

List of open publications by Leonid A. Dombrovsky

Articles in journals

1. Fedorets A.A. and Dombrovsky L.A., Generation of Levitating Droplet Clusters above the Locally Heated Water Surface: A Thermal Analysis of Modified Installation, *Int. J. Heat Mass Transfer*, 2016, under review.
2. Dombrovsky L.A., Dembele S., and Wen J.X., Shielding of Fire Radiation with the Use of Multi-Layered Mist Curtains: Preliminary Estimates, *Computational Thermal Sciences*, 2016, in press.
3. Dombrovsky L.A. and Lipiński W., Simple Methods for Identification of Radiative Properties of Highly-Porous Ceria Ceramics in the Range of Semi-Transparency, *Int. J. Numer. Methods Heat Fluid Flow*, 2016, in press.
4. Nenarokomov A.V., Dombrovsky L.A., Krainova I.V., Alifanov O.M., and Budnik S.A., Identification of Radiative Heat Transfer Parameters in Multilayer Thermal Insulation of a Spacecraft, *Int. J. Numer. Methods Heat Fluid Flow*, 2016, in press.
5. Lisitsyn A.V., Dombrovsky L.A., Mendeleyev V.Ya., Grigorenko A.V., Vlaskin M.S., and Zhuk A.Z., Near-Infrared Optical Properties of a Porous Alumina Ceramics Produced by Hydrothermal Oxidation of Aluminum, *Infrared Physics and Technology*, 2016, vol. 77, pp. 162-170.
6. Dombrovsky L.A., Fedorets A.A., and Medvedev D.N., The Use of Infrared Irradiation to Stabilize Levitating Clusters of Water Droplets, *Infrared Physics and Technology*, 2016, vol. 75, pp. 124-132.
7. Dombrovsky L.A., A New Method to Retrieve Spectral Absorption Coefficient of Highly-Scattering and Weakly-Absorbing Materials, *J. Quant. Spectr. Radiat. Transfer*, 2016, vol. 172, pp. 75-82.
8. Dombrovsky L.A., Dembele S., and Wen J.X., A Simplified Model for the Shielding of Fire Thermal Radiation by Water Mists, *Int. J. Heat Mass Transfer*, 2016, vol. 96, pp. 199-209.
9. Dombrovsky L.A., Reviznikov D.L., and Sposobin A.V., Radiative Heat Transfer from Supersonic Flow with Suspended Particles to a Blunt Body, *Int. J. Heat Mass Transfer*, 2016, vol. 93, pp. 853-861.
10. Reviznikov D.L., Sposobin A.V., and Dombrovsky L.A., Computational Analysis of Radiative Heat Transfer from Supersonic Flow with Suspended Polydisperse Particles to a Blunt Body: Effect of Collisions Between Particles, *Computational Thermal Sciences*, 2015, vol. 7, no. 4, pp. 313-325.
11. Fedorets A.A., Dombrovsky L.A., and Medvedev D.N., Effect of Infrared Irradiation on the Suppression of the Condensation Growth of Water Droplets in a Levitating Droplet Cluster, *JETP Letters*, 2015, v. 102, n. 7, pp. 452-454.
12. Dombrovsky L.A., Nenarokomova N.B., Tsiganov D.I., and Zeigarnik Yu.A., Modeling of Repeating Freezing of Biological Tissues and Analysis of Possible Microwave Monitoring of Volumetric Phase Changes, *Int. J. Heat Mass Transfer*, 2015, vol. 89, pp. 894-902.
13. Fedorets A.A., Dombrovsky L.A., and Smirnov A.M., The Use of Infrared Self-Emission Measurements to Retrieve Surface Temperature of Levitating Water Droplets, *Infrared Physics and Technology*, 2015, vol. 69, pp. 238-243.
14. Dombrovsky L.A., Timchenko V., Pathak C., Piazena H., Müller W., and Jackson M., Radiative Heating of Superficial Human Tissues with the Use of Water-Filtered Infrared-A Radiation: A Computational Modeling, *Int. J. Heat Mass Transfer*, 2015, vol. 85, pp. 311-320.
15. Dombrovsky L.A. and Timchenko V.M., Laser Induced Hyperthermia of Superficial Tumors: Computational Models for Radiative Transfer, Combined Heat Transfer, and Degradation of Biological Tissues, *Thermal Processes in Engineering*, 2015, vol. 7, n. 1, pp. 24-36 (in Russian).

16. Randrianalisoa J.H., Dombrovsky L.A., Lipiński W., and Timchenko V., Effects of Short-Pulsed Laser Radiation on Transient Heating of Superficial Human Tissues, *Int. J. Heat Mass Transfer*, 2014, vol. 78, pp. 488-497.
17. Dombrovsky L.A., Zeigarnik Yu.A., and Tsyganov D.I., Modeling of Repeating Freezing of Biological Tissues Considered as Two-Component Disperse Systems, *Thermal Processes in Engineering*, 2014, vol. 6, n. 9, pp. 403-409 (in Russian).
18. Dombrovsky L.A. and Reviznikov D.L., Radiative Heat Transfer in Supersonic Gas Flow with Suspended Particles to a Blunt Body: A Comparison of Different Models, *Thermal Processes in Engineering*, 2014, vol. 6, n. 7, pp. 294-300 (in Russian).
19. Gritsevich I.V., Dombrovsky L.A., and Nenarokomov A.V., Radiative Transfer in Vacuum Thermal Insulation of Space Vehicles, *Computational Thermal Sciences*, 2014, vol. 6, n. 2, pp. 103-111.
20. Hakoume D., Dombrovsky L.A., Delaunay D., and Rousseau B., Spectroscopic Diagnostics of Morphological Changes Arising in Thermal Processing of Polypropylene, *Applied Optics*, 2014, vol. 53, n. 12, pp. 2702-2710.
21. Ganesan K., Dombrovsky L.A., Oh T.-S., and Lipiński W., Determination of Optical Constants of Ceria by Combined Analytical and Experimental Approaches, *The Journal of Minerals, Metals & Materials Society (JOM) (special issue on "Materials and Processes for Solar Fuel Technology")*, 2013, vol. 65, n. 12, pp. 1694-1701.
22. Dombrovsky L.A., Randrianalisoa J.H., Lipiński W., and Timchenko V., Simplified Approaches to Radiative Transfer Simulations in Laser Induced Hyperthermia of Superficial Tumors, *Computational Thermal Sciences*, 2013, vol. 5, n. 6, pp. 521-530.
23. Hewakuruppu Y.L., Dombrovsky L.A., Chen C., Timchenko V., Jiang X., Baek S., and Taylor R.A., Plasmonic "Pump-Probe" Method to Study Semi-Transparent Nanofluids, *Applied Optics*, 2013, vol. 52, n. 24, pp. 6041-6050 (see also *The Virtual Journal for Biomedical Optics Express*, 2013, vol. 8, n. 9).
24. Hewakuruppu Y.L., Dombrovsky L.A., Timchenko V., Yeoh G.H., Jiang X.C., and Taylor R.A., Optimization of Metallic Nanoshell Suspensions for Radiation Experiments, *Int. J. Transport Phenomena*, 2013, vol. 13, n. 3, pp. 233-244.
25. Baillis D., Coquard R., Randrianalisoa J., Dombrovsky L., and Viskanta R., Thermal Radiation Properties of Highly Porous Cellular Foams, *Special Topics & Reviews in Porous Media – An International Journal*, 2013, vol. 4, no. 2, pp. 111-136.
26. Ganesan K., Dombrovsky L.A., and Lipiński W., Visible and Near-Infrared Optical Properties of Ceria Ceramics, *Infrared Physics and Technology*, 2013, vol. 57, pp. 101-109.
27. Gritsevich I.V., Dombrovsky L.A., and Nenarokomov A.V., Heat Transfer by Radiation in a Vacuum Thermal Insulation of Space Vehicles, *Thermal Processes in Engineering*, 2013, vol. 5, no.1, pp. 12-21 (in Russian).
28. Timchenko V. and Dombrovsky L., Laser Induced Hyperthermia of Superficial Tumors: A Transient Thermal Model for Indirect Heating Strategy, *Computational Thermal Sciences*, 2012, vol. 4, no. 6, pp. 457-475.
29. Dombrovsky L., Ganesan K., and Lipiński W., Combined Two-Flux Approximation and Monte Carlo Model for Identification of Radiative Properties of Highly Scattering Dispersed Materials, *Computational Thermal Sciences*, 2012, vol. 4, no. 4, pp. 365-378.
30. Dombrovsky L.A., The Use of Transport Approximation and Diffusion-Based Models in Radiative Transfer Calculations, *Computational Thermal Sciences*, 2012, vol. 4, no. 4, pp. 297-315.
31. Vinnikov V.V., Dombrovsky L.A., Reviznikov D.L., and Sposobin A.V., Thermal Radiation Modeling in Supersonic Gas Flow around a Blunt Body: Effect of Suspended Particles, *Thermal Processes in Engineering*, 2012, vol. 4, no. 7, pp. 312-318 (in Russian).

32. Dombrovsky L.A., Timchenko V., Jackson M., Indirect Heating Strategy of Laser Induced Hyperthermia: An Advanced Thermal Model, *Int. J. Heat Mass Transfer*, 2012, v. 55, n. 17-18, pp. 4688-4700.
33. Dombrovsky L.A., Isakaev E.Kh., Senchenko V.N., Chinnov V.F., and Shcherbakov V.V., Efficiency of Acceleration, Heating, and Melting of Particles in High-Enthalpy Plasma Jets, *High Temperature*, 2012, v. 50, n. 2, pp. 145-153.
34. Dombrovsky L.A., Rousseau B., Echegut P., Randrianalisoa J.H., and Baillis D., High Temperature Infrared Properties of YSZ Electrolyte Ceramics for SOFCs: Experimental Determination and Theoretical Modeling, *J. Amer. Ceramic Society*, 2011, v. 94, n. 12, pp. 4310-4316.
35. Dombrovsky L.A., Timchenko V., Jackson M., and Yeoh G.H., A Combined Transient Thermal Model for Laser Hyperthermia of Tumors with Embedded Gold Nanoshells, *Int. J. Heat Mass Transfer*, 2011, v. 54, n. 25-26, pp. 5459-5469.
36. Dombrovsky L.A., Baillis D., and Randrianalisoa J.H., Some Physical Models Used to Identify and Analyze Infrared Radiative Properties of Semi-Transparent Dispersed Materials, *J. of Spectroscopy and Dynamics*, 2011, n. 1, paper 7 (20 pp).
37. Dombrovsky L.A., Randrianalisoa J.H., Lipiński W., and Baillis D., Approximate Analytical Solution to Normal Emittance of Semi-Transparent Layer of an Absorbing, Scattering, and Refracting Medium, *J. Quant. Spectr. Radiat. Transfer*, 2011, v. 112, n. 12, pp. 1987-1994.
38. Dombrovsky L.A., Solovjov V.P., and Webb B.W., Attenuation of Solar Radiation by Water Mist and Sprays from the Ultraviolet to the Infrared Range, *J. Quant. Spectr. Radiat. Transfer*, 2011, v. 112, n. 7, pp. 1182-1190.
39. Dombrovsky L.A. and Lipiński W., A Combined P_1 and Monte Carlo Model for Multi-Dimensional Radiative Transfer Problems in Scattering Media, *Computational Thermal Sciences*, 2010, v. 2, n. 6, pp. 549-560.
40. Dombrovsky L.A. and Davydov M.V., A Computational Model for Thermal Radiation from the Zone of Melt-Water Interaction, *Computational Thermal Sciences*, 2010, v. 2, n. 6, pp. 535-547.
41. Dombrovsky L.A. and Davydov M.V., Numerical Simulation of Thermal Radiation from the Zone of Core Melt-Water Interaction, *Thermal Processes in Engineering*, 2010, v. 2, n. 6, pp. 262-266 (in Russian).
42. Dombrovsky L., Lallich S., Enguehard F., and Baillis D., An Effect of "Scattering by Absorption" Observed in Near-Infrared Properties of Nanoporous Silica, *J. Appl. Physics*, 2010, v. 107, n. 8, paper 083106.
43. Dombrovsky L.A., An Extension of the Large-Cell Radiation Model for the Case of Semi-Transparent Nonisothermal Particles, *ASME J. Heat Transfer*, 2010, v. 132, n. 2, paper 023502.
44. Dombrovsky L.A. and Zaichik L.I., An Effect of Turbulent Clustering on Scattering of Microwave Radiation by Small Particles in the Atmosphere, *J. Quant. Spectr. Radiat. Transfer*, 2010, v. 111, n. 1, pp. 234-242.
45. Dombrovsky L.A. and Zaichik L.I., An Effect of Clustering of Particles on Rayleigh Scattering of Radiation in a Turbulent Flow, *High Temperature*, 2009, v. 47, n. 4, pp. 589-596.
46. Zaichik L.I. and Dombrovsky L.A., Analysis of the Effect of Turbulence on Thermal Radiation Transfer in a Nonscattering Medium, *High Temperature*, 2009, v. 47, n. 3, pp. 367-374.
47. Dombrovsky L., Schunk L., Lipiński W., and Steinfeld A., An Ablation Model for the Thermal Decomposition of Porous Zinc Oxide Layer Heated by Concentrated Solar Radiation, *Int. J. Heat Mass Transfer*, 2009, v. 52, n. 11-12, pp. 2444-2452.
48. Dombrovsky L.A., Zalkind V.I., Zeigarnik Yu.A., Marinichev D.V., Nizovskii V.L., Oksman A.A., and Khodakov K.A., Atomization of Superheated Water: Results from Experimental Studies, *Thermal Engineering*, 2009, v. 56, n. 3, pp. 191-200.

49. Dombrovsky L.A., A Model for Solid Bubbles Formation in Melt-Coolant Interaction, *Int. J. Heat Mass Transfer*, 2009, v. 52, n. 5-6, pp. 1085-1093.
50. Dombrovsky L.A., Approximate Model for Break-Up of Solidifying Melt Particles Due to Thermal Stresses in Surface Crust Layer, *Int. J. Heat Mass Transfer*, 2009, v. 52, n. 3-4, pp. 582-587.
51. Dombrovsky L.A., Davydov M.V., and Kudinov P., Thermal Radiation Modeling in Numerical Simulation of Melt-Coolant Interaction, *Computational Thermal Sciences*, 2009, v. 1, n.1, pp. 1-35.
52. Dombrovsky L.A. and Dinh T.-N., The Effect of Thermal Radiation on the Solidification Dynamics of Metal Oxide Melt Droplets, *Nuclear Eng. Design*, 2008, v. 238, n. 6, pp. 1421-1429.
53. Dombrovsky L.A., Mineev V.A., Vlasov A.S., Zaichik L.I., Zeigarnik Yu.A., Nedorezov A.B., and Sidorov A.S., In-Vessel Corium Catcher of a Nuclear Reactor, *Nuclear Eng. Design*, 2007, v. 237, n. 15-17, pp. 1745-1751.
54. Dombrovsky L.A., Tagne H.K., Baillis D., and Gremillard L., Near-Infrared Radiative Properties of Porous Zirconia Ceramics, *Infrared Physics and Technology*, 2007, v. 51, n. 1, pp. 44-53.
55. Dombrovsky L.A., An Estimate of Stability of Large Solidifying Droplets in Fuel-Coolant Interaction, *Int. J. Heat Mass Transfer*, 2007, v. 50, n. 19-20, pp. 3832-3836.
56. Dombrovsky L.A., Large-Cell Model of Radiation Heat Transfer in Multiphase Flows Typical for Fuel-Coolant Interaction, *Int. J. Heat Mass Transfer*, 2007, v. 50, n. 17-18, pp. 3401-3410.
57. Dombrovsky L.A. and Lipinski W., Transient Temperature and Thermal Stress Profiles in Semi-Transparent Particles under High-Flux Irradiation, *Int. J. Heat Mass Transfer*, 2007, v. 50, n. 11-12, pp. 2117-2123.
58. Dombrovsky L., Randrianalisoa J., and Baillis D., Infrared Radiative Properties of Polymer Coatings Containing Hollow Microspheres, *Int. J. Heat Mass Transfer*, 2007, v. 50, n. 7-8, pp. 1516-1527.
59. Dombrovsky L.A., Lipinski W., and Steinfeld A., A Diffusion-Based Approximate Model for Radiation Heat Transfer in a Solar Thermochemical Reactor, *J. Quant. Spectr. Radiat. Transfer*, 2007, v. 103, n. 3, pp. 601-610.
60. Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Mukhtarov E.S., and Sidorov A.S., Calculations of Heat Flowrates to the VVER-440 Reactor Vessel during Interaction of Corium Melt with the Reactor Vessel, *Thermal Engineering*, 2006, v. 53, n. 4, pp. 302-306.
61. Dombrovsky L., Randrianalisoa J., and Baillis D., Modified Two-Flux Approximation for Identification of Radiative Properties of Absorbing and Scattering Media from Directional-Hemispherical Measurements, *J. Optical Soc. Amer. A*, 2006, v. 23, n. 1, pp. 91-98.
62. Dombrovsky L., Randrianalisoa J., Baillis D., and Pilon L., Use of Mie Theory to Analyze Experimental Data to Identify Infrared Properties of Fused Quartz Containing Bubbles, *Applied Optics*, 2005, v. 44, n. 33, pp. 7021-7031.
63. Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Mukhtarov E.S., and Sidorov A.S., Development of the Corium Bath during the Melting of a VVER-440 Reactor Core, *Thermal Engineering*, 2005, v. 52, n. 5, pp. 396-402.
64. Dombrovsky L.A., Modeling of Thermal Radiation of Polymer Coating Containing Hollow Microspheres, *High Temperature*, 2005, v. 43, n. 2, pp. 247-258.
65. Dombrovsky L.A., Absorption of Thermal Radiation in Large Semi-Transparent Particles at Arbitrary Illumination of the Polydisperse System, *Int. J. Heat Mass Transfer*, 2004, v. 47, n. 25, pp. 5511-5522.
66. Dombrovsky L.A., Nonuniform Absorption of Thermal Radiation in Semitransparent Spherical Particles under Conditions of Arbitrary Illumination of a Disperse System, *High Temperature*, 2004, v. 42, n. 6, pp. 975-986.

67. Dombrovsky L.A., Approximate Models of Radiation Scattering in Hollow-Microsphere Ceramics, *High Temperature*, 2004, v. 42, n. 5, pp.776-784.
68. Dombrovsky L.A. and Sazhin S.S., Absorption of External Thermal Radiation in Asymmetrically Illuminated Droplets, *J. Quant. Spectr. Radiat. Transfer*, 2004, v. 87, n. 2, pp. 119-135.
69. Dombrovsky L.A., Sazhin S.S., and M.R. Heikal, Computational Model of Spectral Radiation Characteristics of Diesel Fuel Droplets, *Heat Transfer Research*, 2004, v. 35, n. 1-2, pp. 52-58.
70. Dombrovsky L.A., The Propagation of Infrared Radiation in a Semitransparent Liquid Containing Gas Bubbles, *High Temperature*, 2004, v. 42, n. 1, pp. 133-139.
71. Dombrovsky L.A., Radiation Transfer through a Vapour Gap under Conditions of Film Boiling of Liquid, *High Temperature*, 2003, v. 41, n. 6, pp. 819-824.
72. Dombrovsky L.A. and Sazhin S.S., Absorption of Thermal Radiation in a Semi-Transparent Droplet: a Simplified Model, *Int. J. Heat Fluid Flow*, 2003, v. 24, n. 6, pp. 919-927.
73. Dombrovsky L.A. and Zaichik L.I., Allowance for the Dynamics of a Vapor Bubble in Calculation of Thermal Interaction of a Hot Spherical Particle with Surrounding Water, *Heat Transfer Research*, 2003, v. 34, n. 7-8, pp. 460-470.
74. Dombrovsky L.A. and Sazhin S.S., A Simplified Nonisothermal Model for Droplet Heating and Evaporation, *Int. Comm. Heat Mass Transfer*, 2003, v. 30, n. 6, pp. 787-796.
75. Dombrovsky L.A. and Sazhin S.S., A Parabolic Temperature Profile Model for Heating of Droplets, *ASME J. Heat Transfer*, 2003, v. 125, n. 3, pp. 535-537.
76. Dombrovsky L.A. and Ignatiev M.B., An Estimate of the Temperature of Semitransparent Oxide Particles in Thermal Spraying, *Heat Transfer Eng.*, 2003, v. 24, n. 2, pp. 60-68.
77. Dombrovsky L.A., Sazhin S.S., Mikhalovsky S.V., Wood R., and Heikal M.R., Spectral Properties of Diesel Fuel Droplets, *Fuel*, 2003, v. 82, n. 1, pp. 15-22.
78. Dombrovsky L.A., Spectral Model of Absorption and Scattering of Thermal Radiation by Droplets of Diesel Fuel, *High Temperature*, 2002, v. 40, n. 2, pp. 242-248.
79. Dombrovsky L.A., A Modified Differential Approximation for Thermal Radiation of Semitransparent Nonisothermal Particles: Application to Optical Diagnostics of Plasma Spraying, *J. Quant. Spectr. Radiat. Transfer*, 2002, v. 73, n. 2-5, pp. 433-441.
80. Mineev V.N., Akopov F.A., Virnik A.M., Gutkin L.D., Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Sidorov A.S., Sofronov I.D., and Shagaliev R.M., Schemes of an In-Vessel Corium Catcher, *Thermal Engineering*, 2002, n. 2, pp. 131-136.
81. Alipchenkov V.M., Dombrovsky L.A., and Zaichik L.I., The Growth and Stability of Vapor Film on the Surface of a Hot Spherical Particle, *High Temperature*, 2002, v. 40, n. 1, pp. 100-104.
82. Akopov F.A., Vlasov A.S., Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Mineev V.N., and Traktuev O.M., Some Problems on Thermal State of the External Corium Catcher and on Selecting its Optimum Structure, *J. Eng. Phys. Thermophys.*, 2002, v. 75, n. 1, pp. 1-8.
83. Vasilevsky E.B., Dombrovsky L.A., Mikhatulin D.S., and Polezhaev Yu.V., Heat Transfer in the Neighborhood of the Stagnation Point under Conditions of Supersonic Heterogeneous Slip Flow past Bodies, *High Temperature*, 2001, v. 39, n. 6, pp. 860-873.
84. Dombrovsky L.A., Sazhin S.S., Sazhina E.M., Feng G., Heikal M.R., Bardsley M.E.A., and Mikhalovsky S.V., Heating and Evaporation of Semi-Transparent Diesel Fuel Droplets in the Presence of Thermal Radiation, *Fuel*, 2001, v. 80, n. 11, pp. 1535-1544.
85. Dombrovsky L.A. and Zaichik L.I., Conditions of Thermal Explosion of a Radiating Gas with Polydisperse Liquid Fuel, *High Temperature*, 2001, v. 39, n. 4, pp. 604-611.
86. Dombrovsky L.A. and Ignatiev M.B., Inclusion of Nonisothermality of Particles in the Calculations and Diagnostics of Two-Phase Jets Used for Spray Deposition of Coatings, *High Temperature*, 2001, v. 39, n. 1, pp. 134-141.
87. Dombrovsky L.A., Calculation of Radiation Heat Transfer in a Volume above the Surface of a Corium Pool, *Thermal Engineering*, 2001, v. 48, n. 1, pp. 42-49.

88. Dombrovsky L.A. and Zaichik L.I., The Dynamics of Vapor Void under Conditions of Thermal Interaction of a Hot Spherical Particle with Ambient Water, *High Temperature*, 2000, v. 38, n. 6, pp. 938-947.
89. Mineev V.N., Akopov F.A., Virnik A.M., Gutkin L.D., Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Beshta S.V., Granovsky V.S., Kovtunova S.V., and Khabensky V.B., Use of Refractory Coatings in Systems for Melt Containment in a Serious Accident at a Nuclear Power Plant with a VVÉR Reactor, *Atomic Energy*, 2000, v. 89, n. 5, pp. 868-873.
90. Dombrovsky L.A., Approximate Calculation of Thermal Radiation of Nonisothermal Semi-transparent Particles, *High Temperature*, 2000, v. 38, n. 4, pp. 663-665.
91. Dombrovsky L.A., Radiation Heat Transfer from a Hot Particle to Ambient Water through the Vapor Layer, *Int. J. Heat Mass Transfer*, 2000, v. 43, n. 13, pp. 2405-2414.
92. Dombrovsky L.A., Thermal Radiation from Nonisothermal Spherical Particle of a Semi-transparent material, *Int. J. Heat Mass Transfer*, 2000, v. 43, n. 9, pp. 1661-1672.
93. Dombrovsky L.A., Radiation Heat Transfer from a Spherical Particle via Vapor Shell to the Surrounding Liquid, *High Temperature*, 1999, v. 37, n. 6, pp. 912-919.
94. Dombrovsky L.A., Zaichik L.I., and Zeigarnik Yu.A., A Model of Effective Heat Conduction for Calculating Free-Convection Heat Exchange at Large Rayleigh Numbers, *Doklady Physics*, 1999, v. 366, n. 4, pp. 358-361.
95. Dombrovsky L.A., Thermal Radiation of a Spherical Particle of Semitransparent Material, *High Temperature*, 1999, v. 37, n. 2, pp. 260-269.
96. Dombrovsky L.A., Infrared and Microwave Radiative Properties of Metal Coated Microfibers, *Revue Générale de Thermique*, 1998, v. 37, n. 11, pp. 925-933.
97. Dombrovsky L.A., Zaichik L.I., and Zeigarnik Yu.A., Numerical Simulation of the Stratified-Corium Temperature Field and Melting of the Reactor Vessel for a Severe Accident in a Nuclear Power Station, *Thermal Engineering*, 1998, v. 45, n. 9, pp. 755-765.
98. Dombrovsky L.A., Evaluation of the Error of the P1 Approximation in Calculations of Thermal Radiation Transfer in Optically Inhomogeneous Media, *High Temperature*, 1997, v. 35, n. 4, pp. 676-679.
99. Dombrovsky L.A. and Mironov V.P., Application of the Mie Theory to the Microwave Characteristics of Metal Powder in a Dielectric Matrix, *J. Commun. Tech. Electronics*, 1997, v. 42, n. 5, pp. 492-496.
100. Dombrovsky L.A., Radiative Properties of Metalized-Fiber Thermal Insulation, *High Temperature*, 1997, v. 35, n. 2, pp. 275-282.
101. Dombrovsky L.A., Quartz-Fiber Thermal Insulation: Infrared Radiative Properties and Calculation of Radiative-Conductive Heat Transfer, *ASME J. Heat Transfer*, 1996, v. 118, n. 2, pp. 408-414.
102. Dombrovsky L.A., A Theoretical Investigation of Heat Transfer by Radiation under Conditions of Two-Phase Flow in a Supersonic Nozzle, *High Temperature*, 1996, v. 34, n. 2, pp. 255-262.
103. Dombrovsky L.A., Approximate Methods for Calculating Radiation Heat Transfer in Dispersed Systems, *Thermal Engineering*, 1996, v. 43, n. 3, pp. 235-243.
104. Dombrovsky L.A., Analysis of Infrared Radiation Characteristics of Isotropic Fiberglass Materials in the Semitransparency Region, *High Temperature*, 1996, v. 34, n. 1, pp. 156-158.
105. Dombrovsky L.A., Calculation of Infrared Radiative Properties of Carbon Fibers and Fibrous Materials, *High Temperature*, 1994, v. 32, n. 6, pp. 895-898.
106. Dombrovsky L.A., Quartz-Fiber Thermal Insulation: Calculation of Spectral Radiation Characteristics in the Infrared Region, *High Temperature*, 1994, v. 32, n. 2, pp. 209-215.
107. Dombrovsky L.A., Yukina E.P., Kolpakov A.V., and Ivanov V.A., Procedure for Calculating the Thermal Destruction of Phenolic Carbon under the Effect of Intensive Infrared Radiation, *High Temperature*, 1993, v. 31, n. 4, pp. 566-572.

108. Dombrovsky L.A. and Raizer V.Y., Microwave Model of a Two-Phase Medium at the Ocean Surface, *Izvestiya, Atmospheric and Oceanic Physics*, 1992, v. 28, n. 8, pp. 650-656.
109. Dombrovsky L.A., Kolpakov A.V., and Surzhikov S.T., Transport Approximation in Calculating the Directed-Radiation Transfer in an Anisotropically Scattering Erosional Flare, *High Temperature*, 1991, v. 29, n. 6, pp. 954-960.
110. Dombrovsky L.A., Approximate Expressions for Calculating of Main Radiative Properties of Spherical Particles in the Mie Scattering Region, *High Temperature*, 1990, v. 28, n. 6, pp. 1242-1245 (in Russian).
111. Kolpakov A.V., Dombrovsky L.A., and Surzhikov S.T., Transfer of Directed Radiation in an Absorbing and Anisotropically Scattering Medium, *High Temperature*, 1990, v. 28, n. 5, pp. 753-757.
112. Dombrovsky L.A., Yukina E.P., and Ivanov A.V., Calculation of Electric Field and Current in a MHD-Channel with the Use of a Variational Formulation of a Two-dimensional Boundary-Value Problem, *High Temperature*, 1990, v. 28, n. 1, pp. 115-122.
113. Dombrovsky L.A., Barkova L.G., and Nagel Yu.A., Electric Field Calculation for Single Body of Complex Shape, *Techn. Electrodynamics*, 1987, n. 5, pp. 19-24.
114. Dombrovsky L.A. and Barkova L.G., Solving the Two-Dimensional Problem of Thermal-Radiation Transfer in an Anisotropically Scattering Medium Using the Finite Element Method, *High Temperature*, 1986, v. 24, n. 4, pp. 585-592.
115. Dombrovsky L.A., Inertial Deposition of Particles from Gas-Disperse Flow in the Vicinity of Stagnation Point, *High Temperature*, 1986, v. 24, n. 3, pp. 429-434.
116. Dombrovsky L.A. and Yukina E.P., Critical Conditions for Inertial Particle Deposition from a Gas Flow near a Retardation Point. Effect of Blowing, *High Temperature*, 1984, v. 22, n. 4, pp. 728-732 (in Russian).
117. Dombrovsky L.A., Radiative-Convective Heat Transfer on a Plate, *High Temperature*, 1984, v. 22, n. 2, pp. 341-345 (in Russian).
118. Dombrovsky L.A. and Yukina E.P., Critical Conditions for Inertial Particle Deposition from a Gas Flow near the Stagnation Point, *High Temperature*, 1983, v. 21, n. 3, pp. 402-408.
119. Dombrovsky L.A., Radiative-Convective Heat Transfer in Optically Thin Boundary Layer on a Plate, *High Temperature*, 1982, v. 20, n. 5, pp. 990-992 (in Russian).
120. Dombrovsky L.A., Possibility of Determining the Disperse Composition of a Two-Phase Flow from the Small-Angle Light Scattering, *High Temperature*, 1982, v. 20, n. 3, pp. 472-479.
121. Dombrovsky L.A., Absorption and Scattering of Microwave Radiation by Spherical Water Shells, *Izvestiya, Atmospheric and Oceanic Physics*, 1981, v. 17, n. 3, pp. 324-329.
122. Dombrovsky L.A., Radiative-Convective Heat Transfer in Optically Thick Boundary Layer on a Plate, *High Temperature*, 1981, v. 19, n. 1, pp. 100-106.
123. Dombrovsky L.A. and Zhiravov V.M., Method of Interpreting Particles Velocity Optical Measurements in Two-Phase Flows, *High Temperature*, 1980, v. 18, n. 3, pp. 475-481.
124. Dombrovsky L.A., Radiative-Convective Heat Transfer in an Optically Thin Boundary Layer near the Leading Edge of a Flat Plate. Effects of Blowing, *High Temperature*, 1979, v. 17, n. 6, pp. 1056-1059.
125. Dombrovsky L.A., Calculation of Thermal Radioemission of Foam on the Sea Surface, *Izvestiya, Atmospheric and Oceanic Physics*, 1979, v. 15, n. 3, pp. 193-198.
126. Dombrovsky L.A., Heat Transfer when a Non-Heat-Conducting Radiating Medium Flows Around a Flat Plate, *High Temperature*, 1978, v. 16, n. 5, pp. 859-864.
127. Dombrovsky L.A., Radiative-Convective Heat Transfer in Optically Thin Boundary Layer near the Leading Edge of a Flat Plate, *High Temperature*, 1977, v. 15, n. 5, pp. 885-891.
128. Dombrovsky L.A., Radiation of Isothermal Polydisperse Layer, *High Temperature*, 1976, v. 14, n. 4, pp. 733-737.

129. Dombrovsky L.A., Radiation of a Plane-Parallel Layer of Hollow Spherical Aluminum Oxide Particles, *High Temperature*, 1974, v. 12, n. 6, pp. 1316-1318 (in Russian).
130. Dombrovsky L.A., Radiative Equilibrium in a Plane-Parallel Layer of Absorbing and Scattering Medium, *Fluid Dynamics*, 1974, v. 9, n. 4, pp. 663-666.
131. Dombrovsky L.A., Scattering and Absorption of Light by Hollow Spherical Particles, *Izvestiya, Atmospheric and Oceanic Physics*, 1974, v. 10, n. 7, pp. 720-727 (in Russian).
132. Dombrovsky L.A. and Ivenskikh N.N., Radiation of Homogeneous Plane-Parallel Layer of Spherical Particles, *High Temperature*, 1973, v. 11, n. 4, pp. 818-822 (in Russian).
133. Dombrovsky L.A., Calculation of Radiation Heat Transfer in a Plane-Parallel Layer of Absorbing and Scattering Medium, *Fluid Dynamics*, 1972, v.7, n. 4, pp. 691-695.

Other articles

1. Dombrovsky L.A., Calculation of Radiative Properties of Highly Porous Fibrous Materials. In «*Heat Transfer in Modern Engineering*», Moscow, IVT RAN, 1998, pp. 279-291 (in Russian).
2. Dombrovsky L.A., Zaichik L.I., and Zeigarnik Yu.A., Numerical Simulation of the Pressure Vessel Thermal State during Nuclear Reactor Severe Accident Accompanied by Core Melting. In «*Heat Transfer in Modern Engineering*», Moscow, IVT RAN, 1998, pp. 75-82 (in Russian).
3. Dombrovsky L.A., Kolpakov A.V., and Yukina E.P., Calculation of Radiative-Conductive Heat Transfer in Thermal Processing of Synthetic Fibers. In: "*Applied Problems of Aeromechanics and Space Physics*", Moscow, 1991, pp. 58-62 (in Russian).
4. Kolpakov A.V. and Dombrovsky L.A., Approximate Method of Two-Dimensional Transfer Calculations for Collimated Radiation in Anisotropically Scattering Medium. In: "*Problems of Continuous Medium Mechanics in Geospace Investigations*", Moscow, 1989, pp. 22-26 (in Russian).
5. Dombrovsky L.A., On the Mie Theory Application for Interpretation of Optical Measurements in Disperse Systems. In: "*Physical Methods in Investigations of Nonhomogeneous Semitransparent Media*", Moscow, 1987, pp. 37-40 (in Russian).
6. Barkova L.G. and Dombrovsky L.A., Solving the Two-Dimensional Radiation-Transfer Problem in an Anisotropically Scattering Medium Using the Finite Element Method. In: "*Problems of Hydrodynamics, Aerophysics and Applied Mechanics*", Moscow, 1985, pp. 132-136 (in Russian).

Books

1. Dombrovsky L.A. and Baillis D., *Thermal Radiation in Disperse Systems: An Engineering Approach*, Begell House Inc. Publ., New York and Redding (CT), USA, 2010. <http://www.begellhouse.com/books/6d17e856430c0b8d.html>
2. A continually updated online monograph "[Topics in Particle and Dispersion Science](#)" (edited by Mirosław Jonasz).
3. Dombrovsky L.A., Thermal Radiation Modeling in Multiphase Flows Typical of Melt-Coolant Interaction, Chapter 4 in the book "*Advances in Multiphase Flow and Heat Transfer*", edited by L. Cheng and D. Mewes, Bentham Sci. Publ., 2009, vol. 1, pp. 114-157. <http://www.bentham.org/ebooks/9781608050802/contents.htm>
4. Dombrovsky L.A., Radiative Properties of Particles and Fibers. *ThermalHUB publication*. <http://thermalhub.org/contributors/1050>. 2008. (Draft version of Chapter 2 of the book manuscript by L.A. Dombrovsky and D. Baillis "*Thermal Radiation in Disperse systems: An Engineering Approach*").
5. Dombrovsky L.A., Radiative Properties of Particles in Calculations of the Radiation Heat Transfer in Disperse Systems, in "*Mechanical Engineering. Encyclopedia. Vol. 1-2. Theoret-*

ical Mechanics, Thermodynamics. Heat Transfer”, Mashinostroeniye Publ. House, Moscow, 1999, pp. 504-509 (in Russian).

6. Dombrovsky L.A., *Radiation Heat Transfer in Disperse Systems*, Begell House Inc. Publ., New York, Wallingford (UK), 1996.

Preprints

1. Mineev V.N., Akopov F.A., Borovkova E.B., Dombrovsky L.A., Zeigarnik Yu.A., Onufriev S.V., Traktuev O.M., and Funtikov A.I., *The Choice of Materials and Heat Removal Analysis for Designs of the Core Melt Localization in Nuclear Reactors of VVER Type*, Preprint 2-493, Joint Institute for High Temperatures of the Russian Academy of Science, 2007 (in Russian).
2. Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Sidorov A.S., and Derevich I.V., *Thermophysical Processes Involved in the VVER Core Destruction and Corium Interaction with Reactor Vessel*. Preprint 2-431, Institute for High Temperatures of the Russian Academy of Science, 1999 (in Russian).

Conference papers

1. Dombrovsky L.A., Optics of Water Droplets: From our Vision to Wide-Range Spectral Properties, *The 9th Int. Conf. Mater. Techn. Model. (MMT-2016)*, July 25-29, Ariel, Israel, invited lecture.
2. Fedorets A.A., Dombrovsky L.A., A Modified Method to Generate Stable Droplet Clusters Levitating Above the Locally Heated Water Surface, *The 9th Int. Conf. Mater. Techn. Model. (MMT-2016)*, July 25-29, Ariel, Israel.
3. Dombrovsky L.A. and Reviznikov D.L., An Estimate of a Solar Probe Protection from Intense Radiation with the Use of Particles Embedded in an Ablating Material, *Proc. 8th Int. Symp. Radiat. Transfer (RAD-16)*, June 6-10, 2016, Cappadocia, Turkey, paper RAD-16-SE1.
4. Krainova I.V., Dombrovsky L.A., Nenarokomov A.V., Budnik S.A., and Alifanov O.M., A Generalized Analytical Model for Radiative Transfer in Vacuum Thermal Insulation of Space Vehicles, *Proc. 8th Int. Symp. Radiat. Transfer (RAD-16)*, June 6-10, 2016, Cappadocia, Turkey, paper RAD-16-NH1.
5. Dombrovsky L.A., Dembele S., and Wen J.X., Shielding of Fire Radiation with the Use of Multi-Layered Mist Curtains: Preliminary Estimates, *Proc. 8th Int. Symp. Radiat. Transfer (RAD-16)*, June 6-10, 2016, Cappadocia, Turkey, paper RAD-16-CS5.
6. Timchenko V., Dombrovsky L., and Jackson M., A Method to Determine the Increase in Blood Perfusion in Human Dermis during Infrared Hyperthermia, *Int. Congress of Hypothermic Oncology (ICHO-2016)*, New Orleans, April 11-15, 2016, LA, USA, paper ICHO2016-0090.
7. Fedorets A.A., Dombrovsky L.A., Medvedev D.N., and Smirnov A.N., Suppression of Microdroplet Growth in a Levitating Droplet Cluster with the Use of Infrared Irradiation, *Proc. XXXII Siberian Thermophysical Workshop*, November 19-20, 2015, Novosibirsk, Russia (in Russian).
8. Fedorets A.A. and Dombrovsky L.A., Levitating Clusters of Droplets above the Heated Water Surface: From Passive Observation to Managing the Process, *Proc. Int. Workshop “Droplets 2015”*, October 6-8, 2015, Univ. Twente, Enschede, The Netherlands, paper 1470 (see also video at <https://www.youtube.com/watch?v=CzITZ2RmDTI>).
9. Dombrovsky L.A. and Lipiński W., On Retrieval of Spectral Radiative Properties of Highly-Porous Ceria Ceramics in the Range of Semi-Transparency, *Proc. Eurotherm Seminar 109 “Numerical Heat Transfer 2015 (NHT-2015)”*, September 27-30, 2015, Gliwice–Warsaw, Poland, pp. 149-157.

10. Reviznikov D.L., Sposobin A.V., and Dombrovsky L.A., Computational Analysis of Radiative Heat Transfer from Supersonic Flow with Suspended Polydisperse Particles to a Blunt Body, *Proc. ICHMT Int. Symp. Adv. Comput. Heat Transfer (CHT-15)*, May 25-29, 2015, Rutgers Univ., Piscataway, USA, paper CHT15-020.
11. Dombrovsky L.A., A Novel Method to Retrieve Spectral Absorption Coefficient of Highly Scattering and Weakly Absorbing Materials, *Proc. Eurotherm Seminar 105 "Computational Thermal Radiation in Participating Media V"*, April 1-3, 2015, Albi, France.
12. Dombrovsky L.A., Simple Physical Models for Engineering Estimates of Radiative Transfer in Particle Clouds and Dispersed Materials, *Proc. OSA Light, Energy and the Environment Congress, Optics for Solar Energy (SOLAR)*, December 2-5, 2014, Canberra, Australia, invited lecture.
13. Dombrovsky L.A. and Reviznikov D.L., A Comparison of Radiative Heat Transfer Models for Supersonic Flow around a Blunt Body, *Proc. 6th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 27-31, 2014 (in Russian).
14. Dombrovsky L.A., Zeigarnik Yu.A., and Tsyganov D.I., Heat Transfer Models for Cyclic Freezing of Two-Component Dispersed Systems, *Proc. 6th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 27-31, 2014 (in Russian).
15. Dombrovsky L.A. and Timchenko V.M., Laser-Induced Hyperthermia of Superficial Tumors: Heat Transfer Models for Continuous Wave and Pulsed Irradiation with Account for Embedded Gold Nanoparticles, *Proc. 6th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 27-31, 2014 (Invited lecture, in Russian).
16. Nenarokomov A.V., Dombrovsky L.A., Gritsevich I.V., Alifanov O.M., and Budnik S.A., Heat Transfer in Vacuum Thermal Insulation of Space Vehicles: An Experimental Estimate vs Theoretical Prediction, *Proc. 15th Int. Heat Transfer Conf. (IHTC-15)*, August 10-15, 2014, Kyoto, Japan, paper 9822.
17. Randrianalisoa J.H., Dombrovsky L.A., Lipiński W., and Timchenko V., Absorption of Short-Pulsed Laser Radiation in Superficial Human Tissues: Transient vs Quasi-Steady Radiative Transfer, *Proc. 15th Int. Heat Transfer Conf. (IHTC-15)*, August 10-15, 2014, Kyoto, Japan, paper 8268.
18. Dombrovsky L.A. and Reviznikov D.L., Radiative Heat Transfer Modeling in Supersonic Gas Flow with Suspended Particles to a Blunt Body, *Proc. 15th Int. Heat Transfer Conf. (IHTC-15)*, August 10-15, 2014, Kyoto, Japan, paper 8214.
19. Hakoume D., Dombrovsky L.A., Delaunay D., and Rousseau B., Effect of Processing Temperature on Radiative Properties of Polypropylene, *Proc. 15th Int. Heat Transfer Conf. (IHTC-15)*, August 10-15, 2014, Kyoto, Japan, paper 8207.
20. Hakoume D., Dombrovsky L.A., Delaunay D., and Rousseau B., An Experimental Determination of Near-Infrared Properties of Polypropylene and Composite Material Containing Polypropylene and Glass Fibers, *Proc. 16th European Conf. Composite Materials (ECCM-16)*, June 22-26, 2014, Seville, Spain.
21. Nenarokomov A.V., Dombrovsky L.A., Krainova I.V., Alifanov O.M., and Budnik S.A., Identification of Radiative Heat Transfer Parameters in Multilayer Thermal Insulation of a Spacecraft, *Proc. 8th Int. Conf. on Inverse Problems in Engineering*, May 12-15, Cracow, Poland, paper 145-190-1-RV.
22. Gritsevich I.V., Dombrovsky L.A., and Nenarokomov A.V., Radiative Transfer in Vacuum Thermal Insulation of Space Vehicles, *Proc. 7th Int. Symp. Radiat. Transfer (RAD-13)*, June 2-8, 2013, Kuşadası, Turkey.
23. Dombrovsky L.A., Randrianalisoa J.H., Lipiński W., and Timchenko V., Simplified Approaches to Radiative Transfer Simulations in Laser Induced Hyperthermia of Superficial Tumors, *Proc. 7th Int. Symp. Radiat. Transfer (RAD-13)*, June 2-8, 2013, Kuşadası, Turkey.

24. Dombrovsky L.A. and Reviznikov D.L., Modeling of Radiation Heat Transfer in Supersonic Gas Flows with Suspended Particles, *Proc. 18th Int. Conf. Comput. Mechanics Applications*, May 22-31, 2013, Alushta, Ukraine (in Russian).
25. Dombrovsky L.A., The Use of Transport Approximation and Simplest Differential Models in Radiative Transfer Calculations, *Proc. 19th School-Seminar "Problems of Heat and Mass Transfer and Gas Dynamics in Power Plants"*, May 20-24, 2013, Orekhovo-Zuevo, Russia (invited lecture, in Russian).
26. Hewakuruppu Y.L., Dombrovsky L.A., Timchenko V., Yeoh G.H., Jiang X.C, Taylor R.A., Optimization of Metallic Nanoshell Suspensions for Radiation Experiments, *Proc. 23rd Int. Symp. Transport Phen.*, Nov. 19-22, 2012, Auckland, New Zealand.
27. Quist A., Timchenko V., Dombrovsky L.A., A Simplified Model of Laser Hyperthermia of Superficial Tumors Including Variation of Human Tissue Optical Properties with Thermal Damage, *Proc. Int. Mech. Eng. Cong. & Expos. (IMECE-2012)*, Nov. 9-15, 2012, Houston, Texas, USA, paper 87034.
28. Dombrovsky L., Ganesan K., and Lipiński W., Combined Two-Flux Approximation and Monte Carlo Model for Identification of Radiative Properties of Highly Scattering Dispersed Materials, *Proc. Int. Symp. Adv. Comput. Heat Transfer (CHT-12)*, July 1–6, 2012, Bath, UK, paper CHT12-RD04.
29. Timchenko V. and Dombrovsky L. Laser Induced Hyperthermia of Superficial Tumors: A Transient Thermal Model for Indirect Heating Strategy, *Proc. Int. Symp. Adv. Comput. Heat Transfer (CHT-12)*, July 1–6, 2012, Bath, UK, keynote lecture CHT12-VT.
30. Dombrovsky L.A., The Use of Transport Approximation and Diffusion-Based Models in Radiative Transfer Calculations, *Proc. Int. Symp. Adv. Comput. Heat Transfer (CHT-12)*, July 1–6, 2012, Bath, UK, keynote lecture CHT12-LAD.
31. Ganesan K., Dombrovsky L., and Lipiński W., A Novel Methodology to Determine Spectral Radiative Properties of Ceria Ceramics, *Proc. Eurotherm Seminar No. 95 "Computational Thermal Radiation in Participating Media IV"*, April 18–20, 2012, Nancy, France.
32. Vinnikov V.V., Dombrovsky L.A., Reviznikov D.L., and Sposobin A.V., A Combined Method for Radiative Heat Transfer Modeling in Supersonic Heterogeneous Flows Past Obstacles, *Proc. Int. Sci. School "Problems of Gas Dynamics and Heat Transfer in Power Technologies"*, Sept. 5-11, Moscow, MPE Publ. House, 2011, pp. 99-101 (in Russian).
33. Baillis D., Coquard R., Dombrovsky L.A., Viskanta R., Thermal Radiation Properties of Dispersed Media, *Proc. 7th Int. Conf. Comput. Heat Mass Transfer (ICCHMT-2011)*, July 18-22, 2011, Istanbul, Turkey.
34. Dombrovsky L.A. and Baillis D., A Simple Physical Approach to Model Spectral Radiative Properties of Semi-Transparent Dispersed Materials, *Proc. ASME/JSME 8th Thermal Engineering Conf. (AJTEC-2011)*, March 13-17, 2011, Honolulu, Hawaii, USA, paper 44011.
35. Dombrovsky L.A., Senchenko V.N., Chinnov V.F., Shutov N.V., and Shcherbakov V.V., Investigation of Temperature and Velocity of Particles in Plasma Spraying by Using CCD Camera, in *"Book of Abstracts of the XXXVIII Int. Conf. on Plasma Physics and Controlled Fusion"*, Febr. 14-18, 2011, Zvenigorod, Moscow region, Russia, p. 318 (in Russian).
36. Vinnikov V.V., Dombrovsky L.A., Reviznikov D.L., and Sposobin A.V., Radiation Heat Transfer Modeling in Numerical Simulation of a Two-Phase Flow Past a Blunt Body, *Proc. 5th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 24-29, 2010, v. 6, pp. 198-201 (in Russian).
37. Dombrovsky L.A. and Davydov M.V., Numerical Modeling of Thermal Radiation from the Zone of the Core Melt – Water Interaction, *Proc. 5th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 24-29, 2010, v. 6, pp. 209-212 (in Russian).
38. Dombrovsky L. and Lipiński W., A Combined P₁ and Monte Carlo Model for Radiative Transfer in Multi-Dimensional Anisotropically Scattering Media, *Proc. 14th Int. Heat Transfer Conf. (IHTC-14)*, August 8-13, 2010, Washington DC, USA, paper 22194.

39. Dombrovsky L.A. and Davydov M.V., Thermal Radiation from the Zone of Melt-Water Interaction: Computational Model and Some Numerical Results, *Proc. 14th Int. Heat Transfer Conf. (IHTC-14)*, August 8-13, 2010, Washington DC, USA, paper 22157.
40. Dombrovsky L.A., Solovjov V.P., and Webb B.W., Attenuation of Solar Radiation by Water Mist and Sprays from the Ultraviolet to the Infrared Range, *Proc. 6th Int. Symp. Radiat. Transfer (RAD-10)*, June 13-19, 2010, Antalya, Turkey.
41. Dombrovsky L., Lallich, S., Enguehard F., and Baillis D., An Effect of “Scattering by Absorption” observed in the Near-Infrared Properties of Nanoporous Silica, *Proc. 6th Int. Symp. Radiat. Transfer (RAD-10)*, June 13-19, 2010, Antalya, Turkey.
42. Vinnikov V.V., Dombrovsky L.A., Reviznikov D.L., and Sposobin A.V., Calculation of Radiative Heat Flux from Two-Phase Flow to the Body Surface, *Proc. Int. Conf. on Nonequilibrium Processes in Nozzles and Jets*, Alushta, May 25-31, 2010, Ukraine, (in Russian).
43. Dombrovsky L.A., An Extension of the Large-Cell Radiation Model for the Case of Semi-Transparent Nonisothermal Particles, *Proc. ASME Summer Heat Transfer Conf.*, July 19-23, 2009, San Francisco, CA, paper 88646.
44. Dombrovsky L.A. and Zaichik L.I., An Effect of Turbulent Clustering on Scattering of Microwave Radiation by Small Particles in the Atmosphere, *Proc. Eurotherm Seminar No. 83 “Computational Thermal Radiation in Participating Media III”*, April 15–17, 2009, Lisbon, Portugal, pp. 257-270.
45. Dombrovsky L.A., Modeling of Radiation Heat Transfer in Multiphase Flows Typical for Fuel-Coolant Interaction, *Int. Symp. Adv. Comput. Heat Transfer (CHT-08)*, Marrakech, Morocco, May 11–16, 2008, Presentation at the Panel on Computational Radiative Heat Transfer.
46. Dombrovsky L.A., Davydov M.V., and Kudinov P., Thermal Radiation Modeling in Numerical Simulation of Melt-Coolant Interaction, *Proc. Int. Symp. Adv. Comput. Heat Transfer (CHT-08)*, Marrakech, Morocco, May 11–16, 2008, paper 155.
47. Dombrovsky L.A., Thermal Radiation of Nonisothermal Particles in Combined Heat Transfer Problems, *Proc. 5th Int. Symposium on Radiative Transfer*, Bodrum, Turkey, 17-22 June 2007 (dedication lecture).
48. Dombrovsky L.A., Special Features of Radiative Heat Transfer in Thermal Interaction of Corium Melt Droplets and Ambient Water, *Proc. 16th School-Seminar “Problems of Heat and Mass Transfer and Gas Dynamics in Power Plants”*, Saint-Petersburg, Russia, 21-25 May 2007, v. 2, pp. 9-12 (invited lecture, in Russian).
49. Dombrovsky L.A., Modelling of Thermal Radiation of Semi-Transparent Particles in Combined Heat Transfer Problems, *Proc. 4th Russ. Nat. Heat Transfer Conf.*, Moscow, Oct. 23-27, 2006, v. 1, pp. 48-53 (in Russian).
50. Dombrovsky L., Randrianalisoa J., and Baillis D., Infrared Radiative Properties of Polymer Coatings Containing Hollow Microspheres, *Proc. 13th Int. Heat Transfer Conf. (IHTC-13)*, 13–18 August 2006, Sydney, Australia.
51. Dombrovsky L.A. and Lipinski W., Temperature and Thermal Stress Profiles in Semi-Transparent Particles Heated by Concentrated Solar Radiation, *Proc. 13th Int. Heat Transfer Conf. (IHTC-13)*, 13–18 August 2006, Sydney, Australia.
52. Dombrovsky L.A., Lipinski W., and Steinfeld A., A Diffusion-Based Approximate Model for Radiation Heat Transfer in a Solar Thermochemical Reactor, *Proc. Eurotherm-78 – Computational Thermal Radiation in Participating Media II*, 5-7 April 2006, Poitiers, France, pp. 319-328.
53. Dombrovsky L.A., Mineev V.N., Vlasov A.S., Zaichik L.I., Zeigarnik Yu.A., Nedorezov A.B., and Sidorov A.S., In-Vessel Corium Catcher of a Nuclear Reactor, *Proc. 11th Int. Topical Meeting on Nuclear Reactor Thermal-Hydraulics (NURETH-11)*, Avignon, France, Oct. 2-6, 2005, paper 234.

54. Dombrovsky L.A., Thermal Radiation Transfer in a Semi-Transparent Liquid with Gas Bubbles, *Proc. 4th Int. Symposium on Radiative Transfer*, Istanbul, Turkey, 20-25 June 2004, pp. 497-506.
55. Dombrovsky L.A. and Sazhin S.S., Absorption of Thermal Radiation inside a Fuel Droplet, *Proc. of the Eurotherm Seminar No. 73 "Computational Thermal Radiation in Participating Media"*, 15-17 April, 2003, Mons, Belgium, pp. 249-258.
56. Dombrovsky L.A., Sazhin S.S., and Heikal M.R., Analytical Model for Radiative Properties of Diesel Fuel Droplets, *Proc. 3d Russ. Nat. Conf. on Heat Transfer*, Moscow, Oct. 21-25, 2002, v. 6, pp. 262-265 (in Russian).
57. Vasilevsky E.B., Dombrovsky L.A., Mikhatulin D.S., and Polezhaev Yu.V., Heat Transfer in a Heterogeneous Supersonic Flow, *Proc. XII Int. Heat Transfer Conf.*, Grenoble, France, 18-23 August 2002, v. 3, pp. 177-182.
58. Sazhin S.S., Dombrovsky L.A., Krutitskii P., Sazhina E.M., and Heikal M.R., Analytical and Numerical Modelling of Convective and Radiative Heating of Fuel Droplets, *Proc. XII Int. Heat Transfer Conf.*, Grenoble, France, 18-23 August 2002, v. 1, pp. 699-704.
59. Dombrovsky L.A., Spectral Model of Absorption and Scattering of Thermal Radiation by Diesel Fuel Droplets, *Proc. XII Int. Heat Transfer Conf.*, Grenoble, France, 18-23 August 2002, v. 1, pp. 651-656.
60. Sazhin S.S., Dombrovsky L.A., Sazhina E.M., and Heikal M.R., New Models for Convective and Radiative Heating of Fuel Droplets: Application to Numerical Simulation of Combustion Processes in Diesel Engines, *Book of Abstracts of the Ninth Int. Conf. on Numerical Combustion*, April 7-10, 2002, Sorrento, Italy, pp. 261-262 (pap. No. 113).
61. Sazhin S.S., Sazhina E.M., Heikal M.R., Krutitskii P.A., Dombrovsky L.A., and Pozorski J., Modelling of Diesel Fuel Sprays: Penetration, Heating, Autoignition, *Proc. Second Mediterranean Combust. Symp.*, Sharm El-Sheikh, Egypt, 6-11 Jan. 2002, vol. 2, pp. 738-749.
62. Dombrovsky L.A. and Ignatiev M.B., Determination of Bulk Temperature of Semitransparent Oxide Particles in Thermal Spraying from the Experimental Data on their Color Temperature, *Proc. 5th World Conf. on Experim. Heat Transfer, Fluid Mech. and Thermodynamics*, Thessaloniki, Greece, 24-28 Sept. 2001, v. 2, pp. 1287-1292.
63. Sazhin S.S., Heikal M.R., Dombrovsky L.A., and Pozorski J., New Approaches to Analytical and Numerical Modelling of Fuel Sprays, *Proc. 1st ImechE Automobile Division Southern Centre Conf. on Total Vehicle Technol.*, 18-19 Sept. 2001, Univ. of Sussex, Brighton, UK, pp. 233-240.
64. Dombrovsky L.A., A Modified Differential Approximation for Thermal Radiation of Semi-transparent Nonisothermal Particles: Application to Optical Diagnostics of Plasma Spraying, *Proc. Third Int. Symp. on Radiative Transfer*, Antalya, Turkey, 17-22 June 2001, pp. 396-404.
65. Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., Mukhtarov E.S., and Sidorov A.S., Numerical Simulation of Transient Thermal State of Corium in the Core Catcher, *Proc. of the Conf. "Thermophys. Codes for Nucl. Reactors (Elaboration and Verification)"*, Obninsk, Moscow region, 29-31 May 2001, pp. 280-282 (in Russian).
66. Sazhin S.S., Sazhina E.M., Heikal M.R., Dombrovsky L.A., Krutitskii P.A., Pozorski J., and Petrović S., Modelling of Fluid Dynamics, Heat Transfer and Combustion Processes in Diesel Engines, *Proc. XVIII Science and Motor Vehicles '01 (Int. Conf. with Exhibition). Automotive Engineering for Improved Safety*, Belgrade, 28-30 May 2001, pp. 119-122.
67. Dombrovsky L.A. and Zaichik L.I., Thermal Interaction of a Hot Spherical Particle with Surrounding Water: Effect of the Vapor Shell Dynamics, *Proc. 3rd Eur. Thermal Sci. Conf.*, Heidelberg, Germany, 10-13 Sept. 2000, v. 2., pp. 1059-1064.
68. Dombrovsky L.A. and Zaichik L.I., Account for Vapor Shell Dynamics in Calculation of Thermal Interaction of a Hot Spherical Particle with Surrounding Water, *Proc. IV Minsk Int.*

- Heat and Mass Transfer Forum*, Minsk, Belarus, May 22-26, 2000, v. 5, pp. 66-76 (in Russian).
69. Dombrovsky L.A., Thermal Radiation from Nonisothermal Particles of Weakly Absorbing Substance. *Proc. 2nd Russ. Nat. Conf. on Heat and Mass Transfer*, Moscow, Oct. 26-30, 1998, v. 6, pp. 278-281 (in Russian).
 70. Dombrovsky L.A., Calculation of Quasi-Steady Thermal State of the Nuclear Reactor Pressure Vessel during Severe Accident Accompanied by the Corium Pool Formation, *Proc. 2nd Russ. Nat. Conf. on Heat Transfer*, Moscow, Oct. 26-30, 1998, v. 6, pp. 274-277 (in Russian).
 71. Dombrovsky L.A. and Zeigarnik Yu.A., Numerical Simulation of Temperature Field in Stratified Corium and Evaluation of Nuclear Reactor Wall Melting During Severe Accident, *Proc. XI Int. Heat Transfer Conf.*, Kyongju, Korea, 23-28 August 1998, v. 6, pp. 39-44.
 72. Akopov F.A., Alipchenkov V.M., Dombrovsky L.A., Zaichik L.I., Zeigarnik Yu.A., and Sidorov A.S., The Simulation of Heat Transfer and Corium Interaction with Reactor Vessel during a Severe Accident at NPP, *Proc. Int. Conf. on Thermophys. Aspects of WWER-Type Reactor Safety «Thermophysics '98»*, Obninsk, Moscow region, Russia, May 26-29, 1998, v. 2, pp. 103-112 (in Russian).
 73. Dombrovsky L.A., Calculation of Radiative Properties of Highly Porous Fibrous Materials, *Proc. Int. Symp. "Advanced Thermal Technologies and Materials"*, Katsively, Crimea, Ukraine, Sept. 22-26, 1997, part 2, pp. 31-39. (In Russian).
 74. Dombrovsky L.A., Calculation of Infrared and Microwave Radiative Properties of Metal Coated Microfibers, *Proc. Int. Symp. on Radiative Transfer*, Kuşadası, Turkey, July 21-25, 1997, pp. 355-366.
 75. Dombrovsky L.A., Radiative Properties of Highly Porous Thermal Insulation of Metal Coated Microfibers: Comparison of Calculations with the Experimental Data, *Proc. 4th World Conf. on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics (ExHFT 4)*, Brussels, Belgium, June 2-6, 1997, v. 1, pp. 409-416.
 76. Dombrovsky L.A., Effect of Micron-Sized Particles on Thermal Radiation of Combustion Products and Radiation Heat Transfer in Rocket Engines, *Abstracts of the Int. Aerosol Symp. IAS-3*, Moscow, Dec. 2-5, 1996, v. 2, n. 1, pp. 30-31.
 77. Dombrovsky L.A., Numerical Investigation of Radiative Heat Transfer in Two-Phase Supersonic Nozzle Flow, *Proc. 2nd European Thermal-Sciences and 14th UIT Nat. Heat Transfer Conf.*, Rome, Italy, May 29-31, 1996, v.3, pp. 1419-1424.
 78. Dombrovsky L.A., Numerical Investigation of Radiative Heat Transfer in a Two-Phase Supersonic Nozzle Flow, *Proc. III Minsk Int. Heat and Mass Transfer Forum*, May 20-24, 1996, v. 2, pp. 120-123 (in Russian).
 79. Dombrovsky L.A., The Mie Theory Analysis of Comparably Dense Disperse Systems, *Proc. Int. Symp. on Radiat. Heat Transfer*, Kuşadası, Turkey, Aug.13-18, 1995, pp.323-333.
 80. Dombrovsky L.A., Calculation of Radiative-Conductive Heat Transfer in Quartz Fibrous Insulation, *Proc. First Russ. Nat. Conf. on Heat Transfer*, Moscow, Nov. 21-25, 1994, pp. 91-96 (in Russian).
 81. Dombrovsky L.A., Determination of Spectral Radiative Properties of Fiberglass Thermal Insulation from Steady-State Heat Flux Measurements, *Proc. 2nd Int. Conf. Identif. Dynam. Syst. and Inverse Problems*, St. Petersburg, Aug. 22-26, 1994, v. 2, pp. D-10-1 – D-10-11 (in Russian).
 82. Dombrovsky L.A., Calculation of Spectral Radiative Properties of Quartz Fibrous Insulation in the Infrared, *Proc. X Int. Heat Transfer Conf.*, Brighton, England, 14-18 August 1994, v.2, pp. 25-30.
 83. Dombrovsky L.A., Kolpakov A.V., and Surzhikov S.T., Approximate Method for Directional Radiation Transfer Calculation in Anisotropically Scattering Medium, *Proc. II Minsk Int. Heat and Mass Transfer Forum*, 1992, v. 2, pp. 158-161 (in Russian).

84. Kolpakov A.V., Dombrovsky L.A., and Yukina E.P., Numerical Investigation of Light Scattering by Disperse Systems of Cylindrical Filaments. *Proc. XV Conf. Young Scient.*, Mosc. Inst. Phys. Techn. (MIPT), Dolgoprudny, Moscow region, Russia, 1990, Part 2 (Depos. VINITI, n. 6175-B90, in Russian).
85. Barkova L.G. and Dombrovsky L.A., On Errors of Radiation Heat Transfer Calculations Due to Use of Simple Differential Approximations, *Proc. XI Conf. Young Scient.*, Mosc. Inst. Phys. Techn. (MIPT), Dolgoprudny, Moscow region, Russia, 1986, Part 2 (Depos. VINITI, n. 5697-B86, in Russian).
86. Barkova L.G. and Dombrovsky L.A., Solving the Two-Dimensional Radiation-Transfer Problem in High-Temperature Two-Phase Flows by Taking into Account Anisotropic Scattering, *Proc. X Conf. Young Scient.*, Mosc. Inst. Phys. Techn. (MIPT), Dolgoprudny, Moscow region, Russia, 1985 (Depos. VINITI, n. 5984-85, in Russian).
87. Barkova L.G., Dombrovsky L.A., and Saveljev V.I., An Application of the Finite Element Method to Heat Conduction and Stress-Strain State Calculations, *Proc. IX Conf. Young Scient.*, Moscow Inst. Phys. Techn. (MIPT), Dolgoprudny, Moscow region, Russia, 1984 (Depos. VINITI, n. 6029-84, in Russian).