

HEAT TRANSFER BIBLIOGRAPHY

E. M. SPARROW and L. R. LAING

Heat Transfer Laboratory, Department of Mechanical Engineering,
University of Minnesota, Minneapolis, MN 55455, U.S.A.

APPLICATIONS

- I. T. Alad'yev, K. D. Voskresenskiy, Ye. S. Turilina and A. A. Ivlev, Convective heat transfer in turbulent flow of refrigerant in electrical superconducting cables, *Heat Transfer, Soviet Res.* **9**(4), 138 (1977).
- N. Arai, K. Karashima and K. Sato, Transient ablation of teflon hemispheres, *AIAA Jl* **15**, 1655 (1977).
- S. I. Abdel-Khalik and T. O. Hunter, Assessment of surface heating problems in laser fusion reactors, *J. Heat Transfer* **100**, 311 (1978).
- R. M. Abdel-Wahed, E. Pfender and E. R. G. Eckert, A transient method for measuring thermal properties of soils, *Wärme- und Stoffübertragung* **11**, 1 (1978).
- R. S. Abdulhadi and J. C. Chato, Flow and heat transfer in convectively cooled underground electric cable systems; Part 2. Temperature distributions and heat transfer correlations, *J. Heat Transfer* **100**, 36 (1978).
- A. M. Baklastov, A. L. Yefimov and V. A. Gorbenko, The efficiency of a shaped fin for gas-liquid heat exchangers, *Heat Transfer, Soviet Res.* **9**(3), 105 (1977).
- R. B. Bannerot and J. R. Howell, The effect of non-direct insolation on the radiative performance of trapezoidal grooves used as solar energy collectors, *Sol. Energy* **19**, 549 (1977).
- D. I. Baskir, J. B. Hunter and C. B. Schlesinger, Evaluation of the heat transfer characteristics of a bead mill with the aid of a mathematical model, *IEC Process Des. Dev.* **17**, 318 (1978).
- A. Bejan, General criterion for rating heat-exchanger performance, *Int. J. Heat Mass Transfer* **21**, 655 (1978).
- R. G. Bennett and M. W. Golay, Interferometric investigation of turbulently fluctuating temperature in an LMFBR outlet, *J. Heat Transfer* **100**, 334 (1978).
- N. Blakebrough, W. J. McManamey and K. R. Tart, Heat transfer to fermentation systems in an air-lift fermenter, *Trans. Instn Chem. Engrs* **56**, 127 (1978).
- S. Bloss and U. Grigull, Temperature distribution in deep and shallow lakes (in German), *Wärme- und Stoffübertragung* **11**, 119 (1978).
- D. G. Burkhard, G. L. Strobel and D. R. Burkhard, Flat-sided rectilinear trough as a solar concentrator: an analytical study, *Appl. Optics* **17**, 1870 (1978).
- J. C. Chato and R. S. Abdulhadi, Flow and heat transfer in convectively cooled underground electric cable systems. Part 1. Velocity distributions and pressure drop correlations, *J. Heat Transfer* **100**, 30 (1978).
- J. P. Chiou, The effect of longitudinal heat conduction on crossflow heat exchanger, *J. Heat Transfer* **100**, 346 (1978).
- T. C. Daniels and R. J. Williams, Experimental temperature distribution and heat load characteristics of rotating heat pipes, *Int. J. Heat Mass Transfer* **21**, 193 (1978).
- I. Gaballah, Calculation of spray-type steam evaporator, *Wärme- und Stoffübertragung* **11**, 109 (1978).
- M. D. Green and J. Kornfilt, A digital transfer matrix for fuel pin heat transfer, *Nucl. Sci. Engng* **65**, 385 (1978).
- G. Grossman, A. Shitzer and Y. Zvirin, Heat transfer analysis of a flat-plate solar energy collector, *Sol. Energy* **19**, 493 (1977).
- I. G. Goryachko and G. V. Zhizhin, An experimental and analytical study of heat pipe performance, *Heat Transfer, Soviet Res.* **9**(2), 54 (1977).
- P. J. Heggs and K. J. Carpenter, Prediction of a dividing line between conduction and convection effects in re-generator design, *Trans. Instn Chem. Engrs* **56**, 86 (1978).
- B. R. Hollworth and R. D. Berry, Heat transfer from arrays of impinging jets with large jet-to-jet spacing, *J. Heat Transfer* **100**, 352 (1978).
- Z. G. Idiatalin and O. M. Petashvili, Measuring gas temperature in furnaces in steam generators with combustion of solid fuel, *Thermal Engng* **24**(9), 20 (1977).
- A. R. Jones, S. A. Lloyd and F. J. Weinberg, Combustion in heat exchangers, *Proc. R. Soc.* **360A**, 97 (1978).
- D. D. Kalafati and V. V. Popalov, A comparison of longitudinal flow and cross flow around tube bundles with respect to heat transfer efficiency, *Thermal Engng* **24**(9), 44 (1977).
- J. Kern and J. W. Hemmings, On the analogy between the calorimeter problem and some granulate-fluid exchange processes, *J. Heat Transfer* **100**, 319 (1978).
- L. F. Krasnoshchekov, Formulae for check calculation of heat exchangers with parallel-mixed flow of heat carrier, *Thermal Engng* **24**(8), 54 (1977).
- P. S. Kuts, External heat transfer—calculation methods and moist material drying kinetics, *Int. J. Heat Mass Transfer* **21**, 567 (1978).
- Yu. N. Kuznetsov, V. N. Oyvin and V. I. Pevzner, Investigation of transient heat transfer and flow dynamics in a tube bundle at large flow and heat flux perturbations, *Heat Transfer, Soviet Res.* **9**(4), 160 (1977).
- D. W. Larson, D. K. Gartling and W. P. Schmiddel, Jr., Natural convection studies in nuclear spent-fuel shipping casks: computations and experiment, *J. Energy* **2**, 147 (1978).
- Z. Lavan and J. Thompson, Experimental study of thermally stratified hot water storage tanks, *Sol. Energy* **19**, 519 (1977).
- T. L. Lauvray, Experimental heat transmission coefficients for operating air duct systems, *ASHRAE Jl* **20**(6), 69 (1978).
- Y. Lee and A. Bedrossian, The characteristics of heat exchangers using heat pipes or thermosyphons, *Int. J. Heat Mass Transfer* **21**, 231 (1978).
- V. M. Legkiy, Effect of thermal conductivity of the metal on heat transfer from single transversely-finned tubes in air flow, *Heat Transfer, Soviet Res.* **9**(2), 120 (1977).
- W. C. Louis and D. C. Miller, Operational data: evacuated-tube solar collector: effect of control on efficiency at high operating temperatures, *ASHRAE Jl* **20**(5), 39 (1978).
- S. B. Margolis, Thermocline degradation in a packed bed thermal storage tank, *J. Heat Transfer* **100**, 371 (1978).
- E. Marschall and G. Adams, The efficiency of solar flat-plate collectors, *Sol. Energy* **20**, 413 (1978).
- D. R. McKenzie, Effect of substrate on graphite and other solar selective surfaces, *Appl. Optics* **17**, 1884 (1978).
- D. J. Morrison and S. I. Abdel-Khalik, Effects of phase-change energy storage on the performance of air-based and liquid-based solar heating systems, *Sol. Energy* **20**, 57 (1978).
- R. L. Musselman, Effect of an elevated pipeline on moss covered ground temperature, *J. Heat Transfer* **100**, 363 (1978).
- S. Nagaraja and M. V. Krishna Murthy, Heat- and mass-transfer characteristics of a cooling and dehumidifying coil and the effect of upstream turbulence on them, *Int. J. Heat Mass Transfer* **21**, 87 (1978).
- K. Y. Narayan, Leeside flowfield and heat transfer of a delta wing at $M_\infty = 10$, *AIAA Jl* **16**, 160 (1978).

- R. L. Nicholls, Comparisons of deep well and insulated shallow earth storage of solar heat, *Sol. Energy* **20**, 127 (1978).
- B. R. Pai, S. Michelfelder and D. B. Spalding, Prediction of furnace heat transfer with a three-dimensional mathematical model, *Int. J. Heat Mass Transfer* **21**, 571 (1978).
- B. E. Pearce, Radiative heat transfer within a solid-propellant rocket motor, *J. Spacecraft Rockets* **15**, 125 (1978).
- E. V. Pemberton and C. D. Remick, Low temperature, "ambient-plus" solar collectors, *ASHRAE Jl* **20**(1), 57 (1978).
- P. S. Pshkas, V. Yu. Survila and A. A. Zhukauskas, Local heat transfer rate at a tube in a corridor bundle lateral to an airstream at large Reynolds numbers, *Int. Chem. Engng* **18**, 337 (1978).
- A. Rabl, Prisms with total internal reflection as solar reflectors, *Sol. Energy* **19**, 555 (1977).
- G. A. Rottingni, Concentration of the sun's rays using catenary curves, *Appl. Optics* **17**, 969 (1978).
- V. Ya. Sasin and V. N. Fedorov, Certain aspects of flow with injection in high-temperature heat pipes, *Heat Transfer, Soviet Res.* **9**(3), 70 (1977).
- V. Ya. Sasin and V. N. Fedorov, One-dimensional model of transport processes in heat pipes, *Heat Transfer, Soviet Res.* **9**(3), 65 (1977).
- W. C. Siu and H. L. Kwok, Cu_xS/CdS thin-film solar cells using chemically sprayed CdS films, *J. Phys. E: Appl. Phys.* **11**, 669 (1978).
- G. L. Strobel and D. G. Burkhard, Irradiance for skew rays incident upon a trough-like solar collector of arbitrary shape, *Sol. Energy* **20**, 25 (1978).
- J. Szego and F. W. Schmidt, Transient behavior of a solid sensible heat thermal storage exchanger, *J. Heat Transfer* **100**, 148 (1978).
- H. Tabor, Testing of solar collectors, *Sol. Energy* **20**, 293 (1978).
- M. E. Talaat, A pressurized-liquid concept for solar-thermal energy storage, *J. Energy* **2**, 136 (1978).
- I. Todo, Dynamic response of bayonet-type heat exchangers, *Bull. J.S.M.E.* **21**, 644 (1978).
- A. Hu, Veski and R. A. Kruus, Local heat transfer from plates with regular macroroughness (ribbed plates), *Heat Transfer, Soviet Res.* **9**(4), 78 (1977).
- W. J. Wang, Three kinds of heat transfer augmentation in perforated surfaces, *Letters Heat Mass Transfer* **5**, 1 (1978).
- W. T. Welford and R. Winston, On the problem of ideal flux concentrators, *J. Opt. Soc. Am.* **68**, 531 (1978).
- R. Winston and W. T. Welford, Two-dimensional concentrators for inhomogeneous media, *J. Opt. Soc. Am.* **68**, 289 (1978).
- J. L. Yellott, Passive solar heating and cooling systems, *ASHRAE Jl* **20**(1), 60 (1978).
- L. M. Zysina-Molozhen, A. A. Dergach, M. A. Medvedeva and E. G. Roost, The development of the thermal boundary layer in turbine cascades, *Heat Transfer, Soviet Res.* **9**(4), 88 (1977).
- L. M. Zysina-Molozhen, M. M. Ivashchenko, A. A. Dergach, and Ya. M. Feildshteyn, Investigation of transient heat transfer in the nozzle blading of an operating turbine, *Heat Transfer, Soviet Res.* **9**(4), 184 (1977).
- BOUNDARY-LAYER AND EXTERNAL FLOWS**
- R. C. Ackerberg, R. D. Patel and S. K. Gupta, The heat/mass transfer to a finite strip at small Pecllet numbers, *J. Fluid Mech.* **86**, 49 (1978).
- G. G. Astashenkova, V. P. Motulevici and E. D. Sergievskiy, Calculation of turbulent boundary layers of a compressible fluid at a permeable plate, *Heat Transfer, Soviet Res.* **9**(3), 42 (1977).
- M. N. Bismarck-Nasr, A finite-difference/Galerkin finite-element solution of a turbulent boundary layer, *AIAA Jl* **15**, 1813 (1977).
- A. Brown and R. C. Burton, The effects of free-stream turbulence intensity and velocity distribution on heat transfer to curved surfaces, *J. Engng Pwr* **100**, 159 (1978).
- J. L. S. Chen and T. N. Smith, Forced convection heat transfer from non-isothermal thin needles, *J. Heat Transfer* **100**, 358 (1978).
- H. W. Coleman, M. M. Pimenta and R. J. Moffat, Rough-wall turbulent heat transfer with variable velocity, wall temperature, and blowing, *AIAA Jl* **16**, 78 (1978).
- L. I. Dagis, M. M. Tamonis and Z. Z. Zhukauskas, Analysis of a turbulent boundary layer with variable physical properties of the stream.
3. Experimental investigation of the heat transfer rate at the initial section of a channel with a flow of combustion products, *Int. Chem. Engng* **18**, 350 (1978).
- M. R. M. Drizhyus, S. I. Bartkus and A. A. Shlanchyauskas, Effect of type of roughness on the heat transfer rate at a plate with $Pr \geq 1$, *Int. Chem. Engng* **18**, 330 (1978).
- M. I. O. Ero, Heat and mass transfer in close proximity impinging two-dimensional laminar jets, *AIAA Jl* **16**, 611 (1978).
- T. Fujita and T. Ueda, Heat transfer to falling liquid film and film breakdown. I. Subcooled liquid films, *Int. J. Heat Mass Transfer* **21**, 97 (1978).
- K. Gersten, H. D. Papenfuss and J. F. Gross, Influence of the Prandtl number on second order heat transfer due to surface curvature at a three-dimensional stagnation point, *Int. J. Heat Mass Transfer* **21**, 275 (1978).
- R. S. R. Gorla, Viscous dissipation effects on heat transfer in an axisymmetric stagnation flow on a circular cylinder, *Letters Heat Mass Transfer* **5**, 121 (1978).
- J. C. Gottifredi and O. D. Quiroga, A simple analysis of unsteady heat transfer in impulsive Falkner-Skan flows, *Int. J. Heat Mass Transfer* **21**, 662 (1978).
- G. L. Hayward and D. C. T. Pei, Local heat transfer from a single sphere to a turbulent air stream, *Int. J. Heat Mass Transfer* **21**, 35 (1978).
- G. H. Junkhan, Some effects of mechanically-produced unsteady boundary layer flows on convective heat transfer, *J. Heat Transfer* **100**, 25 (1978).
- J. Karnis and V. Pechoc, The thermal laminar boundary layer on a continuous cylinder, *Int. J. Heat Mass Transfer* **21**, 43 (1978).
- V. Kottke, H. Blenke, and K. G. Schmidt, Determination of the local and average mass transfer on thick plates in parallel flow with flow separation and reattachment (in German), *Wärme- und Stoffübertragung* **10**, 217 (1977).
- A. I. Leon'yev, Ye. V. Shishov, V. M. Belov and V. N. Afans'yev, Mean and fluctuating characteristics of thermal turbulent boundary layers and heat transfer in divergent flows, *Heat Transfer, Soviet Res.* **9**(4), 48 (1977).
- A. W. Lipsett and R. R. Gilpin, Laminar jet impingement heat transfer including the effects of melting, *Int. J. Heat Mass Transfer* **21**, 25 (1978).
- V. I. Makarevicius, Dimensionless equations for heat transfer in laminar flow with variable physical properties, *Heat Transfer, Soviet Res.* **9**(4), 145 (1977).
- R. E. Mayle, Note on diffusion in a turbulent boundary layer, *Int. J. Heat Mass Transfer* **21**, 364 (1978).
- V. K. Migay, Reynolds analogy in boundary layers with pressure gradients, *Heat Transfer, Soviet Res.* **9**(4), 96 (1977).
- W. J. Minkowycz and E. M. Sparrow, Numerical solution scheme for local non-similarity boundary-layer analysis, *Numerical Heat Transfer* **1**, 69 (1978).
- B. P. Mironov, V. N. Vasechikin and N. I. Yarygina, Effect of an upstream adiabatic zone on heat transfer in a subsonic and supersonic downstream boundary layer at different flow histories, *Heat Transfer, Soviet Res.* **9**(4), 57 (1977).
- A. K. Rastogi and W. Rodi, Calculation of general three-dimensional turbulent boundary layers, *AIAA Jl* **16**, 151 (1978).
- M. Schmal and A. M. Figuciredo, The effect of suction and slip velocity of a non-Newtonian fluid flowing over a circular cylinder, *Int. J. Heat Mass Transfer* **21**, 175 (1978).

- R. A. Seban and A. Faghri, Wave effects on the transport to falling laminar liquid films, *J. Heat Transfer* **100**, 143 (1978).
- P. M. Sforza and R. F. Mons, Mass, momentum and energy transport in turbulent free jets, *Int. J. Heat Mass Transfer* **21**, 371 (1978).
- S. Sideman, H. Horn and D. Moalem, Transport characteristics of films flowing over horizontal smooth tubes, *Int. J. Heat Mass Transfer* **21**, 285 (1978).
- A. A. Slianciuskas and M. R. M. Drizhus, Calculation of heat transfer on rough surfaces, *Heat Transfer, Soviet Res.* **9**(4), 40 (1977).
- S. Swarup, Heat transfer from a porous sphere in low Reynolds number flow, *Z. Angew. Math. Phys.* **29**, 147 (1978).
- M. M. Tamonis, L. I. Dagis and A. A. Zhukauskas, Analysis of a turbulent boundary layer with variable physical properties of the stream.
2. Results of air and combustion products, *Int. Chem. Engng* **18**, 343 (1978).
- D. P. Telionis and M. S. Romaniuk, Velocity and temperature streaming in oscillating boundary layers, *AIAA Jl* **16**, 488 (1978).
- W. Winkler and U. Grigull, Compressible turbulent boundary layer heat transfer with strong favourable pressure gradients (heat transfer in a convergent-divergent nozzle) (in German), *Wärme- und Stoffübertragung* **10**, 281 (1977).
- CHANGE OF PHASE AND TWO-PHASE FLOW**
- N. H. Afgan and L. A. Jović, Intermittent phenomena in the boiling two-phase boundary layer, *Int. J. Heat Mass Transfer* **21**, 427 (1978).
- N. V. Antonishin and V. S. Nikitin, High-temperature vaporization of water from the surface of a capillary-porous plate in electrothermally produced fluidized beds, *Heat Transfer, Soviet Res.* **9**(1), 11 (1977).
- A. M. Baklastov, L. I. Arkhipov and A. A. Ivanov, Condensation of steam in capillaries, *Heat Transfer, Soviet Res.* **9**(3), 96 (1977).
- M. K. Bezrodnyi and D. V. Alekseenko, The intensity of heat transfer in the boiling section of evaporative thermosiphons, *Thermal Engng* **24**(7), 71 (1977).
- M. K. Bologa and A. B. Didkovskiy, Enhancement of heat transfer in film condensation of vapors of dielectric liquids by superposition of electric fields, *Heat Transfer, Soviet Res.* **9**(1), 147 (1977).
- V. M. Borishanskiy, Effect of uncondensable gas content on heat transfer in steam condensation in a vertical tube, *Heat Transfer, Soviet Res.* **9**(2), 35 (1977).
- Yu. M. Brodov, R. Z. Savel'yev, V. A. Permyakov, V. K. Kupstov and A. G. Gal'perin, The effect of vibration on heat transfer and flow of condensing steam on a single tube, *Heat Transfer, Soviet Res.* **9**(1), 152 (1977).
- L. T. Chen, Heat transfer to pool-boiling Freon from inclined heating plate, *Letters Heat Mass Transfer* **5**, 111 (1978).
- S. C. Cheng, W. W. Ng, K. T. Heng and D. C. Groenveld, Measurement of transition boiling data for water under forced convective conditions, *J. Heat Transfer* **100**, 382 (1978).
- T. L. Chuck and J. E. Myers, The effect of heater plate thickness on boiling heat-transfer coefficients, *Int. J. Heat Mass Transfer* **21**, 187 (1978).
- R. L. Collins, Choked expansion of subcooled water and the I.H.E. flow model, *J. Heat Transfer* **100**, 275 (1978).
- R. B. Duffey, M. C. Ackerman, B. D. G. Piggott and S. A. Fairbairn, The effects of countercurrent single and two-phase flows on the quenching rate of hot surfaces, *Int. J. Multiphase Flow* **4**, 117 (1978).
- Yu. I. Dzrasov, Heat transfer and pressure loss in annular flow of steam-water mixtures with high vapor content, *Heat Transfer, Soviet Res.* **9**(2), 61 (1977).
- M. El-Shanawany, A. A. El-Shirbini and W. Murgatroyd, A model for predicting the dry-out position for annular flow in a uniformly heated vertical tube, *Int. J. Heat Mass Transfer* **21**, 529 (1978).
- R. Farhadieh and L. Baker, Heat transfer phenomenology of a hydro-dynamically unstable melting system, *J. Heat Transfer* **100**, 305 (1978).
- R. Farhadieh and L. Baker, Experimental studies of the growth of an internally heated liquid pool in a solid bed, *Nucl. Sci. Engng* **65**, 394 (1978).
- H. S. Fath and R. L. Judd, Influence of system pressure on microlayer evaporation heat transfer, *J. Heat Transfer* **100**, 48 (1978).
- T. Fujita and T. Ueda, Heat transfer to falling liquid films and film breakdown. II. Saturated liquid films with nucleate boiling, *Int. J. Heat Mass Transfer* **21**, 119 (1978).
- D. C. Groenveld and S. R. M. Gardiner, A method of obtaining flow film boiling data for subcooled water, *Int. J. Heat Mass Transfer* **21**, 662 (1978).
- R. J. Hannemann, Condensing surface thickness effects in dropwise condensation, *Int. J. Heat Mass Transfer* **21**, 65 (1978).
- G. Joffre, B. Prunet-Foch and M. Cloupeau, Charged droplets evaporation and motion in an electric field, *Int. J. Multiphase Flow* **4**, 41 (1978).
- J. G. H. Joosten, W. Zul and S. J. D. van Stralen, Growth of a vapour bubble in combined gravitational and non-uniform temperature fields, *Int. J. Heat Mass Transfer* **21**, 15 (1978).
- M. S. Kazimi and J. C. Chen, Void distribution in boiling pools with internal heat generation, *Nucl. Sci. Engng* **65**, 17 (1978).
- A. N. Khoze, Yu. V. D'yachenko and A. S. Zakharov, Condensation of steam on heat-exchange surfaces in a foam bed, *Heat Transfer, Soviet Res.* **9**(2), 32 (1977).
- V. A. Kravchenko and L. F. Tolubinskaya, Heat transfer with boiling ethane and ethylene, *Heat Transfer, Soviet Res.* **9**(3), 9 (1977).
- V. G. Leitsina, N. V. Pavlyukevich and G. I. Rudin, Kinetics of mass transfer in a capillary with evaporation from the internal surface, *Int. J. Heat Mass Transfer* **21**, 399 (1978).
- M. I. Marinov and L. P. Kabanov, An investigation of heat transfer in the region of deteriorated heat transfer at low pressures and moderate mass velocities of the flow, *Thermal Engng* **24**(7), 68 (1977).
- I. Michiyoshi and K. Makino, Heat-transfer characteristics of evaporation of a liquid droplet on heated surfaces, *Int. J. Heat Mass Transfer* **21**, 605 (1978).
- L. S. Midler and M. Ye. Shitsman, Effect of sodium chloride addition on boiling crisis in up- or down-flow of water, *Heat Transfer, Soviet Res.* **9**(2), 1 (1977).
- A. A. Mikhalevich and V. B. Nesterenko, Laminar film condensation of a chemically reacting gas, *Int. J. Heat Mass Transfer* **21**, 385 (1978).
- Z. L. Miropol'skiy and L. R. Khasanov, Relationship between the local and total heat transfer coefficients and friction factors for condensation inside channels, *Heat Transfer, Soviet Res.* **9**(1), 157 (1977).
- M. Monde and Y. Katto, Burnout in a high heat-flux boiling system with an impinging jet, *Int. J. Heat Mass Transfer* **21**, 295 (1978).
- I. L. Mostinskiy and D. I. Lamden, Heat and mass transfer in vaporization of droplets of solutions in a high-temperature gas flow, *Heat Transfer, Soviet Res.* **9**(2), 43 (1977).
- Ye. I. Nevstruyeva and V. V. Tyutyayev, Relation between thermal and flow characteristics in two-phase, non-equilibrium flow, *Heat Transfer, Soviet Res.* **9**(1), 99 (1977).
- A. P. Ornatskiy and I. G. Sharayevskiy, Acoustic phenomena accompanying boiling of water in annuli under forced convection, *Heat Transfer, Soviet Res.* **9**(3), 28 (1977).
- A. P. Ornatskiy, V. A. Chernobay, A. F. Vasil'yev and S. V. Perkov, Boiling crisis in annuli with different lengthwise heat flux distributions, *Heat Transfer, Soviet Res.* **9**(3), 1 (1977).

- A. P. Ornatskiy, V. A. Chermobay, A. F. Vasil'yev and G. V. Struts, Variation in the critical heat flux in the case of very nonuniform heat release along an annulus, *Heat Transfer, Soviet Res.* **9**(1), 105 (1977).
- M. N. Özışık and T. S. Kress, Effects of internal circulation velocity and noncondensable gas on vapor condensation from a rising bubble, *Nucl. Sci. Engng* **66**, 397 (1978).
- A. Prosperetti and M. S. Plesset, Vapour-bubble growth in a superheated liquid, *J. Fluid Mech.* **85**, 345 (1978).
- M. D. Razavi and A. S. Damle, Heat transfer coefficients for turbulent filmwise condensation, *Trans. Instn Chem. Engrs* **56**, 81 (1978).
- V. G. Rifert, P. A. Barabash, A. B. Golubev, G. G. Leont'yev and S. I. Chaplinskiy, Investigation of film condensation enhanced by surface forces, *Heat Transfer, Soviet Res.* **9**(2), 23 (1977).
- J. H. Royal and A. E. Bergles, Augmentation of horizontal in-tube condensation by means of twisted-tape inserts and internally finned tubes, *J. Heat Transfer* **100**, 17 (1978).
- A. N. Ryabov, Boiling crisis and pressure drop in rod bundles with heat transfer enhancement devices, *Heat Transfer, Soviet Res.* **9**(1), 112 (1977).
- P. Saha and N. Zuber, An analytical study of the thermally induced two-phase flow instabilities including the effect of thermal non equilibrium, *Int. J. Heat Mass Transfer* **21**, 415 (1978).
- M. Seki, H. Kawamura and K. Sanokawa, Transient temperature profile of a hot wall due to an impinging liquid droplet, *J. Heat Transfer* **100**, 167 (1978).
- M. S. Sifaoui and A. Perrier, Caractérisation de l'évaporation profonde, *Int. J. Heat Mass Transfer* **21**, 629 (1978).
- G. F. Smirnov, Approximate theory of heat transfer with boiling on surfaces covered with capillary-porous structures, *Thermal Engng* **24**(9), 55 (1977).
- F. D. Stacey and R. D. Irvine, Theory of melting: thermodynamic basis of Lindemann's law, *Aust. J. Phys.* **30**, 631 (1977).
- M. A. Syrikoviy, A. I. Leont'yev, V. S. Polonskiy and I. I. Malashkin, Investigation of transcritical (post-dryout) heat transfer in smooth and rough steam-generating tubes, *Heat Transfer, Soviet Res.* **9**(1), 123 (1977).
- M. Sultan and R. L. Judd, Spatial distribution of active sites and bubble flux density, *J. Heat Transfer* **100**, 56 (1978).
- T. G. Theofanous, T. H. Bohrer, M. C. Chang and P. D. Patel, Experiments and universal growth relations for vapor bubbles with microlayers, *J. Heat Transfer* **100**, 41 (1978).
- V. I. Tolubinskiy, Ye. E. Domashev, A. K. Litoshenko and A. S. Matorin, Boiling crisis in concentric and eccentric annuli, *Heat Transfer, Soviet Res.* **9**(1), 132 (1977).
- V. I. Tolubinskiy, Yu. N. Ostrovskiy and V. Ye. Pisarev, Effect of heater diameter on the treatment critical heat flux, *Heat Transfer, Soviet Res.* **9**(2), 83 (1977).
- V. I. Tolubinskiy, Yu. N. Ostrovskiy and V. Ye. Pisarev, Unsteady boiling crisis at different initial heat-output rates and different heat capacities (tube wall thicknesses) of the heater, *Heat Transfer, Soviet Res.* **9**(2), 73 (1977).
- V. I. Tolubinskiy, A. A. Vasil'yev and N. A. Stoyanova, Pressure drop in channels with boiling and flow parallel to rod bundles, *Heat Transfer, Soviet Res.* **9**(3), 15 (1977).
- L. I. Tovazhyanskiy, V. I. Atroschenko and M. S. Kedrov, Coefficients of heat transfer for condensation of low-pressure steam in plate condensers with slot-like channels in a grid pattern, *Heat Transfer, Soviet Res.* **9**(2), 28 (1977).
- P. A. Tselishchey, T. M. Bogacheva and G. G. Abayev, Heat transfer in steam condensation on a vertical cylindrical surface below the point of transition from the liquid to the solid state, *Heat Transfer, Soviet Res.* **9**(2), 66 (1977).
- H. C. Ünal, Determination of void fraction, incipient point of boiling, and initial point of net vapor generation in sodium-heated helically cooled steam generator tubes, *J. Heat Transfer* **100**, 268 (1978).
- K. W. Wall and E. L. Park, Jr., Nucleate boiling of *n*-pentane, *n*-hexane and several mixtures of the two from various tube arrays, *Int. J. Heat Mass Transfer* **21**, 73 (1978).
- D. F. Warner, E. L. Park, Jr., and K. G. Mayhan, Nucleate boiling heat transfer of liquid nitrogen from plasma deposited polymer coated surfaces, *Int. J. Heat Mass Transfer* **21**, 137 (1978).
- S. C. Yao and R. E. Henry, An investigation of the minimum film boiling temperature on horizontal surfaces, *J. Heat Transfer* **100**, 260 (1978).
- I. S. Yefremova and M. S. Smirnov, The temperature field inside a vaporizing droplet, *Heat Transfer, Soviet Res.* **9**(1), 90 (1977).
- M. C. Yuen and L. W. Chen, Heat-transfer measurements of evaporating liquid droplets, *Int. J. Heat Mass Transfer* **21**, 537 (1978).
- N. V. Zozulya, V. A. Karkhu and V. P. Borovkov, An analytic and experimental study of heat transfer in condensation of vapor on finned surfaces, *Heat Transfer, Soviet Res.* **9**(2), 18 (1977).

CHANNEL FLOW

- A. M. M. Aly, A. C. Trupp and A. D. Gerrard, Measurements and prediction of fully developed turbulent flow in an equilateral triangular duct, *J. Fluid Mech.* **85**, 57 (1978).
- A. B. Ambravicius, P. J. Valatkevicius and P. M. Kezelis, Effect of the temperature factor on heat transfer in turbulent flow of high-temperature gas in an inlet region of a tube, *Heat Transfer, Soviet Res.* **9**(4), 156 (1977).
- A. M. Baklastov, A. L. Yefimov and V. A. Gorbenko, Heat transfer with flattened tubes in transverse flow, *Heat Transfer, Soviet Res.* **9**(3), 101 (1977).
- R. D. Borisova, A. A. Gukhman, V. V. Dil'man and B. A. Kader, Experimental study of the rate of turbulent heat and mass transfer in pipe inlet region at $Pr > > 1$, *Heat Transfer, Soviet Res.* **9**(4), 133 (1977).
- D. J. Braxton, Prediction of heat transfer to supercritical helium at high heat fluxes using non-bulk values of Pr and Re , *Int. J. Heat Mass Transfer* **21**, 76 (1978).
- T. W. Chapman, W. W. Collins and S. D. Troyer, Mass transfer in laminar flow with linear wall resistance-entrance region solution, *A.I.Ch.E. J.* **24**, 338 (1978).
- K. C. Cheng and J. W. Ou, Joule-Thomson effects on turbulent Graetz problem for gas flows in pipes with uniform wall temperature, *Can. J. Chem. Engng* **56**, 31 (1978).
- K. C. Cheng and S. L. Wong, Asymmetric solidification of flowing liquid in a convectively cooled parallel-plate channel, *Appl. Scient. Res.* **33**, 309 (1977).
- B. T. F. Chung, L. C. Thomas and Y. Pang, A surface rejuvenation model for turbulent heat transfer in annular flow with high Prandtl numbers, *J. Heat Transfer* **100**, 92 (1978).
- S. W. Churchill and J. P. Gupta, The effective power dependence of the heat transfer coefficient for fully developed turbulent convection in a tube, *I/EC Process. Des. Dev.* **17**, 351 (1978).
- M. D. Deshpande and D. P. Giddens, Turbulent entrance flow using a two-equation model, *Physics Fluids* **21**, 510 (1978).
- Ye. P. Dyban, E. Ya. Epik and V. Ye. Filipchuk, Local (length- and perimeter-wise) heat transfer in a flat duct at different initial inlet turbulence of the air flow, *Heat Transfer, Soviet Res.* **9**(4) 123 (1977).
- M. Epstein and G. M. Hauser, Solidification of a liquid penetrating into a convectively cooled tube, *Letters Heat Mass Transfer* **5**, 19 (1978).
- M. Faghri and J. R. Welty, Analysis of heat transfer, including axial fluid conduction, for laminar tube flow with arbitrary circumferential wall heat flux variations, *Int. J. Heat Mass Transfer* **21**, 317 (1978).
- B. M. Galitsevskiy and Yu. A. Ryzhov, Heat transfer in turbulent gas flows in the case of high-frequency pressure fluctuations, *Heat Transfer, Soviet Res.* **9**(4), 178 (1977).
- F. Gori, Variable physical properties in laminar heating of

- pseudo-plastic fluids with constant wall heat, *J. Heat Transfer* **100**, 220 (1978).
- F. Gori, Effects of variable physical properties in laminar flow of pseudo-plastic fluids, *Int. J. Heat Mass Transfer* **21**, 247 (1978).
- J. Gosse and R. Schiestel, Thermal convection in the wavy tubes of a type of heat exchanger, *Int. Chem. Engng* **18**, 1 (1978).
- O. T. Hanna and O. C. Sandall, Heat transfer in turbulent pipe flow for liquids having a temperature dependent viscosity, *J. Heat Transfer* **100**, 224 (1978).
- J. L. Houzelot and J. Villermaux, Mass transfer in annular cylindrical reactors in laminar flow, *Chem. Engng Sci.* **32**, 1465 (1977).
- E. E. Kalinin and G. A. Dreytser, Correlation of experimental and theoretical results on transient convective turbulent heat transfer in channels, *Heat Transfer, Soviet Res.* **9**(4), 168 (1977).
- K. N. Krishnan and V. M. K. Sastry, Numerical solution of thermal entry length problem with variable viscosities and viscous dissipation, *Wärme- und Stoffübertragung* **11**, 73 (1978).
- V. M. Legkii, Local heat transfer at the thermal inlet section of a flat-parallel channel with laminar flow in the boundary layer, *Int. Chem. Engng* **18**, 74 (1978).
- V. I. Leleshuk, K. F. Shuyskaya, A. G. Sorokin and O. N. Bragina, Heat transfer in the inlet length of fuel-elements modeling rod bundle in longitudinal air flow, *Heat Transfer, Soviet Res.* **9**(4), 100 (1977).
- D. C. Leslie, The form of the extended Reynolds analogy for rough surfaces, *Letters Heat Mass Transfer* **5**, 99 (1978).
- N. C. G. Markatos, R. Sala and D. B. Spalding, Flow in an annulus of non-uniform gap, *Trans. Instn Chem. Engrs* **56**, 28 (1978).
- A. Mojtabi and M. P. Caltagirons, Convection entre deux cylindres coaxiaux en régime laminaire permanent, *Int. J. Heat Mass Transfer* **21**, 261 (1978).
- A. L. Moys and R. H. Sabersky, Heat transfer and friction coefficients for dilute suspensions of asbestos fibers, *Int. J. Heat Mass Transfer* **21**, 7 (1978).
- D. R. Oliver and S. S. Rao, Heat transfer to viscous Newtonian liquids in laminar flow in straight horizontal circular tubes, *Trans. Instn Chem Engrs* **56**, 69 (1978).
- G. Ooms, G. Groen, D. P. de Graag and J. F. Ballintijn, On turbulent pipe flow with heat transfer and chemical reaction, *Chem. Engng Sci.* **33**, 357 (1978).
- S. V. Patankar, C. H. Liu and E. M. Sparrow, The periodic thermally developed regime in ducts with streamwise periodic wall temperature or heat flux, *Int. J. Heat Mass Transfer* **21**, 557 (1978).
- B. S. Petukhov, V. S. Grigor'yev, A. F. Polyakov and S. V. Rosnovskiy, An experimental study of heat transfer in pipes with variable density of the heat flux through the wall, *Heat Transfer, Soviet Res.* **9**(4), 114 (1977).
- V. N. Pilipenko, Heat and mass transfer in turbulent flows over a rough surface, *Heat Transfer, Soviet Res.* **9**(4), 78 (1977).
- V. L. Rvachev, A. P. Slesarenko and V. I. Popishvili, Use of the structural method and of Laplace transformation in solving problems of heat transfer for ducts and pipes with intricately shaped cross sections, *Heat Transfer, Soviet Res.* **9**(4), 105 (1977).
- K. Seshadri and F. A. Williams, Laminar flow between parallel plates with injection of a reactant at high Reynolds number, *Int. J. Heat Mass Transfer* **21**, 251 (1978).
- V. M. Sheptun, Investigating the effect of fluctuations in heat carrier sonic frequency on heat transfer under forced convection conditions, *Thermal Engng* **24**(9), 47 (1977).
- Z. P. Shulman and E. V. Korobko, Convective heat transfer of dielectric suspensions in coaxial cylindrical channels, *Int. J. Heat Mass Transfer* **21**, 543 (1978).
- W. Slagter, Finite element analysis for turbulent flow of incompressible fluids in fuel rod bundles, *Nucl. Sci. Engng* **66**, 84 (1978).
- E. M. Sparrow, S. V. Patankar and H. Shahrestani, Laminar heat transfer in a pipe subjected to a circumferentially varying external heat transfer coefficient, *Numerical Heat Transfer* **1**, 117 (1978).
- N. C. Steele and K. E. Barrett, A 2nd order numerical method for laminar flow at moderate to high Reynolds numbers: entrance flow in a duct, *Int. J. Num. Meth. Engng* **12**, 405 (1978).
- A. S. Sukamel, D. F. Gunstev and V. I. Velichko, Heat transfer in the inlet zone of a flat duct at different turbulence levels of the inlet flow, *Heat Transfer, Soviet Res.* **9**(4), 128 (1977).
- J. W. Vilemas and M. A. Nemira, Effect of variability of physical properties on heat transfer to turbulent air flows in annuli, *Heat Transfer, Soviet Res.* **9**(4), 151 (1977).
- K. Wichterle, The effect of wall, temperature and dissipative heat on the temperature field and pressure drop in non-Newtonian flows in a pipe, *Int. Chem. Engng* **18**, 305 (1978).

CONDUCTION

- R. T. Balmer, The critical radius effect with a variable heat transfer coefficient, *A.I.Ch.E. Jl* **24**, 547 (1978).
- V. A. Bubnov, Some remarks on the incorrect heat conduction problems, *Letters Heat Mass Transfer* **5**, 47 (1978).
- J. S. Chang and J. G. LaFramboise, Conductive heat transfer to an arbitrarily shaped body in a variable property fluid, *Int. J. Heat Mass Transfer* **21**, 360 (1978).
- J. Crank and A. B. Crowley, Isotherm migration along orthogonal flow lines in two dimensions, *Int. J. Heat Mass Transfer* **21**, 393 (1978).
- A. B. Crowley, Numerical solution of Stefan problems, *Int. J. Heat Mass Transfer* **21**, 221 (1978).
- O. Ehrlic, Y. K. Chuang and K. Schwerdtfeger, The melting of metal spheres involving the initially frozen shells with different material properties, *Int. J. Heat Mass Transfer* **21**, 341 (1978).
- D. Glasser and J. Kern, Bounds and approximate solutions to linear problems with nonlinear boundary conditions: solidification of a slab, *A.I.Ch.E. Jl* **24**, 161 (1978).
- L. E. Goodrich, Efficient numerical technique for one-dimensional thermal problems with phase change, *Int. J. Heat Mass Transfer* **21**, 615 (1978).
- D. Greenspan, A particle model of the Stefan problem, *Comput. Meth. Appl. Mech. Engng* **13**, 95 (1978).
- G. Horvay, B. Gold and E. S. Kaczenski, Longitudinal heat propagation in three-phase laminated composites at high exiting frequencies, *J. Heat Transfer* **100**, 281 (1978).
- L. M. Jiji and S. Weinbaum, Perturbation solutions for melting or freezing in annular regions initially not at the fusion temperature, *Int. J. Heat Mass Transfer* **21**, 593 (1978).
- A. D. Kraus, A. D. Snider and L. F. Doty, An efficient algorithm for evaluating arrays of extended surface, *J. Heat Transfer* **100**, 288 (1978).
- T. H. Kuehn, Radial heat transfer and critical Biot number with radiation, uniform surface heat generation, and curvature effects in convection, *J. Heat Transfer* **100**, 374 (1978).
- S. H. Lin, Transient heat conduction with temperature-dependent thermal conductivity by the orthogonal collocation method, *Letters Heat Mass Transfer* **5**, 29 (1978).
- A. Maewal, G. A. Gurtman and G. A. Hegemier, A mixture theory for quasi-one-dimensional diffusion in fiber-reinforced composites, *J. Heat Transfer* **100**, 128 (1978).
- G. E. Myers, The critical time-step for finite-element solutions to two-dimensional heat-conduction transients, *J. Heat Transfer* **100**, 120 (1978).
- M. Necati Özışık, A note on the general formulation of phase change problem as heat conduction problem with a moving heat source, *J. Heat Transfer* **100**, 370 (1978).
- J. Padovan, Moving thermal contact problems, *AIAA Jl* **15**, 1811 (1977).
- B. B. Raju, R. Chandra and M. S. Rao, Transient temperatures in laminated composite conical shells due to aero-dynamic heating, *AIAA Jl* **16**, 547 (1978).

- J. W. Ramsey and E. M. Sparrow, Melting and natural convection due to a vertical embedded heater, *J. Heat Transfer* **100**, 368 (1978).
- T. Saitoh, Numerical method for multi-dimensional freezing problems in arbitrary domains, *J. Heat Transfer* **100**, 294 (1978).
- R. Siegel, Shape of two-dimensional solidification interface during directional solidification by continuous casting, *J. Heat Transfer* **100**, 3 (1978).
- E. M. Sparrow, R. R. Schmidt and J. W. Ramsey, Experiments on the role of natural convection in the melting of solids, *J. Heat Transfer* **100**, 11 (1978).
- J. Sucec and S. Hedge, Transient conduction in a slab with temperature dependent thermal conductivity, *J. Heat Transfer* **100**, 172 (1978).
- A. I. Syslov, on Stefan's problem occurring in the theory of powder burning, *Appl. Math. Mech.* **41**, 87 (1977).
- M. Suzuki and S. Maeda, Non-linear diffusion problems with variable diffusivity and time-dependent flux boundary conditions, *Int. J. Heat Mass Transfer* **21**, 653 (1978).
- Y. Zvirin and M. Toren, Simultaneous melting and evaporation due to an area heat source, *Wärme- und Stoffübertragung* **11**, 29 (1978).

FLOW WITH SEPARATED REGIONS

- M. A. Collins and R. L. Simpson, Flowfield prediction of separating turbulent shear layers, *AIAA Jl* **16**, 291 (1978).
- J. C. LaRue and P. A. Libby, Detailed similarity in the turbulent wake of a heated cylinder, *Physics Fluids* **21**, 891 (1978).
- H. L. Moses, R. R. Jones III, W. F. O'Brien, Jr. and R. S. Peterson, Simultaneous solution of the boundary layer and freestream with separated flow, *AIAA Jl* **16**, 61 (1978).
- S. V. Patankar, E. M. Sparrow and M. Ivanovic, Thermal interactions among the confining walls of a turbulent recirculating flow, *Int. J. Heat Mass Transfer* **21**, 269 (1978).
- R. L. Simpson and M. A. Collins, Prediction of turbulent boundary layers in the vicinity of separation, *AIAA Jl* **16**, 289 (1978).

HEAT AND MASS TRANSFER

- H. Eickhoff, Analytical approximation for the laminar binary boundary-layer flow along a vaporizing liquid layer (in German), *Wärme- und Stoffübertragung* **11**, 103 (1978).
- M. Y. Jabbari and R. J. Goldstein, Adiabatic wall temperature and heat transfer downstream of injection through two rows of holes, *J. Engng Pwr* **100**, 303 (1978).
- O. A. Kiseleva, Ya. I. Rabinovich, V. D. Sobolev, V. M. Starov and N. V. Churayev, Investigation of heat and mass transfer in model capillary systems, *Heat Transfer, Soviet Res.* **9**(1), 23 (1977).
- P. A. Libby, Interaction of a rough subliming surface and a laminar boundary layer, *AIAA Jl* **16**, 130 (1978).
- A. V. Lykova, A. M. Medvedev and V. D. Kosoy, Heat and mass transfer in heated colloidal capillary-porous bodies, *Heat Transfer, Soviet Res.* **9**(1), 60 (1977).
- R. J. Moffat, J. M. Healzer and W. M. Kays, Experimental heat transfer behavior of a turbulent boundary layer on a rough surface with blowing, *J. Heat Transfer* **100**, 134 (1978).
- V. M. Repukhov and K. A. Bogachuk-Kozachuk, Effect of swirl of the main air flow on the efficiency of film cooling in axisymmetric air flow past a rotating cylinder, *Heat Transfer, Soviet Res.* **9**(2), 100 (1977).
- S. G. Romanovskiy, K. D. Lukin and L. I. Margolin, The method of invariant groups for solving the non-linear problem of heat and mass transfer in capillary-porous bodies, *Heat Transfer, Soviet Res.* **9**(1), 94 (1977).
- G. S. Shubin, Analysis of mass and heat transfer accompanied by movement of the phase-transition boundary, *Heat Transfer, Soviet Res.* **9**(1), 65 (1977).
- V. M. Yeroshenko, A. A. Klumov and Yu. N. Terent'yev, Heat and mass transfer in the zone of transition from laminar to turbulent flow on a permeable surface, *Heat Transfer, Soviet Res.* **9**(4), 66 (1977).

LOW DENSITY

- L. Carlomusto and L. M. DeSocio, Poiseuille flow of a rarefied gas mixture, *Z. Angew. Math. Phys.* **29**, 206 (1978).
- G. E. Gorelik, V. V. Levdansky and N. V. Pavlyukevich, Mass transfer during vapor condensation in a nonisothermal channel, *Letters Heat Mass Transfer* **5**, 81 (1978).
- W. Steckelmacher, Molecular flow conductance of long tubes with uniform elliptical cross-section and the effect of different cross-sectional shapes, *J. Phys. D: Appl. Phys.* **11**, 473 (1978).
- K. Tamada and H. Miura, Slip flow past a tangential flat plate at low Reynolds numbers, *J. Fluid Mech.* **85**, 731 (1978).

MEASUREMENT TECHNIQUES

- T. Ashworth, J. L. DeVries and D. R. Smith, Convectively mixed humidity chamber, *Rev. Scient. Instrum.* **48**, 1595 (1977).
- G. Backstrom, Circuitry for ac thermometry and dc heating in measurements of thermal properties, *Rev. Scient. Instrum.* **49**, 864 (1978).
- R. C. Baker and M. Tarabad, The performance of electromagnetic flowmeters with magnetic slurries, *J. Phys. D: Appl. Phys.* **11**, 167 (1978).
- B. N. Barman and Z. Rahim, Magnetic float densimeter for wide range density measurements, *Rev. Scient. Instrum.* **48**, 1695 (1977).
- H. Becker and U. Grigull, Interferometry of transparent phase objects, especially with a high interference fringe density, illustrated by an example from heat transfer (in German), *Wärme- und Stoffübertragung* **10**, 233 (1977).
- K. Bremhorst and D. B. Gilmore, Influence of end conduction on the sensitivity to steam temperature fluctuations of a hot-wire anemometer, *Int. J. Heat Mass Transfer* **21**, 145 (1978).
- A. Brown, E. L. Thomas, R. Foord and J. M. Vaughan, Measurements on a distant smoke plume with a CO₂ laser velocimeter, *J. Phys. D: Appl. Phys.* **11**, 137 (1978).
- T. C. Cetas, Practical thermometry with thermographic camera—calibration, transmittance and emittance measurements, *Rev. Scient. Instrum.* **49**, 245 (1978).
- R. K. Chakravarty, K. Siater and C. W. Fischer, Linearization of thermistor resistance-temperature characteristics using active circuitry, *Rev. Scient. Instrum.* **48**, 1645 (1977).
- J. I. Chen, J. H. Lienhard and R. Eichhorn, A method for measuring transparent droplet diameters, *Int. J. Multiphase Flow* **4**, 233 (1978).
- J. Crank and R. M. Furzeland, Edge effects in diffusion and conductivity measurements, *J. Phys. D: Appl. Phys.* **11**, 447 (1978).
- K. Depooter, E. Brundrett and A. B. Strong, The calibration of Preston tubes in transpired turbulent boundary layers, *J. Fluids Engng* **100**, 10 (1978).
- M. A. Donelan and J. Moycka, Miniature drag sphere velocity probe, *Rev. Scient. Instrum.* **49**, 298 (1978).
- J. P. Dumas, The analysis of theoretical melting curves in differential scanning calorimetry. A versatile atomic number correction for electron-probe microanalysis, *J. Phys. D: Appl. Phys.* **11**, 1 (1978).
- F. Es vignes, Methods of surface temperature measurement using radiation, *Int. Chem. Engng* **18**, 7 (1978).
- G. T. Feke and C. E. Riva, Laser Doppler measurements of blood velocity in human retinal vessels, *J. Opt. Soc. Am.* **68**, 531 (1978).
- M. S. Francis, D. A. Kennedy and G. A. Butler, Technique for the measurement of spatial vorticity distributions, *Rev. Scient. Instrum.* **49**, 617 (1978).
- H. Genda and H. Okayama, Simulator for remote sensing and its application to soil moisture measurements, *Appl. Optics* **17**, 807 (1978).
- O. A. Geraschenko, T. G. Grishchenko, O. V. Luchay and V. T. Nikandrov, Contactless method of monitoring the temperature of rotating surfaces, *Heat Transfer, Soviet Res.* **9**(3), 143 (1977).

- F. J. Goldner, Use of the microtransient thermal diffusivity measuring technique on liquids, *Int. J. Heat Mass Transfer* **21**, 69 (1978).
- W. F. Griffiths and P. Chaloupka, The transmission of sub-millimeter radiation by copper light pipes, *J. Phys. D: Appl. Phys.* **11**, 33 (1978).
- K. G. Gupta, M. J. Laubitz and A. Feingold, An apparatus to measure the effect of moisture content of granular materials on their thermal conductivity, *Letters Heat Mass Transfer* **5**, 89 (1978).
- M. Hishida and Y. Nagano, Simultaneous measurements of velocity and temperature in nonisothermal flows, *J. Heat Transfer* **100**, 340 (1978).
- Y. H. Julia, J. F. Renaud, D. J. Ferrand and P. E. Malbrunot, Device for automatic thermal conductivity measurements, *Rev. Scient. Instrum.* **48**, 1654 (1977).
- J. W. Kannel, F. F. Zugara and T. A. Don, A method for measuring surface temperature between rolling/sliding steel cylinders, *J. Lubr. Tech.* **100**, 110 (1978).
- V. Kottke and H. Blenke, Methods of measuring convective mass transfer (in German), *Chemie-Ingr-Tech.* **50**, 81 (1978).
- F. F. Lezhenin, P. I. Shurgay, A. G. Kostornov and M. S. Shevchuk, Effective thermal conductivity in the 373 to 1400 K temperature range, *Heat Transfer, Soviet Rev.* **9**(2), 144 (1977).
- N. I. Loginov, Measuring the flowrate of liquid metals when they poorly wet the flowmeter wall, *Soviet Atomic Energy* **43**, 886 (1977).
- F. Milton, P. Paranthoen and M. Trinite, Influence des échanges thermiques entre le capteur et ses supports sur la mesure des fluctuations de température dans un écoulement turbulent, *Int. J. Heat Mass Transfer* **21**, 1 (1978).
- A. F. Polyakov and S. A. Shindin, Peculiarities of hot-wire measurements of mean velocity and temperature in the wall vicinity, *Letters Heat Mass Transfer* **5**, 53 (1978).
- T. Sato, T. Kishimoto and K. Sasaki, Laser Doppler particle measuring system using forced vibration synchronized detection and power spectral analysis, *Appl. Optics* **17**, 230 (1978).
- Y. Sato, K. Yamamoto and T. Mizushima, Fluid velocity measurement by a laser Doppler technique on a practical measuring instrument, *Int. Chem. Engng* **18**, 26 (1978).
- H. Shaukatullah and B. Gebhart, Effect of flow direction on calibration of hot-film anemometers at low velocities, *J. Heat Transfer* **100**, 381 (1978).
- S. Takizawa, H. Murata and A. Nagashima, Measurement of the thermal conductivity of liquids by transient hot-wire method, *Bull. J.S.M.E.* **21**, 273 (1978).
- R. L. Wright and E. V. Zoby, Comparison of thermal techniques for determining boundary-layer transition in flight, *AIAA J.* **15**, 1543 (1977).
- I. Wygnanski and C. M. Ho, Note on the prong configuration of an x-array hot-wire probe, *Rev. Scient. Instrum.* **49**, 865 (1978).
- E. J. Yarmchuk and W. I. Glaberson, Sensitive temperature gradiometer for use at low temperatures, *Rev. Scient. Instrum.* **49**, 463 (1978).
- NATURAL CONVECTION**
- S. I. Abdel-Khalik and K. R. Randall, Natural convection in compound parabolic concentrators—a finite element solution, *J. Heat Transfer* **100**, 199 (1978).
- N. Afzal and N. K. Banthiya, Mixed convection over a semi-infinite vertical flat plate, *Z. Angew Math. Phys.* **28**, 993 (1977).
- T. Ahmad and G. M. Faeth, An investigation of the laminar overfire region along upright surfaces, *J. Heat Transfer* **100**, 112 (1978).
- M. Al-Arabi and M. M. El-Refaee, Heat transfer by natural convection from corrugated plates to air, *Int. J. Heat Mass Transfer* **21**, 357 (1978).
- R. F. Bergholz, Instability of steady natural convection in a vertical fluid layer, *J. Fluid Mech.* **84**, 743 (1978).
- J. R. Booker and K. C. Stengel, Further thoughts on convective heat transport in a variable-viscosity fluid, *J. Fluid Mech.* **86**, 289 (1978).
- A. Brown, Relative importance of viscous dissipation and pressure stress effects on laminar free convection, *Trans. Instn. Chem. Engrs* **56**, 77 (1978).
- A. Bejan and C. L. Tien, Natural convection in a horizontal porous medium subjected to an end-to-end temperature difference, *J. Heat Transfer* **100**, 191 (1978).
- S. N. Brown and K. Stewartson, On finite amplitude Bénard convection in a cylindrical container, *Proc. R. Soc.* **360A**, 455 (1978).
- V. P. Carey and J. C. Mollendorf, Measured variations of thermal boundary-layer thickness with Prandtl number for laminar natural convection from a vertical uniform-heat-flux surface, *Int. J. Heat Mass Transfer* **20**, 481 (1978).
- C. P. Cerasoli, Experiments on buoyant-parcel motion and the generation of internal gravity waves, *J. Fluid Mech.* **86**, 247 (1978).
- K. C. Cheng, M. Takeuchi and R. R. Gilpin, Transient natural convection in horizontal water pipes with maximum density effect and supercooling, *Numerical Heat Transfer* **1**, 101 (1978).
- L. A. Clomburg, Jr., Convection in an enclosure-source and sink located along a single horizontal boundary, *J. Heat Transfer* **100**, 205 (1978).
- P. G. Daniels, The inertial damping and resonance of cellular convection in a rotating fluid annulus: steady linear theory, *J. Fluid Mech.* **85**, 193 (1978).
- P. G. Daniels, The effect of distant sidewalls on the transition to finite amplitude Bénard convection, *Proc. R. Soc.* **358A**, 173 (1978).
- M. Dubois and P. Bergé, Experimental study of the velocity field in Rayleigh-Bénard convection, *J. Fluid Mech.* **85**, 641 (1978).
- D. E. Fussey and I. P. Warneford, Free convection from a downward facing inclined flat plate, *Int. J. Heat Mass Transfer* **21**, 119 (1978).
- D. K. Gartling, Convective heat transfer analysis by the finite element method, *Comput. Meth. Appl. Mech. Engng* **12**, 365 (1977).
- R. R. Gilpin, H. Imura and K. C. Cheng, Experiments on onset of longitudinal vortices in horizontal Blasius flow heated from below, *J. Heat Transfer* **100**, 71 (1978).
- K. Gotoh, S. Yanase and J. Mizushima, The instability of natural convection in a vertical fluid layer in the presence of an adverse temperature gradient, *J. Phys. Soc. Japan* **43**, 1773 (1977).
- R. Greif, An experimental and theoretical study of heat transfer in vertical tube flows, *J. Heat Transfer* **100**, 86 (1978).
- P. Hall and I. C. Walton, The smooth transition to a convective regime in a two-dimensional box, *Proc. R. Soc.* **358A**, 199 (1978).
- N. Hattori and S. Kotake, Combined free and forced-convection heat transfer for fully-developed laminar flow in horizontal tubes (experiments), *Bull. J.S.M.E.* **21**, 861 (1978).
- J. L. Hudson, D. Tang and S. Abell, Experiments on centrifugally driven thermal convection in a rotating cylinder, *J. Fluid Mech.* **86**, 147 (1978).
- D. B. Ingham, Transient free convection on an isothermal vertical flat plate, *Int. J. Heat Mass Transfer* **21**, 67 (1978).
- R. E. Kelly and D. Pal, Thermal convection with spatially periodic boundary conditions: resonant wavelength excitation, *J. Fluid Mech.* **86**, 433 (1978).
- K. Küblbeck, J. Straub, S. Bloss and U. Grigull, Experimental and numerical study of laminar, axisymmetrical jets with and without buoyancy (in German), *Wärme- und Stoffübertragung* **11**, 131 (1978).
- J. A. Liburdy and G. M. Faeth, Heat transfer and mean structure of a turbulent thermal plume along a vertical isothermal wall, *J. Heat Transfer* **100**, 177 (1978).
- F. N. Lin and B. T. Chao, Predictive capabilities of series

- solutions for laminar free convection boundary layer heat transfer, *J. Heat Transfer* **100**, 160 (1978).
- S. J. Lin and S. W. Churchill, Turbulent free convection from a vertical, isothermal plate, *Numerical Heat Transfer* **1**, 129 (1978).
- R. L. Mahajan and B. Gebhart, Higher order approximations to the natural convection flow over a uniform flux vertical surface, *Int. J. Heat Mass Transfer* **21**, 549 (1978).
- B. K. Meena and G. Nath, Nonsimilar laminar free convection flow along a nonisothermal vertical plate, *J. Heat Transfer* **100**, 163 (1978).
- G. P. Merker, Influence of the density anomaly of water on the onset of convection in a semi-infinite layer heated or cooled, respectively from below (in German), *Wärme- und Stoffübertragung* **10**, 255 (1977).
- G. L. Morrison and V. Q. Tran, Laminar flow structure in vertical free convective cavities, *Int. J. Heat Mass Transfer* **21**, 203 (1978).
- M. A. Muntasser and J. C. Mulligan, A local nonsimilarity analysis of free convection from a horizontal cylindrical surface, *J. Heat Transfer* **100**, 165 (1978).
- H. Nakamura and Y. Asako, Laminar free convection from a horizontal cylinder with uniform cross section of arbitrary shape, *Bull. J.S.M.E.* **21**, 471 (1978).
- Yu. N. Ostrovskiy and V. Ye. Pisarev, Nature of transient natural-convection heat transfer in a liquid, *Heat Transfer, Soviet Res.* **9**(3), 84 (1977).
- E. M. Parmentier, A study of thermal convection in non-Newtonian fluids, *J. Fluid Mech.* **84**, 1 (1978).
- S. V. Patankar, S. Ramadhyani and E. M. Sparrow, Effect of circumferentially nonuniform heating on laminar combined convection in a horizontal tube, *J. Heat Transfer* **100**, 63 (1978).
- G. D. Raithby and K. G. T. Hollands, Heat transfer by natural convection between a vertical surface and a stably stratified fluid, *J. Heat Transfer* **100**, 378 (1978).
- S. J. Rhee, V. K. Dhir and I. Catton, Natural convection heat transfer in beds of inductively heated particles, *J. Heat Transfer* **100**, 78 (1978).
- N. Seki, S. Fukusako and H. Inaba, Heat transfer of natural convection in a rectangular cavity with vertical walls of different temperatures, *Bull. J.S.M.E.* **21**, 246 (1978).
- N. Seki, S. Fukusako and H. Inaba, Visual observation of natural convective flow in a narrow vertical cavity, *J. Fluid Mech.* **84**, 695 (1978).
- N. Seki, S. Fukusako and M. Sugawara, Free convective heat transfer and criterion on onset of free convection in a horizontal melt layer of ice heated by upper rigid surface, *Wärme- und Stoffübertragung* **10**, 269 (1977).
- A. V. Shenoy and R. A. Mashelkar, Turbulent free convection heat transfer from a flat vertical plate to a power law fluid, *A.I.Ch.E. Jl* **24**, 344 (1978).
- E. M. Sparrow, S. V. Patankar and R. M. Abdel-Wahed, Development of wall and free plumes above a heated vertical plate, *J. Heat Transfer* **100**, 184 (1978).
- M. Tviitereid, Thermal convection in a horizontal fluid layer with internal heat sources, *Int. J. Heat Mass Transfer* **21**, 335 (1978).
- K. Vajravelu and K. S. Sastri, Free convective heat transfer in a viscous incompressible fluid confined between a long vertical wavy wall and a parallel flat wall, *J. Fluid Mech.* **86**, 365 (1978).
- R. L. Verma and P. Singh, The effect of plate oscillations on horizontal free convection flow, *Aust. J. Phys.* **30**, 335 (1977).
- L. S. Yao, Free-forced convection in the entry region of a heated straight pipe, *J. Heat Transfer* **100**, 212 (1978).
- L. S. Yao and I. Catton, The buoyancy and variable viscosity effects on a water laminar boundary layer along a heated longitudinal horizontal cylinder, *Int. J. Heat Mass Transfer* **21**, 407 (1978).
- L. S. Yao and I. Catton, Thermal instability of a volumetrically-heated pool with phase change and a free upper surface, *J. Heat Transfer* **100**, 376 (1978).
- S. H. Yin, T. Y. Wung and K. Chen, Natural convection in an air layer enclosed within rectangular cavities, *Int. J. Heat Mass Transfer* **21**, 307 (1978).
- C. P. Yu and C. E. Hendrix, Linearized analysis of magneto-hydrodynamic entrance flow in a vertical channel with combined thermal convection, *Appl. Scient. Res.* **33**, 369 (1977).
- A. Zebib, Onset of natural convection in a cylinder of water saturated porous media, *Physics Fluids* **21**, 699 (1978).
- A. Zebib and D. R. Kassoy, Three-dimensional natural convection motion in a confined porous medium, *Physics Fluids* **21**, 1 (1978).

PACKED AND FLUIDIZED BEDS AND POROUS MEDIA

- R. Bauer and E. U. Schlünder, Effective radial thermal conductivity of packings in a gas flow. Part I. Convective transport coefficient, *Int. Chem. Engng* **18**, 181 (1978).
- R. Bauer and E. U. Schlünder, Effective radial thermal conductivity of packings in gas flow. Part II. Thermal conductivity of the packing fraction without gas flow, *Int. Chem. Engng* **18**, 189 (1978).
- M. A. Biot, Variational irreversible thermodynamics of heat and mass transfer in porous solids: new concepts and methods, *Q. Appl. Math.* **36**, 19 (1978).
- J. S. M. Botterill and A. O. O. Denloye, A theoretical model of heat transfer to a packed or quiescent fluidized bed, *Chem. Engng Sci.* **33**, 509 (1978).
- A. S. Ginzburg, Heat and mass transfer involved in phase separation(drying) upon interaction of external and internal fields, *Heat Transfer, Soviet Res.* **9**(1), 1 (1977).
- D. J. Gunn, Transfer of heat or mass to particles in fixed and fluidized beds, *Int. J. Heat Mass Transfer* **21**, 467 (1978).
- R. Ipfelkofer and H. Blenke, Heat transfer in liquid fluidized beds (in German), *Chemie.-Ingr.-Tech.* **50**, 212 (1978).
- R. Kapral and D. Bedaux, The effective shear viscosity of a regular array of suspended spheres, *Physica* **91A**, 590 (1978).
- O. A. Kremnev, A. V. Shurshkov, N. A. Aronova and Ye. M. Kozlov, Transient heat transfer in liquid flow through permeable subsurface strata, *Heat Transfer, Soviet Res.* **9**(1), 51 (1977).
- P. D. Lebedev (deceased), D. P. Lebedev and V. V. Uvarov, Effect of mode of heat supply on the mechanism of freeze drying and the formation of the capillary-porous structure under a vacuum, *Heat Transfer, Soviet Res.* **9**(1), 7 (1977).
- L. B. Tsimermanis and F. Kh. Tsimermanis, Heat and mass transfer between a rheological complex thin-walled capillary-porous body and the surroundings, *Heat Transfer, Soviet Res.* **9**(1), 15 (1977).
- A. S. Zelepuga and V. S. Karpenko, Heat and mass transfer in electrically-heated capillary-porous bodies, *Heat Transfer, Soviet Res.* **9**, 19 (1977).

RADIATION

- T. W. Cadman and D. Sadowski, Generalized equations for the calculation of absorptance, reflectance, and transmittance of a number of parallel surfaces, *Appl. Optics* **17**, 531 (1978).
- Y. S. Chou, Approximate method for radiative transfer in scattering absorbing plane-parallel media, *Appl. Optics* **17**, 364 (1978).
- K. H. Chu and R. Greif, Theoretical determination of band absorption for nonrigid rotation with applications to CO, NO, N₂O, and CO₂, *J. Heat Transfer* **100**, 230 (1978).
- K. D. Cole, Generalization of Planck's law of radiation to anisotropic dispersive media, *Aust. J. Phys.* **30**, 671 (1977).
- A. L. Crosbie and T. L. Linsenbardt, Intensity distribution inside an isotropically scattering semi-infinite medium, *AIAA Jl* **15**, 1604 (1977).
- W. G. Egan and T. Hilgeman, Spectral reflectance of particulate materials: a Monte Carlo model including asperity scattering, *Appl. Optics* **17**, 245 (1978).
- B. W. Fowler and C. S. Sung, Radiative transfer in two dimensions through fog, *Appl. Optics* **17**, 1797 (1978).

- R. Greif, Laminar convection with radiation; experimental and theoretical results, *Int. J. Heat Mass Transfer* **21**, 477 (1978).
- W. L. Grosshandler and R. F. Sawer, Radiation from a methanol furnace, *J. Heat Transfer* **100**, 247 (1978).
- G. L. Hubbard and C. L. Tien, Infrared mean absorption coefficients of luminous flames and smoke, *J. Heat Transfer* **100**, 235 (1978).
- V. I. Kruglov and Yu. V. Khodyko, Vibrational non-equilibrium radiation in diatomic gases—I, *Int. J. Heat Mass Transfer* **21**, 163 (1978).
- V. I. Kruglov and Yu. V. Khodyko, Vibrational non-equilibrium radiation of diatomic gases—II, *Int. J. Heat Mass Transfer* **21**, 169 (1978).
- J. A. Roux and A. M. Smith, Combined conductive and radiative heat transfer in an absorbing and scattering infinite slab, *J. Heat Transfer* **100**, 98 (1978).
- A. M. Smith, B. E. Wood and L. S. Fletcher, Bidirectional reflectance of H_2O cryofilms on specular and diffusing surfaces, *AIAA Jl* **16**, 510 (1978).
- B. S. Soroka and L. I. Val', Investigation of combined radiation and convection heat transfer in a closed system of gray bodies, assuming a two-layer model of the gas medium, *Heat Transfer, Soviet Res.* **9**(2), 134 (1977).
- M. V. Stradomskiy, Ye. P. Vasil'yev, V. I. Kozlenko and Ye. A. Yefremova, The emission characteristics of liquid-fuel flames, *Heat Transfer, Soviet Res.* **9**(2), 87 (1977).
- C. Stramigoli, G. Spadoni and F. Santarelli, Photo-sensitized reactions in absorbing-scattering media within a plane slab, *Int. J. Heat Mass Transfer* **21**, 660 (1978).
- S. Tanaka and T. Kunitomo, Numerical analysis of radiative-convective heat transfer from an extended surface by the Monte Carlo method, *Bull. J.S.M.E.* **21**, 258 (1978).
- S. N. Tiwari and S. K. Gupta, Accurate spectral modeling for infrared radiation, *J. Heat Transfer* **100**, 240 (1978).
- N. K. Uzunoglu, N. G. Alexopoulos and J. G. Fikioris, Scattering from thin and finite di-electric fibers, *J. Optical Soc. Am.* **68**, 194 (1978).
- R. Viskanta and E. D. Hirliman, Combined conduction-radiation heat transfer through an irradiated semitransparent plate, *J. Heat Transfer* **100**, 169 (1978).
- N. E. Wijeyasundara, Geometric factors for plane specular reflectors, *Solar Energy* **20**, 81 (1978).
- ROTATING SURFACES AND FLUIDS**
- A. Sh. Dorfman and G. F. Selyavin, Exact solution of equations of the thermal boundary layer for axisymmetric rotating bodies with an arbitrary surface temperature distribution, *Heat Transfer, Soviet Res.* **9**(2), 105 (1977).
- V. M. Kapinos, V. N. Pustovalov, A. P. Rud'ko and L. A. Gura, An experimental study of heat transfer in the flow of air in a rotating radial convergent duct, *Heat Transfer, Soviet Res.* **9**(4), 73 (1977).
- C. H. Li, The influence of variable density and viscosity on flow transition between two concentric rotating cylinders, *J. Lubr. Tech.* **100**, 261 (1978).
- A. A. Mosyak, B. G. Rykova, P. D. Kostov and G. T. Gruzintsev, Transfer of heat from the outer cylinder to a liquid flowing in an annulus with a rotating inner cylinder, *Heat Transfer, Soviet Res.* **9**(4), 110 (1977).
- V. V. Vasil'yev and S. I. Guzenko, Investigating heat transfer with water lancing of boiler heating surfaces, *Thermal Engng* **24**(9), 59 (1977).
- I. A. Vatutin, O. G. Martynenko and I. V. Skutova, Calculation of pulsatile heat fluxes and rate of temperature fluctuations in turbulent nonisothermal flows of incompressible fluids in a rotating cylindrical pipe, *Heat Transfer, Soviet Res.* **9**(4), 35 (1977).
- T. Yamada and K. Kawashimo, Temperature distribution within a rotating cylindrical body heated and cooled locally on its peripheral surface, *Bull. J.S.M.E.* **21**, 266 (1978).
- THERMODYNAMIC AND TRANSPORT PROPERTIES**
- Md. Alamgir and J. H. Lienhard, The temperature dependence of surface tension of pure fluids, *J. Heat Transfer* **100**, 324 (1978).
- H. Becker and U. Grigull, Measurement of the thermal diffusivity and conductivity of carbon dioxide in the critical region by means of holographic interferometry (in German), *Wärme- und Stoffübertragung* **11**, 9 (1978).
- S. Bhanja, De Udayan, A. K. Barua and T. K. Bose, The effect of a magnetic field on the heat conductivity and oxygen argon gas mixtures, *Physica* **90A**, 167 (1978).
- J. Clark, J. Kestin and V. L. Shah, Effect of long-range intermolecular forces on the drag of an oscillating disk and on the viscosity of gases, *Physica* **89A**, 539 (1977).
- C. J. Coakley and D. Tabor, Direct measurement of van der Walls forces between solids in air, *J. Physics D: Appl. Phys.* **11**, L77 (1978).
- V. N. Evsteev, V. N. Chukhanov and V. P. Skripov, The specific volume of superheated heavy water, *Thermal Engng* **24**, 49(9), 49 (1977).
- W. M. Haynes, Measurement of the viscosity of compressed gaseous and liquid oxygen, *Physica* **89A**, 569 (1977).
- C. A. Hogarth and H. Ebrahimi, Some ionic effects of the thermo-electric properties of solids, *J. Phys. D: Appl. Phys.* **11**, 181 (1978).
- G. Jancsó and W. A. Van Hook, The excess thermodynamic properties of solution of isotopic isomers, one in the other, *Physica* **91A**, 619 (1978).
- J. Kestin, H. E. Khalifa and W. A. Wakeham, The viscosity and diffusion coefficients of the binary mixtures of xenon and other noble gases, *Physica* **90A**, 215 (1978).
- J. Kestin, H. E. Khalifa and W. A. Wakeham, Viscosity of the dry combustion products of carbon in air, *J. Chem. Engng Data* **23**, 80 (1978).
- H. Kinoshita, S. Abe and A. Nagashima, Viscosity of heavy water at high pressures, *J. Chem. Engng Data* **23**, 16 (1978).
- E. A. Mason, H. E. Khalifa, J. Kestin, R. DiPippo and J. R. Dorfman, Composition dependence of the thermal conductivity of dense gas mixtures, *Physica* **91A**, 377 (1978).
- C. A. Miles and M. J. Morley, The effect of hydrostatic pressure on the physical properties of frozen foods, *J. Phys. D: Appl. Phys.* **11**, 201 (1978).
- U. Plocker, H. Knapp and J. Prausnitz, Calculation of high-pressure vapor-liquid equilibria from a corresponding-states correlation with emphasis on asymmetric mixtures, *I/EC Process Des. Dev.* **17**, 324 (1978).
- S. L. Rivkin, An experimental investigation of the coefficient of dynamic viscosity of heavy water in the supercritical region of parameters of state, *Thermal Engng* **24**(8), 49 (1977).
- D. Santrach and J. Lieimezs, The latent heat of vaporization prediction for binary mixtures, *I/EC Fundamentals* **17**, 93 (1978).
- C. F. Spencer and S. B. Adler, A critical review of equations for predicting saturated liquid density, *J. Chem. Engng Data* **23**, 82 (1978).
- R. E. Taylor, Thermal properties of tungsten SRM's 730 and 799, *J. Heat Transfer* **100**, 330 (1978).
- A. S. Teja, N. C. Patel and N. H. Ng, The van der Waals one-fluid model for mixtures and generalized equations of state, *Chem. Engng Sci.* **33**, 624 (1978).
- H. H. H. Yuan and I. Oppenheim, Transport in two dimensions—I. The self-diffusion coefficient, *Physica* **90A**, 1 (1978).
- H. H. H. Yuan and I. Oppenheim, Transport in two dimensions—II. The thermal conductivity coefficient, *Physica* **90A**, 21 (1978).
- M. Zuzovsky and H. Brenner, Effective conductivities of composite materials composed of cubic arrangements of spherical particles embedded in an isotropic matrix, *Z. Angew. Math. Phys.* **28**, 979 (1977).

TRANSFER MECHANISMS

- R. A. Antonia, A. J. Chambers, C. W. Van Atta, C. A. Friehe and K. N. Helland, Skewness of temperature derivative in a heated grid flow, *Physics Fluids* **21**, 509 (1978).

- R. A. Antonia and C. W. Van Atta, Structure functions of temperature fluctuations in turbulent shear flows, *J. Fluid Mech.* **84**, 561 (1978).
- C. Béguier, I. Dekeyser and B. E. Launder, Ratio of scalar and velocity dissipation time scales in shear flow turbulence, *Physics Fluids* **21**, 307 (1978).
- Ye. P. Dyban and E. Ya Epik, Calculation of convective heat transfer from statistical characteristics of turbulence, *Heat Transfer, Soviet Res.* **9**(4), 11 (1977).
- V. L. Kolpashchekov and A. I. Schnipp, Constitutive heat-transfer equations for materials with memory, *Int. J. Heat Mass Transfer* **21**, 155 (1978).
- J. L. Lumley, O. Zeman and J. Siess, The influence of buoyancy on turbulent transport, *J. Fluid Mech.* **84**, 581 (1978).
- P. L. Maksin, B. S. Petukhov and A. F. Polyakov, Calculation of turbulent (eddy) heat transfer in stabilized pipe flow, *Heat Transfer, Soviet Res.* **9**(4), 1 (1977).
- A. A. Shrayber, Model of turbulent heat transfer by gas-solid flows, *Heat Transfer, Soviet Res.* **9**(3), 35 (1977).
- L. C. Thomas, A formulation for ε_M and ε_H based on the surface renewal principle, *A.I.Ch.E. Jl* **24**, 101 (1978).
- K. S. Venkataramani and R. Chevray, Statistical features of heat transfer in grid-generated turbulence: constant-gradient case, *J. Fluid Mech.* **86**, 513 (1978).
- P. C. Wayner, Jr., A constant heat flux model of the evaporating interline region, *Int. J. Heat Mass Transfer* **21**, 362 (1978).
- P. C. Wayner, Jr., The effect of the London-van der Waals dispersion force on interline heat transfer, *J. Heat Transfer* **100**, 155 (1978).