

CURRICULUM VITAE

Leonid A. Dombrovsky

Chief Researcher

Joint Institute for High Temperatures
of the Russian Academy of Science

March 2022

1. PERSONAL DETAILS

HOME ADDRESS: In Russia:
 Apt. 57, Dolgorukovskaya St. 35,
 Moscow 127006, RUSSIA.
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 Apt. 5, Jabotinsky Sd. 43, Netanya 42277, ISRAEL.
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DATE OF BIRTH: 10 August 1948

PLACE OF BIRTH: Moscow, Russia

CITIZENSHIP: Russian and Israeli

2. PRESENT APPOINTMENTS

1. 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.
2. University of Tyumen (Russia):
 Senior Researcher;
 Microhydrodynamic Technology Laboratory;
 X-BIO Institute.
3. Ariel University (Israel):
 Research Fellow;
 Department of Chemical Engineering, Biotechnology and Materials;
 Engineering Science Faculty.

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, The Research Institute of Thermal Processes, Moscow, 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

- ❖ University of Tyumen, Siberian Branch of the Russian Academy of Science, Russia.
Senior Researcher (part time) (*August 2016 – until now*)
- ❖ Joint Institute for High Temperatures, The Russian Academy of Science, Russia.
Chief Researcher (*June 1996 – until now*)
- ❖ 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 ([ICHMT](#))
- Elected Member of the [Executive Committee of the ICHMT](#)
- Elected Member of the Honours and Awards Committee of the ICHMT
- 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 Optica (formerly Optical Society of America, OSA) 
- Member of the American Nano Society (ANS)
- Member of the American Society of Mechanical Engineers (ASME)
- Member of the American Society of Thermal and Fluid Engineers (ASTFE)

6. AWARDS

[The William Begell Medal](#) for Excellence in Thermal Science and Engineering presented at the International Heat Transfer Conference 16, August 14, 2018, China National Convention Center, Beijing, China.

Certificate of Recognition to Leonid A. Dombrovsky **for the American Chemical Society publications reviewing activity** of 2018.

Graham de Vahl Davis Best Paper Award for the paper “*Heat generation in gold nanorods solutions due to absorption of near-infrared radiation*” presented at CHT-17, International Symposium on Advances in Computational Heat Transfer, May 28 – June 1, 2017, Napoli, Italy.

According to the recent decision of the International Centre for Heat and Mass Transfer (ICHMT), **Leonid A. Dombrovsky is awarded by [the A.V. Luikov Medal](#)** for outstanding contributions to the science and art

of Heat and Mass Transfer and for activities in international cooperation in conjunction with ICHMT programs:
<http://www.ichmt.org/page/50/lmedal>

Certificate for **Highly Cited Research** in Infrared Physics and Technology awarded in December, 2016 to **L. Dombrovsky** in recognition of the contribution to the quality of the journal made by: *Visible and near infrared optical properties of ceria ceramics*.

The Fifth International Symposium on Radiative Transfer (Bodrum, Turkey, 2007) was dedicated to Leonid Dombrovsky and two other scientists (from USA and Canada) in recognition of their valuable contributions to the radiation research field: <http://old.ichmt.org/rad-07/dedication.html>

7. CONSULTING AND VISITING APPOINTMENTS

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

2001–2003: *Research Fellow, Brighton University, Brighton, UK (grants from the EPSRC and the UK Royal Society)*

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 (grant no. DVF1415/2/22 from the UK Royal Academy of Engineering)*

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

Sept. 2017–Febr. 2019: *Distinguished Research Fellow, Faculty of Science, Engineering and Computing, Kingston University London, UK (research project RAD-FIRE (no. 749220) supported by the European Commission, the Marie Skłodowska-Curie Action)*

Oct./Nov. 2017 and June 2018: *Invited Professor, GRESPI Laboratory, University of Reims Champagne-Ardenne (URCA), France*

Nov. 2018: *Invited Professor, Engineering Science Faculty, Ariel University, Ariel, Israel*

September 2019–August 2020: *Visiting Professor, Faculty of Science, Engineering and Computing, Kingston University London, UK* (the *visiting professorship* supported by The Leverhulme Trust, project no. VP2-2018-010)

July 2021– until now: *Research Fellow, Faculty of Engineering, Ariel University, Ariel, Israel*

8. MEMBER OF THE EDITORIAL BOARDS

[*International Journal of 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*](#), [*Thermo \(MDPI – Multidisciplinary Digital Publishing Institute\)*](#), [*Atmosphere \(Invited Editor of the Special issue “Levitating Droplet Clusters in Aerosol Science”\)*](#), [*High Temperature Material Processes*](#), [*Frontiers in Thermal Engineering \(Specialty Chief Editor for Heat Transfer and Thermal Power\)*](#),

9. REFEREEING

Referee of papers submitted to:

ACM Transactions on Mathematical Software,
Acta Astronautica,
Acta of Bioengineering and Biomechanics,
Acta Biotheoretica,
AIAA Journal of Thermophysics and Heat Transfer,
Annals of Nuclear Energy,
Applied Optics,
Applied Thermal Engineering,
ASME Journal of Heat Transfer,
ASME Journal of Nanotechnology in Engineering and Medicine,
ASME Journal of Solar Energy Engineering,
Chemical Engineering Journal,
Computational Thermal Sciences,
Computers in Biology and Medicine,
Computer Methods and Programs in Biomedicine,
Energies,
Energy and Buildings,
Experimental Heat Transfer,
Fuel Processing Technology,
Fire,
Frontiers in Heat and Mass Transfer,
Frontiers in Mechanical Engineering,

Heat and Mass Transfer,
Heat Transfer Research,
High Temperature,
High Temperature Materials Processes,
High Temperatures – High Pressures,
IEEE Trans. Microwave Theory and Techniques,
Infrared Physics and Technology,
International Journal of Applied Ceramic Technology,
International Journal of Heat and Mass Transfer,
International Journal of Hydrogen Energy,
International Journal of Thermal Sciences,
International Journal of Thermophysics,
International Journal of Fluid Mechanics Research,
Inverse Problems in Science and Engineering,
Journal of Alloys and Compounds,
Journal of Applied Physics,
Journal of Coatings Technology and Research,
Journal of Composite Materials,
Journal of Enhanced Heat Transfer,
Journal of Materials Research and Technology,
Journal of Material Science,
Journal of Quantitative Spectroscopy and Radiative Transfer,

Journal of the American Ceramic Society,
Langmuir,
Materials and Design,
Mathematical Biosciences,
Nanomaterials,
Nuclear Engineering and Design,
Numerical Heat Transfer,
Optics Express,
Optics Letters,
OSA Continuum,
Physics in Medicine and Biology,
Process Safety and Environmental Protection,
Progress in Organic Coatings,
Remote Sensing,
Scientific Reports,

Solar Energy,
Solar Energy Materials and Solar Cells,
Surface and Coating Technology,
Surface Innovations,
Technical Physics,
The Journal of Physical Chemistry Letters,
Thermal Engineering,
Thermal Processes in Engineering,
Thermophysics and Aeromechanics,

Some certificates from Elsevier:

<https://www.reviewerrecognition.elsevier.com/#/profile/a9c89b73-7711-4ec6-b9a2-54785fbc01b0>

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 geophysics
- Levitating droplet clusters

11. PARAMETERS OF RESEARCH ACTIVITY

Scopus: citations – 2777, h-index – 31

<https://www.scopus.com/authid/detail.uri?authorId=6603682233>

Google Scholar: citations – 4982, h-index – 39, i10-index – 106

<https://scholar.google.com/citations?user=w2ZWbH0AAAJ&hl=ru>

Research Gate: citations – 5271, h-index – 40, RG Score – 50.42

https://www.researchgate.net/profile/Leonid_Dombrovsky

Mendeley <https://www.mendeley.com/reference-manager/library/favorites/>

ORCID <http://orcid.org/0000-0002-6290-019X>

12. PUBLICATIONS

Books and Book Chapters

1. Dombrovsky L.A. and Kokhanovsky A.A., Solar Heating of the Cryosphere: Snow and Ice Sheets, Chapter 2 in the book “*Springer Series in Light Scattering*”, edited by A. Kokhanovsky, Springer, 2021, vol. 6, pp 53-109.
2. Dombrovsky L.A., Scattering of Radiation and Simple Approaches to Radiative Transfer in Thermal Engineering and Bio-Medical Applications, Chapter 2 in the book “*Springer Series in Light Scattering*”, edited by A. Kokhanovsky, Springer, 2019, vol. 4, pp. 72-127.

3. Dombrovsky L.A. and Baillis D., *Thermal Radiation in Disperse Systems: An Engineering Approach*, Begell House, New York, 2010.
4. Online monograph “*Topics in Particle and Dispersion Science*” (edited by Mirosław Jonasz).
5. 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, 2009, vol. 1, pp. 114-157.
6. 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*”).
7. 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, Moscow, 1999, pp. 504-509 (in Russian).
8. Dombrovsky L.A., *Radiation Heat Transfer in Disperse Systems*, Begell House, New York, 1996.

Refereed Journal Papers

1. Starostin A., Strelnikov V., Dombrovsky L.A., Shoal S., Gendelman O., and Bormashenko E., Effect of Asymmetric Cooling of Sessile Droplets on Orientation of the Freezing Tip, *J. Coll. Interface Sci.*, 2022, under review.
2. Dombrovsky L.A. and Kokhanovsky A.A., Deep Heating of a Snowpack by Solar Radiation, *Frontiers in Thermal Engineering. Heat Transfer and Thermal Power*, 2022, under review.
3. Fedorets A.A., Shcherbakov D.V., Levashov V.Yu., and Dombrovsky L.A., Self-Stabilization of Droplet Clusters Levitating over Heated Salt Water, *Sci. Rep.*, 2022, under review.
4. Roy P.K., Binks B.P., Shoal S., Dombrovsky L.A., and Bormashenko E., Liquid Marbles Emerging from Levitating Fumed Silica Clusters, *Coll. Surf. A*, 2022, under review.
5. Roy P.K., Binks B.P., Shoal S., Dombrovsky L., and Bormashenko E., Levitating Clusters of Fluorinated Fumed Silica Nanoparticles Enable Manufacture of Liquid Marbles: Co-Occurrence of Interfacial, Thermal and Electrostatic Events, *J. Phys. Chem. Lett.*, 2022, under review.
6. Fedorets A.A., Frenkel M., Shcherbakov D.V., Dombrovsky L.A., Nosonovsky M., and Bormashenko E., Branched Droplet Clusters and the Kramers Theorem, *Phys. Review E*, 2022, under review.
7. Fedorets A.A., Dombrovsky L.A., E. Bormashenko, and M. Nosonovsky, A Hierarchical Levitating Cluster Containing Transforming Small Aggregates of Water Droplets, *Langmuir*, 2022, under review.
8. Dombrovsky L.A., Specialty Grand Challenge for Heat Transfer and Thermal Power, *Frontiers in Thermal Engineering*, 2022, vol. 2, 862070.
9. Dombrovsky L.A. and Dembele S., An Improved Solution for Shielding of Thermal Radiation of Fires Using Mist Curtains of Pure Water or Seawater, *Comput. Thermal Sci.*, 2022, vol. 14, no. 4, pp 1-18.
10. Roy P.K., Legchenkova I., Dombrovsky L.A., Levashov V.Yu., Binks B.P., Shvalb V., Shoal S., Valtisfer V., and Bormashenko E., Thermophoretic Levitation of Powders at Atmospheric Pressure, *Advanced Powder Techn.*, 2022, vol. 33, no. 3, 103497.
11. Starostin A., Strelnikov V., Dombrovsky L.A., Shoal S., and Bormashenko E., On the Universality of Shapes of the Freezing Water Droplets, *Coll. Interface Sci. Comm.*, 2022, vol. 47, 100590.
12. Dombrovsky L.A., Laser-Induced Thermal Treatment of Superficial Human Tumors: An Advanced Heating Strategy and Non-Arrhenius Law for Living Tissues, *Frontiers in Thermal Engineering, Heat Transfer and Thermal Power*, 2022, vol. 1, 807083.
13. Dombrovsky L.A., Solovjov V.P., and Webb B.W., Effect of the Ground-Based Environmental Conditions on the Level of Dangerous Ultraviolet Solar Radiation, *J. Quant. Spectr. Radiat. Transfer*, 2022, vol. 279, 108048.
14. Starostin A., Strelnikov V., Dombrovsky L.A., Shoal S., and E. Bormashenko, Three Scenarios of Freezing of Liquid Marbles, *Coll. Surf. A*, 2022, vol. 636, 128125.
15. Dombrovsky L.A. and Mendeleyev V.Ya. An Estimate of Size of Copper Nanoparticles Levitating over the Melt Surface Using the Measurements of Spectral Reflectance, *J. Phys.: Conf. Ser.*, 2021, vol. 2116, 012160.

16. Fedorets A.A., Dombrovsky L.A., Shcherbakov D.V., Frenkel M., Bormashenko E., and Nosonovsky M., Thermal Conditions for the Formation of Self-Assembled Cluster of Droplets Over the Water Surface, *J. Phys.: Conf. Ser.*, 2021, vol. 2116, 012038.
17. Fedorets A.A., Gabyshev D.N., Shcherbakov D., Bormashenko E., Dombrovsky L.A., and Nosonovsky M., Vertical Oscillations of Droplets in Small Droplet Clusters, *Coll. Surf. A.*, 2021, vol. 628, 127271.
18. Roy P.K., Shoval S., Dombrovsky L.A., and Bormashenko E., Oscillatory Reversible Osmotic Growth of Sessile Saline Droplets on the Floating Polydimethylsiloxane Membrane, *Fluids*, 2021, vol. 6, no. 7, 232.
19. Roy P.K., Legchenkova I., Shoval S., Dombrovsky L.A., Bormashenko E., Osmotic Evolution of Composite Liquid Marbles, *J. Coll. Interface Sci.*, 2021, vol. 592, pp 167-173.
20. Frenkel M., Fedorets A.A., Dombrovsky L.A., Nosonovsky M., Legchenkova I., and Bormashenko E., Continuous Symmetry Measure vs Voronoi Entropy of Droplet Clusters, *J. Phys. Chem. C*, 2021, vol. 125, no. 4, pp 2431-2436.
21. Bormashenko E., Fedorets A.A., Dombrovsky L.A., and Nosonovsky M., Survival of Virus Particles in Water Droplets: Hydrophobic Forces and Landauer's Principle, *Entropy*, 2021, vol. 23, no. 2, 181.
22. Dombrovsky L.A. and Mendeleyev V.Ya., Interaction of Low-Power Laser Radiation with Nanoparticles Formed over the Copper Melt in Rarefied Argon Atmosphere, *Thermo*, 2021, vol. 1, no. 1, pp 1-14.
23. Fedorets A.A., Shcherbakov D.V., Dombrovsky L.A., Bormashenko E., and Nosonovsky M., Impact of Surfactants on the Formation and Properties of Droplet Clusters, *Langmuir*, 2020, vol. 36, no. 37, 11154-11160.
24. Dombrovsky L.A., Fedorets A.A., V.Yu. Levashov, A.P. Kryukov, Bormashenko E., and Nosonovsky M., Modeling Evaporation of Water Droplets as Applied to Survival of Airborne Viruses, *Atmosphere, special issue "Levitating Droplet Clusters in Aerosol Science"*, 2020, vol. 11, no. 9, 965.
25. Dombrovsky L.A., Fedorets A.A., V.Yu. Levashov, A.P. Kryukov, Bormashenko E., and Nosonovsky M., Stable Cluster of Identical Water Droplets Formed Under the Infrared Irradiation: Experimental Study and Theoretical Modeling, *Int. J. Heat Mass Transfer*, 2020, vol. 161, 120255.
26. Dombrovsky L.A., Frenkel M., Legchenkova I., and Bormashenko E., Effect of Thermal Properties of a Substrate on Formation of Self-Arranged Surface Structures on Evaporated Polymer Films, *Int. J. Heat Mass Transfer*, 2020, vol. 158, 120053. The article is also featured online on "Advances in Engineering": https://click.pstmrk.it/2s/advanceseng.com%2Feffect-thermal-properties-substrate-formation-self-arranged-surface-structures-evaporated-polymer-films%2F/-bP17iAN/J3Nh/dEIV_K2Agv
27. Fedorets A.A., Bormashenko E., Dombrovsky L.A., and Nosonovsky M., Symmetry of Small Clusters of Levitating Water Droplets, *Physical Chemistry Chemical Physics*, 2020, vol. 22, no. 21, pp. 12239-12244.
28. Dombrovsky L.A. and Kokhanovsky A.A., Solar Heating of Ice Sheets Containing Gas Bubbles, *J. Quant. Spectr. Radiat. Transfer*, 2020, vol. 250, 106991.
29. Fedorets A.A., Dombrovsky L.A., Gabyshev D.N., Bormashenko E., and Nosonovsky M., Effect of External Electric Field on Dynamics of Levitating Water Droplets, *Int. J. Therm. Sci.*, 2020, vol. 153, 106375.
30. Dombrovsky L.A., Levashov V.Yu., Kryukov A.P., Dembele S., and Wen J.X., A Comparative Analysis of Shielding of Thermal Radiation of Fires Using Mist Curtains Containing Droplets of Pure Water or Sea Water, *Int. J. Therm. Sci.*, 2020, vol. 152, 106299.
31. Bormashenko E., Fedorets A.A., Frenkel M., Dombrovsky L.A., and Nosonovsky M., Clustering and Self-Organization in Small Scale Natural and Artificial Systems, *Philos. Trans. Royal Soc. A*, 2020, vol. 378, 20190443.
32. Dombrovsky L.A. and Kokhanovsky A.A., Light Absorption by Polluted Snow Cover: Internal Versus External Mixture of Soot, *J. Quant. Spectr. Radiat. Transfer*, 2020, vol. 242C, 106799.
33. Dombrovsky L.A. and Kokhanovsky A.A. Corrigendum to "The influence of pollution on solar heating and melting of a snowpack [JQSRT 233 (2019) 42–51], *J. Quant. Spectr. Radiat. Transfer*, 2020, vol. 241, 106733.
34. Fedorets A.A., Frenkel M., Legchenkova I., Shcherbakov D., Dombrovsky L., Nosonovsky M., and Bormashenko E., Self-Arranged Levitating Droplet Clusters: A Reversible Transition from Hexagonal to Chain Structure, *Langmuir*, 2019, vol. 35, pp. 15330-15334.
35. Fedorets A.A., Aktaev N.E., Gabyshev D.N., Bormashenko E., Dombrovsky L.A., and Nosonovsky M., Oscillatory Motion of a Droplet Cluster, *J. Phys. Chem. C*, 2019, vol. 123, no. 38, pp. 23572-23576.
36. Vlaskin M.S., Grigorenko A.V., Chernova N.I., Kiseleva S.V., Lipatova I.A., Popel O.S., and Dombrovsky L.A., The Hydrothermal Liquefaction as a Promising Procedure for Microalgae-to-Biofuel Production: A General

- Review and Some Thermophysical Problems to be Solved, *High Temper. – High Press.*, 2019, vol. 49, no. 4, pp. 309-351.
37. Fedorets A.A., Bormashenko E., Dombrovsky L.A., and Nosonovsky M., Droplet Clusters: Nature-Inspired Biological Reactors and Aerosols, *Philos. Trans. Royal Soc. A*, 2019, vol. 377, 20190121.
 38. Dombrovsky L.A. and Kokhanovsky A.A., The Influence of Pollution on Solar Heating and Melting of a Snowpack, *J. Quant. Spectr. Radiat. Transfer*, 2019, vol. 233, pp. 42-51.
 39. Dombrovsky L.A., Kokhanovsky A.A., and Randrianalisoa J.H., On Snowpack Heating by Solar Radiation: A Computational Model, *J. Quant. Spectr. Radiat. Transfer*, 2019, vol. 227, pp. 72-85.
 40. Fedorets A.A., Dombrovsky L.A., Bormashenko E., and Nosonovsky M., On Relative Contribution of Electrostatic and Aerodynamic Effects to Dynamics of a Levitating Droplet Cluster, *Int. J. Heat Mass Transfer*, 2019, vol. 133, pp. 712-717.
 41. Bormashenko E., Frenkel M., Vilks A., Legchenkova I., Fedorets A.A., Aktaev N.A., Dombrovsky L.A., and Nosonovsky M., Characterization of Self-Assembled 2D Patterns with Voronoi Entropy, *Entropy*, 2018, vol. 20, 956.
 42. Soufiani A., Haussener S., and Dombrovsky L.A., Computational Problems of Thermal Radiation in Aerospace Engineering, *High Temper. Mater. Proc.*, 2018, vol. 22, no. 2-3, pp. 161-184.
 43. Frenkel M., Dombrovsky L.A., Multanen V., Danchuk V., Legchenkova I., Shofal S., Bormashenko Y., Binks B.P., and Bormashenko E., Self-Propulsion of Water-Supported Liquid Marbles Filled with Sulfuric Acid, *J. Phys. Chem. B*, 2018, vol. 122, no. 32, pp. 7936-7942.
 44. Dombrovsky L., Henry J.-F., Lorreyte C., Pron H., and Randrianalisoa J., Optical Properties of Oakwood in the Near-Infrared Range of Semi-Transparency, *Appl. Optics*, 2018, vol. 57, no. 23, pp. 6657-6663.
 45. Dombrovsky L.A., Dembele S., Wen J.X., and Sikic I., Two-Step Method for Radiative Transfer Calculations in a Developing Pool Fire at the Initial Stage of its Suppression by a Water Spray, *Int. J. Heat Mass Transfer*, 2018, vol. 127 (part B), pp. 717-726.
 46. Fedorets A.A., Aktaev N.E., and Dombrovsky L.A., Suppression of the Condensational Growth of Droplets of a Levitating Cluster Using the Modulation of the Laser Heating Power, *Int. J. Heat Mass Transfer*, 2018, vol. 127 (part A), pp. 660-664.
 47. Gu X., Timchenko V., Yeoh G.H., Dombrovsky L., and Taylor R., The Effect of Gold Nanorods Clustering on Near-Infrared Radiation Absorption, *Appl. Sci.* (special issue "Nanofluids and their Applications"), 2018, vol. 8, no. 7, 1132.
 48. Dombrovsky L.A., Dembele S., and Wen J.X., An Infrared Scattering by Evaporating Droplets at the Initial Stage of a Pool Fire Suppression by Water Sprays, *Infrared Phys. Technol.*, 2018, vol. 91, pp. 55-62.
 49. Dombrovsky L.A. and Randrianalisoa J.H., Directional Reflectance of Optically Dense Planetary Atmosphere Illuminated by Solar Light: An Approximate Solution and its Verification, *J. Quant. Spectr. Radiat. Transfer*, 2018, vol. 208, pp. 78-85.
 50. 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. Meth. Heat Fluid Flow*, 2017, vol. 27, no. 5, pp. 1108-1117.
 51. Dombrovsky L.A., Reviznikov D.L., Kryukov A.P., and Levashov V.Yu., Self-Generated Clouds of Micron-Sized Particles as a Promising Way of a Solar Probe Shielding from Intense Thermal Radiation of the Sun, *J. Quant. Spectr. Radiat. Transfer*, 2017, vol. 200, pp. 234-243.
 52. Fedorets A.A., Dombrovsky L.A., and Ryumin P.I., Expanding of Temperature Range for Generation of Droplet Clusters over the Locally Heated Water Surface, *Int. J. Heat Mass Transfer*, 2017, vol. 113, pp. 1054-1058.
 53. Krainova I.V., Dombrovsky L.A., Nenarokomov A.V., Budnik S.A., Titov D.M., and Alifanov O.M., A Generalized Analytical Model for Radiative Transfer in Vacuum Thermal Insulation of Space Vehicles, *J. Quant. Spectr. Radiat. Transfer*, 2017, vol. 197, pp. 166-172.
 54. Mendeleyev V.Ya., Kachalov V.V., Kurilovich A.V., and Dombrovsky L.A., Abnormally Strong Decrease in Reflectance of Molten Copper due to Possible Generation of Levitating Sub-Micron Melt Droplets, *Int. J. Heat Mass Transfer*, 2017, vol. 113, pp. 53-58.
 55. Fedorets A.A., Frenkel M., Shulzinger E., Dombrovsky L.A., Bormashenko E., and Nosonovsky M., Self-Assembled Levitating Clusters of Water Droplets: Pattern-Formation and Stability, *Sci. Reports*, 2017, vol. 7, 1888, 6 pp.

56. 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. Meth. Heat Fluid Flow*, 2017, vol. 27, no. 3, pp. 598-614.
57. Lisitsyn A.V., Grigorenko A.V., and Dombrovsky L.A., Kinetics of High-Temperature Thermal Treatment of Boehmite-Based Alumina in Vacuum to Produce Pure Alumina, *Int. J. Heat Mass Transfer*, 2017, vol. 110, pp. 314-318.
58. Dombrovsky L.A., Dembele S., and Wen J.X., Shielding of Fire Radiation with the Use of Multi-Layered Mist Curtains: Preliminary Estimates, *Comput. Therm. Sci.*, 2016, vol. 8, no. 4, 371-380.
59. Dombrovsky L.A., Steam Explosion in Nuclear Reactors: Droplets of Molten Steel vs Core Melt Droplets, *Int. J. Heat Mass Transfer*, 2017, vol. 107, pp. 432-438.
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