izv. Vuzor. Pishchev. Tekh.* No. 1, 106-110 (1976).
- E. D. Mysheva, A. P. Nechaev et al., An effect of the drying technique on liquid complex of wheat grain. *Trudy Nauchn.-Issled. In-ta Zerna i Ego Produkt. Pererabotki* (VNIIZ) Vol. 81, 75-78 (1975).
- A. I. Olshansky and E. L. Brom, Concerning determination of material drying rate. *Izv. Vuzor. Tekh. Legkoi Prom.* No. 4, 79-82 (1975).
- G. G. Orlov and A. P. Danilin, Optimization of coolant parameters for vapour taken off for fuel drying. *Izv. Vuzor. Energetika* No. 2, 69-76 (1976).
- N. Ya. Popov and V. A. Rezhikov, Preliminary heating and drying of pea in a fluidized bed. *Trudy Nauchn.-Issled. In-ta Zerna i Produkt. Ego Pererabotki* (VNIIZ) Vol. 81, 1-7 (1975).
- S. P. Rudopashta and A. N. Planovsky, Kinetics of drying with moisture transferred in a material according to the molecular diffusion law. *Teoret. Osnovy Khim. Tekh.* **10**(2), 197-204 (1976).
- E. V. Senkevich and A. A. Kudrevich, Purification of gas blown-out from driers heated by solvent vapours. *Lakokras. Mater. i ikh Primenenie* No. 2, 77-78 (1976).
- Yu. A. Skipin, I. P. Kirsanov et al., Drying of alumoplatinic reforming catalysts. *Neftepererabotka* No. 2, 41-42 (1976).
- I. M. Tinyakova, Calculation of drying by natural gas combustion products in systems of complex-multistage heat recovery. *Prom. Energetika* No. 4, 51-54 (1976).

2. Heat exchangers

- I. A. Barsky, Transient characteristics of a gas air counterflow heat exchanger. *Energomashinostr.* No. 3, 43-45 (1976).
- A. A. Dmitrenko, N. A. Khomutov and A. I. Tumanov, The procedure for determination of the economic efficiency of regenerative heat exchanger packings. *Khim. i Neft. Mashinostr.* No. 4, 32-33 (1976).
- O. K. Krasnikova, V. G. Pronko et al., Comparison of heat exchange surfaces by overall size characteristics. *Khim. i Neft. Mashinostr.* No. 3, 21-24 (1976).
- A. N. Yakushin, On prediction of plate-finned heat exchangers. *Teploenergetika* No. 4, 81-82 (1976).

3. Dispersed systems

- L. S. Aksel'rod and N. I. Vorotnikova, Heat transfer from a single tube wall to a bubbling flow. *Izv. Vuzor. Nefi i Gaz.* No. 1, 73-75 (1976).
- P. A. Andreev, B. S. Fokin and E. N. Goldberg, Vibration of a tubular element affected by a longitudinal two-phase flow. *Energomashinostr.* No. 2, 22-24 (1976).
- R. I. Ayukaev, V. K. Kivran and M. E. Aerov, A statistical method for investigation of porous structures, in *Heat and Mass Transfer* 5, Vol. 5, pp. 152-156. Minsk (1976).
- A. A. Bezdenezhnykh, A. P. Orlov et al., A mathematical model for regeneration of a granular fixed catalyst bed in an adiabatic reactor. *Teoret. Osnovy Khim. Tekh.* **10**(2), 219-225 (1976).
- V. V. Bunyakin, E. P. Koshevoi and V. A. Maslikov, An effect of polydispersed solid particle mixture characteristics on extraction. *Izv. Vuzor. Pishchev. Tekh.* No. 1, 164-166 (1976).
- I. G. Chumak, A. V. Gordienko and A. I. Koshansky, Heat transfer of ammonia two-phase flow in horizontal tube apparatuses of refrigerating units, in *Heat and Mass Transfer* 5, Vol. 3(1), pp. 198-202. Minsk (1976).
- N. P. Chusov, I. O. Protodiakonov et al., On residence time of particles in columns with fluidized loose beds. *Zh. Prikl. Khim.* **49**(3), 696 (1976).
- B. V. Deryagin, S. S. Dukhin et al., On the retardation effect of bubble surface on hydrodynamic interaction with particles in elementary flotation. *Kolloidn. Zh.* **38**(2), 258-264 (1976).
- B. V. Deryagin, S. S. Dukhin and N. N. Rulev, On contribution of hydrodynamic interaction to fine-particle flotation. *Kolloidn. Zh.* **38**(2), 251-257 (1976).
- A. E. Dolnikov, Yu. V. Polyansky and L. I. Popova, Elevation of asbestos suspension homogeneity. *Stroit. Mater.* No. 4, 20 (1976).
- Yu. G. Egiazarov, M. G. Savon'kina et al., Selective piperylene hydrogenation in fixed and vibrofluidized catalyst beds. *Khim. Prom.* No. 4, 302-303 (1976).
- N. S. Frolova, A. A. Seballo et al., Dynamics of non-isothermal adsorption in moving adsorbent layers. *Teoret. Osnovy Khim. Tekh.* **10**(2), 205-211 (1976).
- N. I. Gel'perin, V. G. Ainshtein et al., Hydrodynamic resistance of gas-suspension flows. *Izv. Vuzor. Energetika* No. 2, 94-99 (1976).

- A. V. Golubkovich, Limestone roasting regimes in a furnace with spouting beds, *Khim. i Neft. Mashinostr.* No. 4, 19–21 (1976).
- A. V. Kalinin, On stability of transonic two-phase flow, *Zh. Prikl. Mekh. i Tekh. Fiz.* No. 1, 163–171 (1976).
- N. A. Kochergin, G. N. Tverdokhlebov *et al.*, Models of longitudinal liquid mixing on different mass transfer trays, *Khim. Prom.* No. 4, 296–297 (1976).
- S. M. Konstantinov, A. A. Kisurkin and E. A. Neduzhko, Determination of hydrodynamic parameters of a gas–liquid layer, *Izv. Vuzov. Energetika* No. 2, 90–93 (1976).
- Yu. V. Krasovitsky, V. A. Zhuzhikov *et al.*, Determination of coefficients for passage of fractions through granular filter barriers, *Khim. Prom.* No. 4, 301–302 (1976).
- P. S. Kuts and N. N. Grinchik, Numerical study of variable mass particle motion in a vortex flow, in *Heat and Mass Transfer—5*, Vol. 5, pp. 221–230. Minsk (1976).
- O. N. Lebedev and O. P. Solonenko, Numerical study of some unsteady-state uniform two-phase flow parameters, *Izv. Sib. Otdel. Akad. Nauk. SSSR* No. 3. Ser. Tekh. Nauk. Vol. 1, 66–75 (1976).
- O. S. Lin'kova and S. A. Zhukovskaya, An effect of pressure and suspension concentration upon the resistance of an auxiliary filtering material layer, *Khim.-Farmatsevt. Zh.* **10**(3), 97–99 (1976).
- V. A. Maiorov and L. L. Vasiliev, Internal heat and mass transfer involving two-phase cooling of a porous heat-producing element, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 246–255. Minsk (1976).
- E. S. Nikolaev, A. S. Mozhukhin *et al.*, Verification of adequacy in representation of liquid–vapour equilibrium in terms of the Wilson equation, *Teoret. Osnovy Khim. Tekh.* **10**(2), 289–292 (1976).
- V. I. Pevzner, V. P. Tolchanov *et al.*, Experimental study of unsteady-state heat and mass transfer processes and separation in bubbling, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 77–81. Minsk (1976).
- V. G. Ponomarenko, Yu. A. Kurlyand *et al.*, Static and dynamic characteristics of a fluidized bed in “Kristall”-type crystallizers, *Khim. Prom.* No. 4, 298–300 (1976).
- M. G. Reznik and D. G. Ivanov, Mathematical simulation of thermal decomposition of fine-dispersed powders in a vortex-type apparatus, *Teoret. Osnovy Khim. Tekh.* **10**(2), 212–218 (1976).
- A. D. Sergeev, N. A. Nikolaev, Mass transfer of a liquid film in a swirled two-phase flow, *Izv. Vuzov. Khim. i Khim. Tekh.* **19**(3), 465–468 (1976).
- N. A. Shakhova and V. I. Nazarov, Calculation of entrainment from apparatuses with a non-uniform fluidized bed, *Khim. Prom.* No. 4, 293–296 (1976).
- N. I. Syromyatnikov, G. D. Kosenko *et al.*, Heat transfer in thermal treatment of dry milk in a vibrofluidized-packed bed from horizontal tubes, *Izv. Vuzov. Pishchev. Tekh.* No. 1, 116–119 (1976).
- T. R. Terlovskaya, M. B. Kats *et al.*, An effect of the wall non-uniformity on liquid flow structure in sprayed packed columns, *Khim. Prom.* No. 3, 242–244 (1976).
- M. P. Tonkonogov, S. V. Kim *et al.*, An effect of liquid dispersed phase concentration on particle size distribution in an aerosol flow, *Energetika* No. 3, 141–144 (1976).
- V. A. Vasiliev, V. A. Lepetov *et al.*, A new method of ferromagnetic fluidization application in production of rubber technical articles, in *Rheology in Processes and Apparatuses of Chemical Engineering*. Volgograd, 21–27 (1975).
- A. P. Voinov and V. B. Rakhmanov, A statement of investigating the fluidized-bed furnace for industrial steam generators, *Izv. Vuzov. Energetika* No. 3, 129–134 (1976).
- M. V. Vorobiev, S. A. Lesnyak *et al.*, Instability of gas–liquid interface behind a front of a shock wave slipping along a liquid film surface, *Dokl. Akad. Nauk. SSSR* **227**(4), 900–903 (1976).
- E. D. Zaitsev, V. I. Redekop and V. V. Shvetsov, Hydrodynamics and external heat transfer of a vibrofluidized bed of pharmaceutical preparations, *Khim.-Farmatsevt. Zh.* **10**(3), 81–85 (1976).
- A. I. Zaitsev, A. V. Tsar'kov and Yu. I. Makarov, Concerning prediction of interaction between a solid component and liquid in a centrifugal mixing sprayer, *Teoret. Osnovy Khim. Tekh.* **10**(2), 268–273 (1976).
- G. M. Zaki and M. A. Marvan, Change in local true cubic vapour content with two-phase flow restrictions, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 203–213. Minsk (1976).
- Ya. D. Zelvensky, S. A. Malinov and V. A. Shalygin, Determination of contribution of diffusive and thermal flows with rectification in sprayed-wall tubes, *Teoret. Osnovy Khim. Tekh.* **10**(2), 184–189 (1976).
- V. A. Zysin, E. L. Kitanin *et al.*, The problem of internal heat transfer in vapour–liquid flows, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 157–161. Minsk (1976).
- V. A. Zysin, V. V. Nevinsky *et al.*, Heat and mass transfer of suspended moisture with a high-temperature vapour–gas flow, in *Heat and Mass Transfer—5*, Vol. 3(1), pp. 174–178. Minsk (1976).