

**List of publications for the years 2001 - 2020 in the field of Thermometry and Thermophysics  
with the participation of the D.I. Mendeleyev Institute for Metrology (VNIIM)**

1. Dolgikh I.I., Pokhodun A.I., Rybolovleva O.V., Smirnova V.V., Toivonen E.É., Fedorova E.S., *Measurement of the Emissive Power of Solid Materials in the Temperature Range of the Environment*, Measurement Techniques, February 2001
2. Aleksandrov Yu.I., Ivanova A.G., Pokhodun A.I., *Temperature at the Reference Points of Scale ITS-90*, Measurement Techniques, June 2001
3. Matveyev M.S., *New method for measure of a size-of-source-effect in a standard radiation thermometry*, 8th International Symposium on Temperature and Thermal Measurements in Industry and Science, Tempmeko'01, 2001, 167-171
4. Moiseeva N.P., *Methods of Constructing an Individual Calibration Characteristic for Working Platinum Resistance Thermometers*. Measurement Techniques, 2001, v.44, 502–507
5. Kompan T.A., Korenev A.S., Lukin A.Y., *High Precision Thermal Expansion Measurements with data Acquisition from the total field of Interference Pattern*, 8th International Symposium on Temperature and Thermal Measurements in Industry and Science, Berlin, 2001, v.2, p.1157-1161
6. Kompan T.A., Korenev A.S., Lukin A.Y., *Automated dilatometric system employing multivariate analysis of interference patterns*, Measurement Techniques, 2001, v. 44(6), p. 601-607
7. Korchagina E.N., *Metrological Characteristics of K-1 and K-3 Reference Benzoic Acids*, Measurement Techniques, 2001, v. 44(11), p. 1138-1142
8. Dolgikh I.I., Pokhodun A.I., Rybolovleva O.V., Smirnova V.V., *State Primary Standard of the Unit of Infrared Radiance*, Measurement Techniques, October 2001
9. Aleksandrov Yu.I., Korchagina E.N., *Measuring Calorific Value in Certifying Major Fuels*, Measurement Techniques, 2002, v. 45(6), p.667-670
10. Ponin O., Sharov A., Gayarov I., Kompan T., Swiegers J., Swat A., *Demonstrating the suitability of Sitall for SALT primary mirror*, Proceedings of SPIE “Large Ground-based Telescopes”, Waikoloa, 2002, v.4837(1), p.795-804
11. Aleksandrov Yu.I., Korchagina E.N., and Chunovkina A. G., *New Generalization of Data on the Heat of Combustion of High-Purity Methane*, Measurement Techniques, 2002, v.45(3), p. 268-273
12. Ivanova A.G., Gerasimov S.F., Pokhodun A.I., *Analysis and some aspects of the results of key international comparisons in the 83.8058–933.473 K temperature range*, Measurement Techniques, 2002, v.45(3), p. 325-330
13. Aleksandrov Y.I., Belyakov V.I. & Varganov V.P., *A Computerized Suite for Analyzing High-Purity Organic Compounds by a Cryometric Method*. Measurement Techniques, 2002 v.45, 441–444
14. Matveyev M.S., Pokhodoun A.I., Sild Yu.A., *Should Tungsten Ribbon Lamps Be Replaced Or Not*, TEMPERATURE: Its Measurement and Control in Science and Industry, v.7, 8th International Temperature Symposium, Chicago, October 2002, p. 675-680
15. Mangum B.W. et al.[+35], *Summary of comparison of realizations of the ITS-90 over the range 83.8058 K to 933.473 K: CCT key comparison CCT-K3*, Metrologia, April 2002
16. Pokhodun A.I., Gerasimov S.F., Ivanova A.G., *Analysis and Some Aspects of the Results of Key International Comparisons in the 83.8058–933.473 K Temperature Range*, Measurement Techniques, March 2002
17. Fischer J. et al.[+14], *Uncertainty Budgets for Realization of ITS-90 by Radiation Thermometry*, TEMPERATURE: Its Measurement and Control in Science and Industry, v.7, 8th International Temperature Symposium, Chicago, October 2002, 631-638

18. Ponin O., Sharov A., Galyavov I., Kompan T., Swat A, *Large ground-based telescopes*. Progress in biomedical optics and imaging, 2003, v.4837, p.795
19. Aleksandrov Yu.I., Korchagina E.N., and Chunovkina A. G., *Problems of Precision Measurements of the Enthalpies of Natural Gas Combustion*, Russian Journal of Physical Chemistry, 2003, v.77 (10), p.1759-1763
20. Mangum B.W., Bloembergen P., Chatte M.V., Fellmuth B., Marcarino P., Pokhodun A.I., *On the International Temperature Scale of 1990 (ITS-90), Part I: Some Definitions*, Metrologia, March 2003
21. Mangum B.W., Bloembergen P., Chatte M.V., Fellmuth B., Marcarino P., Pokhodun A.I., *On the International Temperature Scale of 1990 (ITS-90). Part II: Recommended techniques for comparisons, at the highest level of accuracy, of fixed-point cells used for contact thermometry*, Metrologia, March 2003
22. Moiseeva N.P., Pokhodun A.I., *Approximation of the ITS90 with High Temperature Thermometers up to 1085 °C*, Measurement Techniques, September 2003
23. Belotserkovskii V.I., Korostin S.V., Pokhodun A.I., *End of the Transition Period in the Mutual Recognition of National Standards*, Measurement Techniques, February 2004
24. Matveyev M.S., Makarenko A. Yu., Tsorin V. G., *The influence of the polarization of the radiation on the accuracy of the transmission of the dimensions of the unit of temperature in radiation thermometry*, Measurement Techniques, September 2004
25. Matveyev M.S., Makarenko A. Yu., Tsorin V. G., *Polarisation Effect of a Lamp Radiation on the Uncertainty of the Temperature Scale Transfer*, 9th International Symposium on Temperature and Thermal Measurements in Industry and Science, Tempmeko'04, Cavtat-Dubrovnik, Croatia, 2004, p.113
26. Khanov N.I., Aleksandrov V.S., Pokhodun A.I., *International activity of VNIIM im. D. I. Mendeleyev*, Measurement Techniques, June 2005
27. Ivanova A.G., Gerasimov S.F., Il'in A.Yu., Pokhodun A.I., *On the reproducibility of water triple point temperature*, 9th International Symposium on Temperature and Thermal Measurements in Industry and Science, 2005, p. 261-266
28. Ivanova A.G., Gerasimov S.F., Elgourdou M., Renaot E. *The peculiarities of phase transition of Ga-Sn eutectic alloys*, 9th International Symposium on Temperature and Thermal Measurements in Industry and Science, 2005, p. 267-270
29. Stock M. et al.[+23], *Final Report on CCT-K7: Key comparison of water triple point cells*, Metrologia, 2006, v. 43
30. Kompan T.A., Korenev A.S., Lukin A.Ya., *Monitoring the accuracy and provision of reliability for results of measuring the phase shift in an interference dilatometer*, Measurement Techniques, 2007, v.50(4), p. 372-377
31. Gerasimov S.F., Pokhodun A.I., Renaot E., *The Influence of Crucible Material on Aluminum Composition*, International Journal of Thermophysics, December 2007
32. Heyer D. et al.[+26], *Intercomparison of the Realization of the ITS-90 at the Freezing Points of Al and Ag among European NMIs*, International Journal of Thermophysics, January 2007
33. Fischer J. et al.[+16], *Preparative steps towards the new definition of the Kelvin in terms of the Boltzmann constant*, International Jouurnal of Thermophysics, 2007, v. 28, p. 1753-1765
34. Kompan T.A., Korenev A.S., Lukin A.Y., *Investigation of Thermal Expansion of a Glass-Ceramic Material with an Extra-low Thermal Linear Expansion Coefficient*, International Journal of Thermophysics, 2008, v.29, No. 5, p.1896-1905
35. Saunders P. et al.[+17], *Uncertainty Budgets for Calibration of Radiation Thermometers below the Silver Point*, International Journal of Thermophysics, 2008, v. 29, No. 3, p.1066–1083

36. Hollandt J. et al.[+12], *IEC 62942-1 TS: first international technical specification on the technical data for radiation thermometers*, Proceedings of the SPIE(Thermosense XXX. Ed. by Vavilov V.P., Burleigh, D. D.) , 2008, v.6939, p. 08-08-5
37. Strouse G. F., Ballico M., Bojkovski J., de Groot M., Liedberg H. G., Pokhodun A. I., *CCT WG8 CMC review protocols: Development and implementation*, International Journal of Thermophysics, January 2008
38. Heyer Dieter et al.[+30], *Final report on EUROMET.T-K4 (EUROMET Project 820): Comparison of the realizations of the ITS-90 at the freezing points of Al (660.323 °C) and Ag (961.78 °C)*, Metrologia, January 2008
39. Pokhodun A. I., Ivanova A. G., *KEY COMPARISON: Final report on comparison COOMET.TK3: Regional comparisons of the national standards of temperature in the range from the triple point of water to the freezing temperature of zinc*, Metrologia, January 2008
40. Fischer J. et al.[+16], *Report of CCT WG4 Task Group (TG-SI) to CCT*, CCT document CCT/08-02, BIPM, 2008
41. Peruzzi A. et al.[+10], *Linking the results of EURAMET.T-K7 and CCT-K7 key comparisons*, Jiliang Xuebao/Acta Metrologica Sinica, December 2008
42. Ivanova A. G., Gerasimov S. F., *Fixed point on the basis of Ga-In eutectic alloy for rapid monitoring of thermometers and temperature measurement systems*, Measurement Techniques, 2008, vol. 51(5), p.498-502
43. Gerasimov S. F., Pokhodun A. I., Shulgat O. S., *The effect of natural variations in the isotopic composition on the reproducibility of the temperature of the triple point of water*, Measurement Techniques, 2008, v. 51(12), p.1305 -1308
44. Saunders P. et al.[+16], *Uncertainty Budgets for Calibration of Radiation Thermometers below the Silver Point*, International Journal of Thermophysics, t.29, №3, 2008 r. c.1066–1083
45. Hollandt J. et al.[+12], *IEC 62942-1 TS: first international technical specification on the technical data for radiation thermometers*, Proceedings of the SPIE, 2008, v. 6939, 08-08-5
46. Strouse G. F., Ballico M., Bojkovski J., de Groot M., Liedberg H. G., Pokhodun A. I., *CCT WG8 CMC review protocols: Development and implementation*, International Journal of Thermophysics, January 2008
47. Heyer Dieter et al. [+30], *Final report on EUROMET.T-K4 (EUROMET Project 820): Comparison of the realizations of the ITS-90 at the freezing points of Al (660.323 °C) and Ag (961.78 °C)*, Metrologia, January 2008
48. Pokhodun A. I., Ivanova A. G., *KEY COMPARISON: Final report on comparison COOMET.TK3: Regional comparisons of the national standards of temperature in the range from the triple point of water to the freezing temperature of zinc*, Metrologia, January 2008
49. T.A.Kompan, A.A. Sharov, *Monitoring of the uniformity of the thermal linear expansion coefficient of large-size optical components*, Measurement Techniques, 2009, v.52(7)
50. Ivanova A. G., Gerasimov S. F., *The dependence of the phase transition temperature of Ga-Zn eutectic alloy on its morphology*, Measurement Techniques, 2009, v.52(1), p. 52-56
51. Matveyev M.S., Sadli M., Sild Yu. A., Pokhodun A.I., Bourson F., *Experience of construction and study of Pt-C eutectic in VNIIM and cooperation with LNE-INM*, International, Journal of Thermophysics, 2009, 30(1), p. 47-58
52. Pokhodun A.I., Kompan T. A., Sokolov N. A., Gerasimov S. F., Matveyev M. S., Nikonenko V. A., A. S. Korenev, N. V. Churilina, *Modernized state primary standards of the units of thermal quantities*, Measurement Techniques, 2009, 52(8), 859-866
53. Peruzzi A., Bosma R., Kerkhof O., Pokhodun A. et al[+26], *Final Report on EUROMET.T-K7: Key*

*comparison of water triple point cells*, Metrologia, January 2009

54. Kompan T.A., Pukhov N.F., Kuznetsov V.P., *Thermal expansion of nanoporous carbon material*, Measurement Techniques, v.53(1), January 2010
55. Kompan T.A., *Thermal expansion of solids-measurement, investigation, standards in russian state institute for metrology*, Proceedings of the 30th International Thermal Conductivity Conference & 18th International Thermal Expansion Symposium, Pittsburgh, 2010, p.729-733
56. White, D.R., Ballico, M., del Campo, D. et al. *Uncertainties in the SPRT Subranges of ITS-90: Topics for Further Research*, Int J Thermophys, 2010, **31**, 1749–1761
57. Ulanovskiy A.A., Medvedev V.A., Nenashev S.N., Matveyev M.S., Pokhodun A.I., Sild Yu.A., Oleynikov P.P., *Thermoelectric Characteristic of High-Temperature Thermocouples W5%RE/W20%RE*, International, Journal of Thermophysics, 2010, v.31(8-9), 1573-1582
58. Pokhodun A.I., *Report to the CCT on COOMET comparison COOMET.T-K3.1 (previously COOMET.T-S1): Key regional comparison of the national standards of temperature in the range from the triple point of water to the freezing point of zinc*, Metrologia, January 2010
59. Abasov M.Y., Gerasimov S.F., Ivanova A.G., Pokhodun A.I., Shulgat O.S., *Measurement of Al Freezing-Point Temperature: Effect of Initiation Process*, International Journal of Thermophysics, September 2010, v.31, p. 1663-1675
60. Korchagina E.N., Belyakov V.I., Ermakova E.V., *A comparative analysis of the technical and metrological characteristics of bomb calorimeters used in Russia*, Measurement Techniques, 2011, v.54(2), p.186-193
61. Belyakov V.I., Varganov V.P., Ermakova E.V., *The new set of apparatus of the state primary standard of the unit of heat of combustion and specific and volume heat of combustion*, Measurement Techniques, 2011, v.54(8), p. 893-900
62. Kompan T.A., Korenev A.S., Pukhov N.F., Gurov I.P., Dudina T.F., Margaryants N.B., *The speckle interferometry method for determining the thermal expansion of nanomaterials nanometrology*, Measurement Techniques, v.54(4), April 2011, p. 434-441
63. Gurov I., et al. [+10], *Investigation of thermal expansion of nanomaterials by two-wavelengths speckle interferometry and digital holography methods 1sd Cross-Straits Tsinghua Optics and Photonics Conference*, Taiwan, 2011
64. Yamazawa, K., Widiatmo, J.V., Tamba, J. et al. *Comparison Measurements for the Development of High-Temperature Platinum Resistance Scale*. Int J Thermophys., 2011, v.**32**, 86–105
65. Pokhodun A.I., Matveyev M.S., Fuksov V.M., *Experimental and Numerical Investigation of the Temperature Field of a Fixed-Point Cavity*, International Journal of Thermophysics, 2011, v.32(1), 337-347
66. Ivanova A. G., Abasov M. Yu., Gerasimov S. F., Pokhodun A. I., *The effect of the conditions under which the solid phase is formed at the initial stage of the solidification process on the result of a measurement of the temperature of ITS-90 fixed points*, Measurement Techniques 54(7), October 2011, v.794-800
67. Peruzzi A. et al. [+31], *EURAMET.T-K7 key comparison of water triple-point cells*, International Journal of Thermophysics, December 2011
68. Sadli M., Matveyev M.S., Bourson F., Sild Yu. A., Fuksov V., A. I. Pokhodun, *Comparison of Pyrometric Co-C and Re-C Eutectic-Point Cells between LNE-Cnam and VNIIM*, International, Journal of Thermophysics, 2011, 32,(11-12), 2657-2670
69. Sapozhnikov S.Z., Mityakov V.Yu., Mityakov A.V., Pokhodun A.I., Sokolov N.A., Matveyev M. S., *The calibration of gradient heat flux sensors*, Measurement techniques, January 2012, v. 54(10), p.1155-1159
70. Sharov A.A., Galyavov I.R., Patrikeev A.P., Ponin O.V., Kompan T.A., Kulesh V.P., *Interference*

*dilatometers for measuring the thermal coefficient of linear expansion of thermally stable optical materials*, Journal of Optical Technology, 2013, 80(4), p. 250-253

71. Pokhodun A. I., *REPORT to the CCT on Key Comparison "COOMET.T-K3.2" (COOMET theme No. 494/RU/10) Final Report Realizations of the ITS-90 from 0.01 degrees C to 419.572 degrees C 2010-2012*, Metrologia, January 2013
72. Pokhodun A. I., Ivanova A. G., Ivanova K. P., *Final report on COOMET.T-K3.1: Comparison of the realizations of the ITS-90 from 0.01 °C to 419.527 °C*, Metrologia, January 2013, 50(1A), 03006
73. Dul'nev G. N., Pokhodun A. I., Khodunkov V. P., A thermal analysis of the quality of infrared images of distant low-contrast objects, Measurement Techniques, June 2013, 56(3)
74. Korchagina E.N., Ermakova E., Shekhovtsov D., *Problems in the Use of Casing-Head Gas. Functions of Metrological Assurance*, Measurement Techniques, 2013, v. 56(5), p.553-557
75. Ivanova A. G., Abasov M. Yu., Gerasimov S. F., Pokhodun A. I., *Measurement of the In Freezing-Point Temperature:Effect of the Liquid-Solid Interface Structure*, Temperature: Its Measurement and Control in Science and Industry. Proceedings of the 9th International Temperature Symposium, Los Angeles, September 2013, v. 8 p. 243-248
76. Pokhodun A. I., *Current Status and Prospects for Development of Thermometry*, Conference Paper, 9th International Temperature Symposium on Temperature - Its Measurement, September 2013
77. Shulgat O. S., Abasov M. Yu., Fuksov V. M., Pokhodun A. I., *Effect of Heat Removal along the Rod on Uniformity of the Inner Interface Thickness during the Crystallization Initiation*, Conference Paper, 9th International Temperature Symposium on Temperature - Its Measurement, September 2013
78. Yamada Y., Anhalt K., Battuello M., Bloembergen P., Khlevnov B., Matveyev M., Machin G., Sadli M., Wang T., *Construction of high-temperature fixed-point cells for thermodynamic temperature assignment*, AIP Conf. Proc. "Temperature: Its Measurement and Control in Science and Industry", v.8: Proceedings of the 9th International Temperature Symposium, September 2013, 1552, 335-339
79. Khlevnov B. B., Sil'd Yu. A., Matveyev M. S., Grigorieva I. A., Fuksov V. M., *Comparative Investigations of Cobalt–Carbon Eutectic High-Temperature Fixed Point Cells Constructed at the VNIM and VNIOIFI*, Measurement Techniques, April 2013, 56(1) p.72-78
80. Ulanovskiy A. A., Edler F., Fischer J., Oleynikov P., Zaytsev P., Pokhodun A. I., *Features of High-Temperature Calibration of W/Re Thermocouples*, International Journal of Thermophysics, March 2014
81. Shulgat O. S., Fuksov V. M., Ivanova A. G., Gerasimov S. F., Pokhodun A. I., *Correlation Between Immersion Profile and Measured Value of Fixed-Point Temperature*, International Jouurnal of Thermophysics, 2014, v.35, p. 648-656
82. Matveyev M. S., Sergiyenko R. P., *Final report of COOMET.T-K5: realizations of the ITS-90 at 1084.62 °C*, 2015, Metrologia, January 2015
83. Yamada Y., Anhalt K., Battuello M., Bloembergen P., Khlevnov B., Machin G., Matveyev M., Sadli M., Todd A., Wang T., *Evaluation and Selection of High-Temperature Fixed-Point Cells for Thermodynamic Temperature Assignment*, Int. J. Thermophys, 2015, v.36, p. 1834–1847
84. Kostanovskii A.V., Kostanovskaya M.E., Zeodinov M.G., Pronkin A.A., Kompan T.A., Krymov V.M., *Thermal measurements: measurements of the coefficient of linear thermal expansion of single-crystal aluminum oxide*, Measurement Techniques, 2015, v.58(2), p.179-183
85. Pokhodun A. I., Ivanova A. G., Duysebayeva K. K., Ivanova K. P., *Final report on COOMET.T-S1. Comparison of type S thermocouples at the freezing points of zinc, aluminium and copper 2014—2015*, Metrologia, January 2015
86. Pokhodun A. I. et al., *Guide to the Realization of the ITS-90. Platinum Resistance Thermometry*, BIPM publication, July 2016, <https://www.bipm.org/en/committees/cc/cct/guide-its90.html>

(application date 20.02.2020)

87. Ivanova A. G., Pokhodun A. I., Gerasimov S. F., Fuksov V. M., *Study of the Inner Phase Interface Structure in an Indium Freezing Fixed Point Cell*, Measurement Techniques, April 2016
88. Kompan T.A., Kondrat'ev S. V., Korenev A. S., Pukhov N. F., Inochkin F. M., Kruglov S. K., Bronshtein I. G., *Extending the temperature range of the National primary standard for the unit of the thermal linear expansion coefficient*, Measurement Techniques, 2016, V.58(12), p.1341 – 1346
89. Kompan T.A., Pukhov N.F., *Thermal expansion of carbon material for supercapacitor electrodes*, Material science, 2016, v.4, p.38-40
90. Bronshten I.G., Inochkin F. M., Kruglov S. K., Kompan T.A., Kondrat'ev S.V., Korenev A.S. and Pukhov N.F., *Optoelectronic measurement system for a high-temperature dilatometer*”, Measurement Techniques, March, 2016, v.58(12), p.1347 -1353
91. Kompan T.A., *Thermal expansion of solids: regent research and standard materials, International journal for science techniques and innovations for the industry MTM*, 2016,v.10, p.34-36
92. Korchagina E.N.,Ermakova E.V.,Prudaev M.B., *Interlaboratory proficiency tests of the quality parameters of fuels as an effective approach to intralaboratory inspection*, Measurement Techniques, 2016, 58(12), 1354-1359
93. Ivanova A. G., Fuksov V. M., Gerasimov S. F., Pokhodun A. I., *Evolution of the Inner Liquid-Solid Interface During Metal Freezing*, International Journal of Thermophysics, 2017 , vol. 38, No. 31
94. Inochkin F.M., Kruglov S.K., Bronshten I.G., Kompan T.A., Kondratjev S.V., Korenev A.S., Pukhov N.F., *Subpixel edge estimation with lens aberrations compensation based on the iterative image approximation for high-precision thermal expansion measurements of solids*, Proc. SPIE 10329, Optical Measurement Systems for Industrial Inspection X, 1032926, June 2017
95. Pokhodun A. I., *Redefinition of the Kelvin and Future Improvements in State Primary Standard of the Unit of Temperature in the Range from 0 to 3000°C GET 34–2007*, Measurement Techniques, March 2018
96. Kompan T.A., Kondratjev S.V., Korenev A.S., Puhov N. F., Inochkin F. M., Kruglov S. K., BronshtenI. G., *Measurement of the Thermal Expansion Coefficient for Ultra-High Temperatures up to 3000 K*, International Journal of Thermophysics, 2018, v.39(3), p.40
97. Inochkin F.M., Kruglov S.K., Bronshten I.G., Kompan T.A., Kondratjev S.V., Korenev A.S., Pukhov N.F., *Superresolution contour reconstruction approach to a linear thermal expansion measurement*, 25th IEEE International Conference on Image Processing, 2018
98. Pokhodun A. I., Ivanova A. G., Krivonos P. V., Ivanova E. P., Duysebaeva K. K., Bordianu C. I., Iuri Chelidze, *Realizations of the ITS-90 from 273.16 K to 933.473 K (COOMET-K3.3)*, Metrologia, January 2019
99. Chunovkina A. G., Pokhodun A. I., Sulaberidze V. Sh., *The problem of determining and adjusting intercalibration measuring intervals*, Measurement Techniques, 2020, v.62(10), p. 863-868
100. Hay B., Zarr R., Stacey C., Sokolov N., Cortés L.L., Zhang J., Hammerschmidt Ul., Filtz J.-R. and Allard A., *CCT Supplementary comparison S2 on thermal conductivity measurements of insulating materials by guarded hot plate*, Metrologia, 2020, v. 57, No. 1A, 03003