

CURRICULUM VITAE

Leonid A. Dombrovsky

Chief Researcher

Joint Institute for High Temperatures
of the Russian Academy of Science

August 2016

1. PERSONAL DETAILS

HOME ADDRESS: Apt. 57, Dolgorukovskaya St. 35,
Moscow 127006,
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Krasnokazarmennaya 17A,
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RUSSIA.
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DATE OF BIRTH: 10 August 1948.

PLACE OF BIRTH: Moscow, Russia.

CITIZENSHIP: Russian.

2. PRESENT APPOINTMENT

Joint Institute for High Temperatures of the Russian Academy of Science:

Chief Researcher;
Heat Transfer Laboratory;
Division of Thermophysics and Thermal Engineering;
Research Centre of Physical of Thermal Engineering.

3. EDUCATION AND QUALIFICATIONS

Education:

1965–1971: Undergraduate, Moscow Institute of Physics and Technology, Russia

1971–1974: Postgraduate (PhD student), Moscow Institute of Physics and Technology, Russia

Qualifications:

1971: Diploma with honours of Higher Education (Physics) (Aerodynamics and Thermodynamics),
Moscow Institute of Physics and Technology, Russia

1974: Diploma of a Candidate of Physical and Mathematical Sciences (PhD, Mechanics of Fluids,
Gases, and Plasma), Moscow Institute of Physics and Technology, Russia

1984: Certificate of a Senior Researcher, Russia

1990: Diploma of a Doctor of Engineering Sciences (Theoretical Fundamentals of Heat Transfer),
The Research Institute of Thermal Processes, Moscow, Russia.

4. EMPLOYMENT HISTORY

- ❖ Joint Institute for High Temperatures, The Russian Academy of Science, Russia.
Chief Researcher (June 1996 – cont.)
- ❖ The Research Institute of Thermal Processes, Moscow, Russia.
Chief Researcher (1990–1996)
Senior Researcher (1980–1989)
Researcher (1974–1979)

5. MEMBERSHIP IN PROFESSIONAL SOCIETIES

- Elected Member of the Scientific Council of the International Centre for Heat and Mass Transfer
- Elected Member of the Executive Committee of the International Centre for Heat and Mass Transfer
- Elected Member of the National Committee of Heat and Mass Transfer (Russia); Delegate to the Assembly for International Heat Transfer Conferences
- Member of the Scientific Council on Thermophysics and Thermal Engineering of the Russian Academy of Sciences
- Elected Senior Member of the Optical Society of America
- Member of the American Nano Society

6. AWARDS

The Fifth Symposium on Radiative Transfer (Bodrum, Turkey, 2007) was dedicated to me and two other scientists (from USA and Canada) in recognition of our valuable contributions to the radiation research field.

7. CONSULTING AND VISITING APPOINTMENTS

1997–1998: *Consultant, Siemens, Erlangen, Germany*

2001–2003: *Research Fellow, Brighton University, Brighton, UK*

2003–2004: *Visiting Professor, Harbin Institute of Technology, Harbin, China*

2004–2006: *Visiting Professor and Research Fellow, The Thermal Science Centre of Lyon (CETHIL-INSA), Lyon, France*

2005–2008: *Research Fellow, Royal Institute of Technology (KTH), Stockholm, Sweden*

2007: *Consultant and Research Fellow, Swiss Federal Institute of Technology (ETH), Zürich, Switzerland*

2009: *Research Fellow, The Thermal Science Centre of Lyon (CETHIL-INSA), Lyon, France*

2010: *Visiting Professor, Lab. Extreme Condit. & Materials: High Temper. Irradiation (CEMHTI), Univ. Orleans, Orleans, France*

2011–2015: *Visiting Professor, School of Mech. & Manufact. Engineering, Univ. New South Wales (UNSW), Sydney, Australia*

2011: *Consultant and Research Fellow, Solar Energy Laboratory, University of Minnesota, Minneapolis, USA*

2012–2013: *Visiting Professor, Laboratory of Thermal Kinetics (LTN), School of Engineering, University of Nantes, France*

June/July 2015: *Visiting Fellow, Faculty of Science, Engineering and Computing, Kingston University (London), UK*

Nov. 2015: *Invited Consultant, Res. School Eng., The Australian National University (ANU), Canberra, Australia*

8. MEMBER OF THE EDITORIAL BOARDS

International Journal of Heat and Mass Transfer,

International Communications in Heat and Mass Transfer,

Computational Thermal Sciences,

Thermal Processes in Engineering (in Russian),

*Thermopedia (A- to Z Guide to Thermodynamics, Heat & Mass Transfer, and Fluid Engineering),
Journal of Spectroscopy and Dynamics*

9. REFEREEING

Referee of papers submitted to:

<i>Acta of Bioengineering and Biomechanics</i>	<i>International Journal of Hydrogen Energy,</i>
<i>AIAA Journal of Thermophysics and Heat Transfer,</i>	<i>International Journal of Thermal Sciences,</i>
<i>Annals of Nuclear Energy,</i>	<i>International Journal of Thermophysics,</i>
<i>Applied Optics,</i>	<i>International Journal of Fluid Mechanics Research,</i>
<i>ASME Journal of Heat Transfer,</i>	<i>Inverse Problems in Science and Engineering,</i>
<i>ASME Journal of Nanotechnology in Engineering and Medicine,</i>	<i>Journal of Alloys and Compounds,</i>
<i>ASME Journal of Solar Energy Engineering,</i>	<i>Journal of Applied Physics,</i>
<i>Chemical Engineering Journal,</i>	<i>Journal of Composite Materials,</i>
<i>Computational Thermal Sciences,</i>	<i>Journal of Quantitative Spectroscopy and Radiative Transfer,</i>
<i>Computers in Biology and Medicine,</i>	<i>Journal of the American Ceramic Society,</i>
<i>Energy and Buildings,</i>	<i>Materials and Design</i>
<i>Experimental Heat Transfer,</i>	<i>Mathematical Biosciences</i>
<i>Frontiers in Heat and Mass Transfer,</i>	<i>Numerical Heat Transfer,</i>
<i>Heat and Mass Transfer,</i>	<i>Optics Express,</i>
<i>High Temperature,</i>	<i>Physics in Medicine and Biology,</i>
<i>High Temperatures – High Pressures,</i>	<i>Thermal Engineering,</i>
<i>Infrared Physics and Technology,</i>	<i>Thermal Processes in Engineering,</i>
<i>International Journal of Heat and Mass Transfer,</i>	<i>Surface and Coating Technology.</i>

10. RESEARCH INTERESTS

- Wide-range optical properties of particles and fibres
- Spectral properties of advanced porous and composite materials
- Radiative transfer in disperse systems of different nature
- Combined heat transfer in power engineering, biomedicine, and other applications

11. PARAMETERS OF RESEARCH ACTIVITY

Scopus: citations – 1056, h-index – 21 (since 1996)

Google Scholar: citations – 1845, h-index – 25

12. PUBLICATIONS

Books and Book Chapters

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.
2. 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.
4. Dombrovsky L.A., Radiative Properties of Particles and Fibers. *ThermalHUB publication*. (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. Theoretical 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.

Refereed Journal Papers

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 A.Z. Zhuk, 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. of Heat and 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: Effects 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 Lett.*, 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. 2702-2711.
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.
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.
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