

List of Publications of Prof. Andrey Dmitriev

(December 2020)

(Total: 119)

• Defect and Diffusion Forum	22	• IOP Conference Series: Materials Science and Engineering	1
• Ferrous Metallurgy	17	• Materials Science	1
• Izvestiya vusov. Ferrous metallurgy	13	• Computational methods and programming	1
• Metallurgist	12	• New Mathematics and Natural Computation	1
• Steel	6	• Israel Journal of Chemistry	1
• Steel in Translation	5	• Problems of ferrous metallurgy and material science	1
• Advanced Materials Research	4	Journal of Nano Research	1
• Melts	4	Chief engineer	1
• Steel in the USSR	3	• Bulletin of the Magnitogorsk State Technical University named after G.I. Nosov	1
• Applied Mechanics and Materials	3	Gornyi Zhurnal	1
• Journal of Physical Chemistry	3	• AISTech 2016 Proceedings	1
• IFAC Proceedings Volumes	3	• Pure and Applied Chemistry	1
• International Journal of Nanoelectronics and Materials	2	• Journal of Materials Science and Engineering B	1
• Ferrous metals	2	• Journal of Environmental Science and Engineering B	1
• Energy analysis and energy efficiency	2	Journal of Material Sciences	1

I. Publications in Journals with Peer Review:

• E3S Web of Conferences	1	• Titanium	1
• Complex use of mineral raw materials	1		

II. Chapters and Collective Books:	(Total 8)
III. Filed patents:	(Total 13)
IV. Publications in collection of works	(Total 36)
V. Publications in the proceedings of conferences	(Total 114)
VI. Abstracts	(Total 73)

I. Publications in Journals with Peer Review.

- On the connection of state indicators with the outputs of the blast furnace process. L.I. Krivolapova, E.L. Sukhanov, V.P. Avdeev, A.N. Dmitriev. Izvestiya vusov. Ferrous metallurgy, 10, 1976, 171-175.
- Joint extraction of information from indicators of the state and outputs of the blast furnace process.
 E.L. Sukhanov, V.P. Avdeev, L.I. Krivolapova, A.N. Dmitriev. Izvestiya vusov. Ferrous metallurgy, 12, 1976, 147-149.
- Combined extraction of information from indices of the state and output of the blast-furnace process. E.L. Sukhanov, V.P. Avdeefv, L.I. Krivolapova, A.N. Dmitriev. Steel in the USSR, 6 (12), 1976, 653-654.
- Methodology for calculating the temperature field of a blast furnace taking into account the uneven movement of the charge and gas flows. A.N. Dmitriev, V.B. Shcherbatsky, E.L. Sukhanov, B.I. Kitaev, V.S. Shvydkiy. Izvestiya vusov. Ferrous metallurgy, 8, 1979, 28-32.
- Procedure for calculating blast-furnace temperature field with allowance for non-uniformity of movement of charge and gas streams. A.N. Dmitriev, V.B. Shcherbatsky, E.L. Sukhanov, B.I. Kitaev, V.S. Shvydkiy. Steel in the USSR, 9 (8), 1979, 386-388.
- Methodology for calculating the temperature field of a blast furnace taking into account the uneven movement of the charge and gas flows. A.N. Dmitriev, V.B. Shcherbatsky, E.L. Sukhanov, B.I. Kitaev, V.S. Shvydkiy. Steel in the USSR, 1983.
- Equilibrium states and consumption of coke in a blast furnace. Yu.V. Fedulov, I.N. Zakharov, Yu.V. Yakovlev, G.P. Lezhnev, A.N. Dmitriev. Steel, 1, 1981, 13-18.
- Influence of the content of ferrous oxide and sulfur in the agglomerate on the technical and economic performance of blast furnaces. V.V. Kashin, V.Kh. Vakulenko, L.B. Soloviev, V.A. Kobelev, A.N. Dmitriev. Ferrous metallurgy, 6, 1986, 44-46.
- Blast furnace smelting of agglomerate from Lisakovsky concentrate with a reduced mass fraction of iron monoxide. V.A. Mirko, A.N. Dmitriev, V.N. Belyakov, V.K. Golovkin, A.V. Malygin, S.V. Shavrin. Steel, 9, 1989, 9-13.
- A two-dimensional mathematical model of blast furnace process. A.N. Dmitriev, S.V. Shavrin. Steel, 12, 1996, 7-13.

- Two-dimensional mathematical model of the blast-furnace process. A.N. Dmitriev, S.V. Shavrin. Steel in Translation, 26 (12), 1996, 1-5.
- 12. The nature of temperature and velocity fields during injection of a heat carrier gas into a blast furnace shaft. A.N. Dmitriev, S.V. Shavrin. Izvestiya vusov. Ferrous metallurgy, 11, 1996, 87-88.
- Influence of circumferential irregularity on the nature of temperature fields in a blast furnace. A.N. Dmitriev, S.V. Shavrin. Izvestiya vusov. Ferrous metallurgy, 1, 1997, 73.
- 14. Influence of uneven distribution of coal dust over tuyeres on the nature of temperature fields in a blast furnace. A.N. Dmitriev, S.V. Shavrin. Izvestiya vusov. Ferrous metallurgy, 5, 1997, 74-75.
- 15. Influence of oxygen content in blast on the nature of temperature fields in a blast furnace when coal dust is blown, A.N. Dmitriev, S.V. Shavrin. Izvestiya vusov. Ferrous metallurgy, 7, 1997, 81-82.
- The role of blast furnace structural elements in the formation of temperature fields and cohesion zones. S.D. Abramov, G.G. Gavrilyuk, A.N. Dmitriev, N.V. Tretyakov, S.V. Shavrin. Ferrous metals, 10, 1997, 7-8.
- 17. Investigation of temperature and velocity fields using a two-dimensional mathematical model using new technical solutions. A.N. Dmitriev, S.V. Shavrin. Steel, 5, 1998, 5-8.
- 18. Investigation of temperature and velocity fields with aid of two-dimensional model when using new engineering solutions. A.N. Dmitriev, S.V. Shavrin. Steel in Translation, 28 (5), 1998, 5-10.
- Analysis of anomalous phenomena of blast furnace smelting. A.N. Dmitriev, S.V. Shavrin. Steel, 8, 1998, 13-16.
- Analysis and improvement of the blast-furnace process using mathematical models. S.D. Abramov, A.N. Dmitriev, Yu.A. Lekontsev, S.V. Shavrin. Ferrous metals, 7-8, 1998, 32-37.
- Evaluation of the efficiency of obtaining highly metalized concentrate from Bakal siderite by direct reduction in a rotary kiln. A.S. Vusikhis, V.I. Dvinin, A.N. Dmitriev, V.V. Kashin, L.I. Leontiev, R.A. Nafikov, A.V. Chentsov, S.V. Shavrin. Metallurgist, 1, 2001, 37-39.
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- Production and scientific potential of the Ural metallurgy. A.N. Dmitriev, S.V. Shavrin, V.Ya. Bulanov. Metallurgist, 8, 2001, 30-31.
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- 26. Calculation of changes in the composition of a multicomponent oxide melt in the process of its reduction with gas in a bubbling layer. A.S. Vusikhis, A.N. Dmitriev, L.I. Leontiev, S.V. Shavrin. Journal of Physical Chemistry, 75/10, 2001, 1908-1910.

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- 29. New technique in blast-furnace analysis. V.S. Shavrin, A.N. Dmitriev, D.Z. Kudinov, S.V. Shavrin. Steel in Translation, 33 (1), 2003, 6-8.
- A technology for producing agglomerate from a concentrate of poor manganese ores for smelting ferrosilicon manganese. A.N. Dmitriev, V.A. Solomakhin, V.V. Kashin, V.V. Verushkin. Metallurg, 3, 2003, 36-38.
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- 39. Perspective developments in the field of using complex iron ore raw materials. A.N. Dmitriev. Energy analysis and energy efficiency, 3, 2004, 48-49.
- 40. Mathematical modeling of two-dimensional processes in a blast furnace. A.N. Dmitriev. Computational methods and programming, 5-1, 2004, 252-267.
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 A.N. Dmitriev, Ya.S. Mukhitdinov, V.R. Rakhimov, F.G. Sitdikov. Metallurgist, 49 (1/2), 2005, 41-43.
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- 48. Mathematical model of sintering of powder solids. A.N. Dmitriev, V.I. Bulanov. Defect and Diffusion Forum, 258-260, 2006, 101-106.
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- 67. Monitoring the Wear of the Refractory Lining in the Blast Furnace Hearth. A.N. Dmitriev, Yu.A. Chesnokov, K. Chen, O.Yu. Ivanov, M.O. Zolotykh. Steel in Translation, 43 (11), 2013, 732-739.
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- 75. Development of Metallurgical Processing Technology the Titanomagnetite Concentrate of the Tebinbulak Deposit. A.N. Dmitriev, O.Yu. Sheshukov, G.I. Gazaleeva, Yu.A. Chesnokov, E.V. Bratygin, I.V. Nekrasov, G.Yu. Vitkina. Applied Mechanics and Materials, 670-671, 2014, 283-289.
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- 84. Current state, development prospects and development of the base of titanium-containing ores in the Urals. A.N. Dmitriev. Ferrous metallurgy, 12, 2015, 36-40.
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- 106. Comparative technological analysis of control systems for the flare-up of the refractory lining of a blast furnace hearth. A.N. Dmitriev, M.O. Zolotykh, Chen K., G.Yu. Vitkina. Ferrous metallurgy, 8, 2018, 82-91.
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- 73. Complex iron ore raw materials of the Urals the basis for the production of natural-alloyed steel. A.N. Dmitriev. Abstracts of the scientific-practical conference "Phase and structural transformations in steel and alloys" (FSPS 2020), Ekaterinburg, 2020.

<u>List of Conferences, Communications and Seminars</u> (December 2020)

A. Plenaries and Opening Lectures Invited in Major Conferences

- Diagnostics of the thermal state of a blast furnace by generalized parameters using a computer. 5th International Conference of Blast Furnaces "VZhKG-1975". Ostrava (Czechoslovakia). September 1975.
- 2. Taking into account the non-stationarity of the blast-furnace process in the predictive assessment of the thermal state of the furnace. 5th STC UPI. Sverdlovsk (USSR). 1976.
- Development of automated methods for monitoring and controlling the blast furnace process. Conference "Improving the efficiency of automation of ferrous metallurgy objects". Sverdlovsk (USSR). 1976.
- 4. Development and testing of a model of the thermal regime of blast-furnace smelting. 6th International conference of blast furnaces "Vitkovice-1979". Ostrava (Czechoslovakia). 1979.
- Description of heating of a layer of pellets containing carbon by natural gas conversion products. Symposium on kinetics, thermodynamics and the mechanism of recovery processes. Moscow (USSR). 1986.
- Ways of effective use of secondary vanadium-containing materials. Fifth All-Union Meeting on Chemistry, Technology and Application of Vanadium Compounds. Sverdlovsk, Chusovoy (USSR). 1987.

- Study of the location and shape of the cohesion zone in a blast furnace by the method of mathematical modeling. Scientific and technological complex "Ways of improving the gas mechanics of metallurgical charges". Karaganda (USSR). 1987.
- 8. Influence of radial non-uniformity on heat transfer and formation of a cohesion zone in a blast furnace. VNTK "Physicochemistry of metal reduction processes". Dnepropetrovsk (USSR). 1988.
- Machine and industrial experiment to study the influence of the reducibility of iron ore raw materials on the indicators of blast furnace smelting. 8th International Conference of Blast Furnaces "Vitkovice 1989". Czechoslovakia. 1989.
- Mechanical and industrial experiment in connection with the influence of the reducibility of iron ore raw materials on the indicators of blast furnace smelting. 8th International Conference of High Vocational "Vitkovice 1989". Czechoslovakia. 1989.
- 11. Blast-furnace smelting of titanomagnetites using high-grade heat. Sixth All-Union Meeting on Chemistry, Technology and Application of Vanadium Compounds. N. Tagil (Russia). 1990.
- Determination of the plasticity zone during melting of titanomagnetites by the method of mathematical modeling. Sixth All-Union Meeting on Chemistry, Technology and Application of Vanadium Compounds. N. Tagil (Russia). 1990.
- 13. Structure, metallurgical properties and blast-furnace smelting of agglomerates with a reduced mass fraction of iron monoxide. National scientific and technical conference with international participation "New and improved technologies for agglomeration and production of cast iron and ferroalloys". Varna (Bulgaria). 1990.
- 14. Improving the quality of iron ore raw materials and increasing the efficiency of blast-furnace smelting. Scientific and technological achievement TsNTI. Sverdlovsk (Russia). 1991.
- 15. Information support for the computing complex of the blast furnace. Scientific and technical achievement, TsNTI. Sverdlovsk (Russia). 1991.
- Investigation of the nature of temperature fields during melting of titanomagnetites with injection of coal dust. VII All-Russian meeting on chemistry, technology and the use of vanadium compounds. Chusovoy (Russia). 1996.
- 17. Analysis of the effectiveness of various measures in the smelting of vanadium iron. VII All-Russian meeting on chemistry, technology and the use of vanadium compounds. Chusovoy (Russia). 1996.
- Influence of different basic raw materials from KachGOK concentrate on the position of the cohesion zone. VII All-Russian meeting on chemistry, technology and the use of vanadium compounds. Chusovoy (Russia). 1996.
- 19. Investigation of the influence of the blast furnace profile on the temperature and gas velocity fields when melting titanomagnetites. VII All-Russian meeting on chemistry, technology and the use of vanadium compounds. Chusovoy (Russia). 1996.
- Development of a technology for agglomeration of metallurgical sludge using peat as a dehydrator. Second International Exhibition and Scientific and Technical Conference "Technogen-98". Ekaterinburg (Russia). 1998.

- 21. Using the laws of heat and mass transfer and gas dynamics in the development of mathematical models and solving practical problems of blast-furnace smelting. International Conference "Scientific schools UPI-USTU 2 with the creative heritage of B.I. Kitaev into the XXI century. Ekaterinburg (Russia). 1998.
- 22. Pyrometallurgical dressing of siderite ores of the Bakalsky deposit. International scientific and technical conference "Ural metallurgy at the turn of the millennium". Chelyabinsk (Russia). 1999.
- 23. Development and study of pyrometallurgical processes for processing complex iron ore raw materials using mathematical and experimental modeling. International scientific and technical conference "Ural metallurgy at the turn of the millennium". Chelyabinsk (Russia). 1999.
- 24. Indicators of blast-furnace smelting of siderite ores in different variants of their preparation. International scientific and technical conference "Ural metallurgy at the turn of the millennium". Chelyabinsk (Russia). 1999.
- 25. Loading simulation and heat and mass transfer processes in a blast furnace. International conference "Thermal physics and informatics in metallurgy: achievements and problems". Ekaterinburg (Russia). 2000.
- 26. Comparative analysis of indicators of blast-furnace smelting with the addition of siderite ores to the charge in different variants of their preparation. International conference "Thermal physics and informatics in metallurgy: achievements and problems". Ekaterinburg (Russia). 2000.
- 27. The role of modeling in the development and improvement of pyrometallurgical processes for the processing of complex raw materials in the Urals. International conference "Thermal physics and informatics in metallurgy: achievements and problems". Ekaterinburg (Russia). 2000.
- Technical and economic efficiency of using complex technological parameters (KTP). VIII All-Russian conference "Chemistry, technology and application of vanadium". Chusovoy (Russia). 2000.
- 29. On the development of a closed system for automatic control of the thermal state of a blast furnace. VIII All-Russian conference "Chemistry, technology and application of vanadium". Chusovoy (Russia). 2000.
- Technical and economic efficiency of using complex technological parameters (KTP). VIII All-Russian conference "Chemistry, technology and application of vanadium". Ekaterinburg (Russia). 2000.
- On the development of a closed-loop system for automatic control of the thermal state of a blast furnace. VIII All-Russian conference "Chemistry, technology and application of vanadium". Ekaterinburg (Russia). 2000.
- 32. Processing of metallurgical sludge containing zinc. International exhibition "Uralecology. Technogen. Metallurgy-2001". Ekaterinburg (Russia). 2001.
- 33. Kinetic features of the processes of reduction of metal oxides from the melt with a reducing gas in a bubbling layer. All-Russian scientific and practical conference "Modeling, software and scienceintensive technologies in metallurgy". Novokuznetsk (Russia). 2001.

- 34. The use of mathematical modeling in the development and improvement of pyrometallurgical processes for the processing of complex raw materials. All-Russian scientific and practical conference "Modeling, software and science-intensive technologies in metallurgy". Novokuznetsk (Russia). 2001.
- 35. Physicochemical properties of titanium slag. X Russian conference "Structure and properties of metallic and slag melts". Ekaterinburg, Chelyabinsk (Russia). 2001.
- 36. Mathematical modeling of gas bubbling of liquid in metallurgical processes. 6th Russian seminar "Computer modeling of physical and chemical properties of glasses and melts". Kurgan (Russia). 2002.
- 37. New elements in the study of blast furnace melting phenomena. International scientific and technical conference "Theory and practice of cast iron production". Krivoy Rog (Ukraine). 2004.
- 38. The study of liquid and gas phases interaction during the reduction of metal oxides from the melts by gas reductant in bubbled layer. Third International Conference on Mathematical Modeling and Computer Simulation of Material Technologies (MMT-2004). Ariel (Israel). 2004.
- 39. Development of mathematical methods of the analysis and modelling of the phenomena in a blast furnace. Third International Conference on Mathematical Modeling and Computer Simulation of Material Technologies (MMT-2004). Ariel (Israel). 2004.
- 40. Modeling of the process of joint reduction of Nickel and iron from oxide melts by gas in a bubbled layer. XI Russian conference "Structure and properties of metal and slag melts". Ekaterinburg, Chelyabinsk (Russia). 2004.
- 41. Kinetics of the reaction of chlorine interaction with metal oxides. XI Russian conference "Structure and properties of metal and slag melts". Ekaterinburg, Chelyabinsk (Russia). 2004.
- 42. The role of mathematical modeling in the processing of titanomagnetite ores. IX All-Russian conference "Chemistry, technology and application of vanadium". Tula (Russia). 2004.
- 43. Thermodynamic analysis of the interaction of chlorine with oxides of blast furnace slags. XI Russian conference "Structure and properties of metal and slag melts". Ekaterinburg, Chelyabinsk (Russia). 2004.
- 44. Modeling of input of chlorine compounds into a slag melt. XI Russian conference "Structure and properties of metal and slag melts". Ekaterinburg, Chelyabinsk (Russia). 2004.
- 45. Direct production of iron (state, prospects, directions). International scientific and technical conference "Progressive technologies in steel metallurgy: XXI century". Donetsk (Ukraine). 2004.
- 46. High technologies in metallurgy of the XXI century. Third international scientific and practical conference of the Regional Ural Branch of the Academy of Engineering Sciences named after A.M. Prokhorov "At the forefront of science and engineering creativity". Ekaterinburg (Russia). 2004.
- 47. Investigation of the processes of reduction of metal oxides from a melt by a reducing gas in a bubbling layer. Third international scientific and practical conference of the Regional Ural Branch of the Academy of Engineering Sciences named after A.M. Prokhorov "At the forefront of science and engineering creativity". Ekaterinburg (Russia). 2004.

- 48. Calculation of temperature fields of blast furnace No. 3 of OKhMK during the blowing period. Third international scientific and practical conference of the Regional Ural Branch of the Academy of Engineering Sciences named after A.M. Prokhorov "At the forefront of science and engineering creativity". Ekaterinburg (Russia). 2004.
- 49. The use of mathematical modeling in the development and improvement of pyrometallurgical processes for processing complex raw materials. Third international scientific and practical conference of the Regional Ural Branch of the Academy of Engineering Sciences named after A.M. Prokhorov "At the forefront of science and engineering creativity". Ekaterinburg (Russia). 2004.
- 50. Promising developments in the use of complex raw materials. Conference "Physical chemistry and technology in metallurgy". Ekaterinburg (Russia). 2005.
- Thermodynamic modeling of behavior of molybdenum at the low-temperature plasma conditions. Conference "Russian International conference on Chemical Thermodynamics". Moscow (Russia). 2005.
- 52. Method of studying of multicomponent oxide systems interaction with the gas-reducer. Conference "Russian International conference on Chemical Thermodynamics". Moscow (Russia). 2005.
- 53. Thermodynamic modeling of the interaction of molybdenum with sulfur, oxygen, carbon, hydrogen and other components in low-temperature plasma. XI Russian conference "Thermophysical properties of substances". St. Petersburg (Russia). 2005.
- 54. Development of mathematical methods for the analysis of phenomena in metallurgical units. Conference "Physical chemistry and technology in metallurgy". Ekaterinburg (Russia). 2005.
- 55. Thermodynamic modeling of the interaction of molybdenum with argon, oxygen, hydrogen and nitrogen in low-temperature plasma. 7th international practical conference-exhibition "Technology of repair, restoration and hardening of parts of machines, mechanisms, equipment, tools and technological equipment". St. Petersburg (Russia). 2005.
- 56. Theoretical base and method of studying of liquid and gas phases interaction during the reduction of metal oxides from the melts by gas in bubbled layer. Fourth Israeli-Russian bi-national Workshop "The optimization of composition, structure and properties of metals, oxides, composites, nano- and amorphous materials". Jerusalem, Tel Aviv (Israel). 2005.
- 57. Activation energy of powder materials consolidation process of systems Fe-Ni-B, Fe-Ni-B-C, obtained by liquid phase sintering. First International Conference on Diffusion in Solids and Liquids DSL-2005. Aveiro (Portugal). 2005.
- 58. Heat and mass transfer in blast furnace in conditions of non-uniform movement of material and gas. A.N. Dmitriev. First International Conference on Diffusion in Solids and Liquids DSL-2005. Aveiro (Portugal). 2005.
- 59. Comparative analysis of carbonate iron ore reduction results at various roasting conditions. First International Conference on Diffusion in Solids and Liquids DSL-2005. Aveiro (Portugal). 2005.
- 60. Analysis of the properties of roasted molybdenum concentrate. Conference "Modern technologies of development of mineral resources". Krasnoyarsk (Russia). 2005.

- Liquid and gas interaction during reduction in bubbled layer. European Metallurgical Conference EMC 2005. Dresden (Germany). 2005.
- 62. Development and implementation of computer methods for analyzing the operation of blast furnaces. I scientific-practical conference dedicated to the 85th anniversary of the formation of GOU VPO USTU-UPI and the metallurgical faculty. Ekaterinburg (Russia). 2005.
- 63. On the work of the COMES Association for 2000-2005. General meeting of the members of the Academy "Academy of Engineering Sciences in the Urals: scientific, practical and organizational activities at the turn of the century". Ekaterinburg (Russia). 2005.
- 64. A complex mathematical model of a blast furnace process and its application for solving practical problems. General meeting of the members of the Academy "Academy of Engineering Sciences in the Urals: scientific, practical and organizational activities at the turn of the century". Ekaterinburg (Russia). 2005.
- 65. New methods for studying the blast furnace process. International scientific-practical conference "Metallurgy of Russia at the turn of the XXI century". Novokuznetsk (Russia). 2005.
- Development of mathematical model of blast furnace smelting. International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 2005). Bridgeport (USA). 2005.
- 67. The study of heat and mass transfer phenomena in the shaft furnace on the basis of the twodimensional mathematical model of the gas dynamics. 18th National and 7th ISHMT-ASME Heat and Mass Transfer Conference. Guwahati (India). 2006.
- 68. Development of the theory of heat transfer in a blast furnace. III International Scientific and Practical Conference "Metallurgical Heat Engineering: History, Present State, Future. On the centenary of the birth of M.A. Glinkov". Moscow (Russia). 2006.
- 69. Viscosity polytherms of the B₂O₃-CaO-NiO system. First Russian Scientific Forum Demidov Readings "Moscow - Yekaterinburg - Tomsk" "Demidov Readings in the Urals". Ekaterinburg (Russia). 2006.
- 70. Modeling the reduction of nickel oxide from the B₂O₃-CaO-NiO melt with hydrogen in a bubbling layer. First Russian Scientific Forum Demidov Readings "Moscow Yekaterinburg Tomsk" "Demidov Readings in the Urals". Ekaterinburg (Russia). 2006.
- 71. Application of new methods for the analysis of the blast-furnace process. Second International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education", St. Petersburg (Russia). 2006.
- 72. X-ray study of products remaining after sublimation of oxidized molybdenum concentrate, depending on the sublimation time. Conference "Modern technologies for the development of mineral resources". Krasnoyarsk (Russia). 2006.

- 73. Use of condition of thermodynamic equilibrium for development of mathematical model of blast furnace smelting. Sohn International Symposium on Advanced Processing of Metals and Materials: Principles, Technologies and Industrial Practice. San Diego (USA). 2006.
- 74. Influence of pressure on two-dimensional character of the phenomena in the blast furnace. Fourth International Conference on Mathematical Modeling and Computer Simulation of Material Technologies (MMT-2006). Ariel (Israel). 2006.
- 75. Thermodynamics modeling of iron oxide reduction by hydrogen from the B2O3-CaO-FeO melt in bubbled layer. Fourth International Conference on Mathematical Modeling and Computer Simulation of Material Technologies (MMT-2006). Ariel (Israel). 2006.
- 76. Mathematical modeling of the reduction of nickel oxide from the melt with hydrogen in a bubbling layer. 8th Russian seminar "Computer modeling of physical and chemical properties of glasses and melts". Kurgan (Russia). 2006.
- 77. Use of pulverized coal in blast-furnace smelting. International scientific-practical conference "Fuel and metallurgical complex". Ekaterinburg (Russia). 2007.
- 78. Development of the theory of heat transfer and recovery in blast furnaces. 80th anniversary of the birth of prof. Yu.G. Yaroshenko. Ekaterinburg (Russia). 2007.
- 79. Analysis of a representative sample of talcomagnesite ore flotation tailings. Fourth International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2007.
- 80. Pulverized coal fuel as the only alternative to substitutes for coke in blast-furnace smelting Fourth International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2007.
- 81. Modeling a blast furnace process when dividing the dry zone of the furnace into rings of equal size. Fifth International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2008.
- Reduction kinetics of iron ore materials by gases. Fourth International Conference on Diffusion in Solids and Liquids DSL-2008. Barcelona (Spain). 2008.
- Mathematical model of homogenization process of alloying elements in binary metal nanosystems. Fourth International Conference on Diffusion in Solids and Liquids DSL-2008. Barcelona (Spain). 2008.
- 84. Research of extraction of chromium from ore of Serov deposit. Sixth international scientificpractical conference "Research, development and application of high technologies in industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2008.

- 85. Mathematical modelling of blast furnace process at smelting of non-traditional raw materials. Fifth International Conference on Mathematical Modeling and Computer Simulation of Material Technologies (MMT-2008). Ariel (Israel), 2008.
- 86. Mathematical modeling of the blast-furnace process in order to solve practical problems. International scientific-practical conference "Modern issues of blast-furnace production". Dnepropetrovsk (Ukraine). 2008.
- 87. Development of the Theory of Heat and Mass Transfer in Blast Furnaces and Solution of Practical Problems of Blast Furnace Smelting. International Scientific and Practical Conference "The Creative Legacy of B.I. Kitaev". Ekaterinburg (Russia). 2009.
- 88. The quality of iron ore and coke is a reserve for improving blast-furnace smelting technology. Seventh International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2009.
- 89. Increasing the efficiency of blast-furnace smelting by microalloying agglomerates with barium and strontium. Seventh International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2009.
- Influence of Elements Oxides Microadditives with Major Cationic Radius on Properties of Silicate Bundle. 5th International Conference on Diffusion in Solids and Liquids DSL-2009. Rome (Italy). 2009.
- Mathematical Model of Forecasting of Coke Quality Indicators. A.N. Dmitriev, Yu.A. Chesnokov, G.Yu. Arzhadeeva. 5th International Conference on Diffusion in Solids and Liquids DSL-2009. Rome (Italy). 2009.
- 92. Mathematical modeling of the kinetic characteristics of blast in a blast furnace. G.Yu. Arzhadeeva, A.N. Dmitriev, Yu.A. Chesnokov. Eighth International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2009.
- 93. Research of work of blast furnaces with blowing of coal dust. International Scientific and Practical Conference "The Creative Legacy of B.I. Kitaev". Ekaterinburg (Russia). 2009.
- 94. Environmental and metallurgical aspects of processing of technogenic and secondary resources. All-Russian conference "Research in the field of processing and disposal of technogenic formations and waste" with elements of a school for young scientists. Ekaterinburg (Russia). 2009.
- 95. A new waste-free scheme for processing brown-chromium ores of the Serov deposit. All-Russian conference "Research in the field of processing and utilization of technogenic formations and waste" with elements of a school for young scientists. Ekaterinburg (Russia). 2009.
- 96. Investigation of the influence of the qualitative characteristics of iron ore raw materials on the indicators of blast furnace smelting. Ninth International Scientific and Practical Conference

"Research, Development and Application of High Technologies in Industry. High technologies, basic and applied research, education". St. Petersburg (Russia). 2010.

- Mathematical models and their application for solving practical problems of blast-furnace smelting. International Congress of Blast Furnaces "Blast-furnace production - XXI century". Moscow (Russia). 2010.
- 98. Waste-free technology for processing Serov brown-chromium ores. International Correspondence Conference dedicated to the 15th anniversary of the creation of the Regional Ural Branch of the Academy of Engineering Sciences named A.M. Prokhorov "Engineering support for innovation and modernization". Ekaterinburg (Russia). 2010.
- 99. Mathematical model of forecasting the iron ore materials quality indicators. 6th International Conference on Diffusion in Solids and Liquids DSL-2010. Paris (France). 2010.
- 100. Mathematical model of powder sintering with nano- and microadditives. 6th International Conference on Diffusion in Solids and Liquids DSL-2010. Paris (France). 2010.
- 101. Investigation of the influence of the morphology of initial coals on the quality and technical and economic indicators of coke production. Tenth International Scientific and Practical Conference "Research, Development and Application of High Technologies in Industry. High technologies and basic research". St. Petersburg (Russia). 2010.
- 102. Coke and iron ore materials kinetic characteristics and quantitative indicators of blast furnace smelting. 7th International Conference on Diffusion in Solids and Liquids DSL-2011. Algarve (Portugal). 2011.
- 103. Promising developments in the field of control and management of blast-furnace smelting. Scientific and technical conference "Problems and prospects for the development of metallurgy and mechanical engineering with the use of completed fundamental research and R&D". Ekaterinburg (Russia). 2011.
- 104. Mathematical modelling of a blast furnace smelting by improving the iron ore raw materials and coke. Tenth Russian-Israeli Bi-National Workshop "The optimization of the composition, structure and properties of metals, oxides, composites, nano and amorphous materials". Jerusalem (Israel). 2011.
- 105. Mathematical modeling of forecasting the iron ore materials and coke quality indicators. Fray International Symposium on Metals and Materials Processing in a Clean Environment: Principles, Technologies and Industrial Practice. Cancun (Mexico). 2011.
- 106. Current state and prospects of mathematical modeling of blast furnace smelting. Fray International Symposium on Metals and Materials Processing in a Clean Environment: Principles, Technologies and Industrial Practice. Cancun (Mexico). 2011.
- 107. Mathematical Modeling of Blast Furnace Smelting. Fray International Symposium on Metals and Materials Processing in a Clean Environment: Principles, Technologies and Industrial Practice. Cancun (Mexico). 2011.

- 108. Methodical basis of investigation of influence of the iron ore materials and coke metallurgical characteristics on the blast furnace smelting efficiency. 2nd/2012 International Conference on Materials and Products Manufacturing Technology (MPMT 2012). Guangzhou (China). 2012.
- 109. Assessment of the influence of the physical and chemical properties of the iron ore part of the charge on the efficiency of blast furnace smelting. International Scientific and Practical Conference "Theory and Practice of Thermal Processes in Metallurgy". Ekaterinburg (Russia). 2012.
- 110. Information technologies in the processing of iron ore raw materials. All-Russian scientific conference with international participation "Days of Earth Sciences in the Urals", round table "Mining and metallurgical complex of the Urals modern problems and ways to solve them". Ekaterinburg (Russia). 2012.
- 111. Technological problems and prospects for the development of the mining complex of the Urals. All-Russian scientific conference with international participation "Days of Earth Sciences in the Urals", round table "Mining and metallurgical complex of the Urals modern problems and ways to solve them". Ekaterinburg (Russia). 2012.
- 112. Prospects for the use of titanium-containing raw materials from the Urals in metallurgical processes. All-Russian scientific conference with international participation "Days of Earth Sciences in the Urals", round table "Mining and metallurgical complex of the Urals modern problems and ways to solve them". Ekaterinburg (Russia). 2012.
- 113. The reducibility of the iron ore materials as instrument of the coke consumption decrease in the blast furnace smelting. 8th International Conference on Diffusion in Solids and Liquids DSL-2011. Istanbul (Turkey). 2012.
- Research of titanomagnetite ores and concentrates of JSC EVRAZ KGOK. 5th Ural Mining Forum, Ekaterinburg (Russia). 2013.
- 115. Research of titanomagnetite ores and concentrates of JSC EVRAZ KGOK. Scientificpractical conference "Technological platform "Solid minerals": technological and environmental problems of development of natural and man-made deposits". Ekaterinburg (Russia). 2013.
- 116. Investigation of the influence of metallurgical characteristics of iron ore raw materials and coke on the efficiency of blast-furnace smelting. II All-Russian scientific and practical conference of students, graduate students and young scientists (TIM'2013) with international participation. Ekaterinburg (Russia). 2013.
- 117. Development of Processing Technology the Leucoxene Concentrates. 9th International Conference on Diffusion in Solids and Liquids DSL-2013. Madrid (Spain). 2013.
- 118. The use of modern information technologies for the analysis and control of the blastfurnace process. Scientific and technical conference "Problems and prospects for the development of metallurgy and mechanical engineering with the use of completed fundamental research and R&D". Ekaterinburg (Russia). 2013.

- 119. Control system of the state of the refractory lining of the hearth of a blast furnace. IX All-Russian scientific and practical conference "Automation systems in education, science and production". Novokuznetsk (Russia). 2013.
- 120. Metallurgical evaluation of ores and concentrates of the Kachkanarsky deposit. III All-Russian scientific-practical conference of students, graduate students and young scientists (TIM'2014) with international participation, dedicated to the 150th anniversary of the birth of Vladimir Efimovich Grum-Grzhimailo. Ekaterinburg (Russia). 2014.
- 121. On the design of blast furnaces V.E. Grum-Grzhimailo. III All-Russian scientific-practical conference of students, graduate students and young scientists (TIM'2014) with international participation, dedicated to the 150th anniversary of the birth of Vladimir Efimovich Grum-Grzhimailo. Ekaterinburg (Russia). 2014.
- 122. Assessment of the reliability of the signal of temperature sensors located in the lining of the blast furnace hearth. III All-Russian scientific-practical conference of students, graduate students and young scientists (TIM'2014) with international participation, dedicated to the 150th anniversary of the birth of Vladimir Efimovich Grum-Grzhimailo. Ekaterinburg (Russia). 2014.
- 123. Modern information technologies in blast-furnace production. Sixth International Industrial Forum "Reconstruction of industrial enterprises - breakthrough technologies in metallurgy and mechanical engineering". Chelyabinsk (Russia). 2014.
- 124. Development of technology for metallurgical processing of titanium-magnetite concentrate from Tebinbulak deposit using an intermediate product of enrichment. Congress with international participation and elements of the school of young scientists "Fundamental research and applied development of processing and disposal of technogenic formations" (Technogen - 2014). Ekaterinburg (Russia). 2014.
- 125. Ore base and proposed technologies for creating a pigment titanium dioxide production. International scientific-practical conference "Modern trends in the theory and practice of mining and processing of mineral raw materials". Ekaterinburg (Russia). 2014.
- 126. Titanium Ores and Concentrates and Their Treatment. Sustainable Industrial Processing Summit, Shechtman International Symposium. Cancun (Mexico). 2014.
- 127. Mathematical Modelling and Practical Tasks Solution of Blast Furnace Smelting and Adjacent Repartitions Sustainable Industrial Processing Summit, Shechtman International Symposium. Cancun (Mexico). 2014.
- 128. Features of oxidizing roasting and reducing melting of titancontaining iron ore concentrates. 10th International Conference on Diffusion in Solids and Liquids DSL-2014. Paris (France). 2014.
- 129. Pigmentary titan dioxide processing from leucoxene and perovskite concentrates. 10th International Conference on Diffusion in Solids and Liquids DSL-2014. Paris (France). 2014.
- Use of Information System "Interactive Calculations in Ferrous Metallurgy". Sustainable Industrial Processing Summit, Shechtman International Symposium. Cancun (Mexico). 2014.

- 131. Adaptation of the mathematical model of the height of the blast furnace hearth lining to the object of diagnostics. IV All-Russian scientific-practical conference of students, postgraduates and young scientists "Heat engineering and informatics in education, science and production" (TIM'2015) "Heat engineering and informatics in education, science and production". Ekaterinburg (Russia). 2015.
- 132. Assessment of the possibility of processing low-titanium and high-titanium concentrates from the Gusevogorskoye deposit according to the "blast furnace - converter" scheme. IV All-Russian scientific-practical conference of students, postgraduates and young scientists "Heat engineering and informatics in education, science and production" (TIM'2015) "Heat engineering and informatics in education, science and production". Ekaterinburg (Russia). 2015.
- 133. Development of a mathematical model of the height of the blast furnace hearth lining and the introduction of software based on this model. IV Intern. interact. scientific-practical conf. "Innovations in materials science and metallurgy". Ekaterinburg (Russia). 2015.
- 134. The monitoring system of the fireproof lining wear in the blast furnace hearth. METEC & 2nd ESTAD. Düsseldorf (Germany). 2015.
- 135. Current state, prospects for the development and development of the base of titaniumcontaining ores in the Urals. Scientific-practical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2015.
- 136. Scientific problems of improving information-modeling systems in metallurgy. Scientificpractical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2015.
- 137. Study of the metallurgical properties of titanium-magnetite raw materials. Scientificpractical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2015.
- 138. Analysis of readings of temperature sensors located in the masonry of the hearth of furnace No. 5 NTMK. Scientific-practical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2015.
- 139. Using information technologies in the development and improvement of pyrometallurgical processing of iron ore raw materials. IV All-Russian scientific and practical conference with international participation "Modeling and high technology information technologies in technical and socio-economic systems". Novokuznetsk (Russia). 2016.
- Extraction possibilities of the iron, titanium and vanadium from titanium-containing iron ores. SIPS 2015: Gudenau Intl. Symp. "Iron and Steel Making". Montreal (Canada). 2015.

- 141. The thermophysical bases of control of the fireproof lining wear in the blast furnace hearth. SIPS 2015: Gudenau Intl. Symp. "Iron and Steel Making". Montreal (Canada). 2015.
- 142. Information system interactive calculations in ferrous metallurgy. SIPS 2015: Gudenau Intl. Symp. "Iron and Steel Making". Montreal (Canada). 2015.
- 143. The reduction processes of the titanium containing iron ores treatment. 11th International Conference on Diffusion in Solids and Liquids DSL-2015. Munich (Germany). 2015.
- 144. Choice of the sampling interval of the temperature sensor signal in the blast furnace state monitoring system. I International conference "Computer analysis of images: Intelligent solutions in industrial networks (CAI-2016)". Ekaterinburg (Russia). 2016.
- 145. The mathematical model of thermal processes in a hearth laying of the blast furnaces of China. 2016-Sustainable Industrial Processing Summit & Exhibition (CD-Proceedings). Hainan-Island (China). 2016.
- 146. State-of-Art and Physicochemical Bases of Pyrometallurgical Processing of Titanomagnetite Raw Materials. 2016-Sustainable Industrial Processing Summit & Exhibition (CD-Proceedings). Hainan-Island (China). 2016.
- 147. The reduction processes at the pyrometallurgical treatment of the complex iron ores. A.N.Dmitriev. BIT's 5th Annual World Congress of Advanced Materials-2016. Chongqing (China).2016.
- 148. The monitoring system of the refractory lining wear in the blast furnace hearth in metallurgical plants of China. BIT's 5th Annual World Congress of Advanced Materials-2016. Chongqing (China). 2016.
- 149. The Oxidizing Roasting and Reducing Melting of Titaniferous Iron Ores. 12th International Conference on Diffusion in Solids and Liquids DSL-2016. Split (Croatia). 2016.
- 150. The Thermophysical Bases of Monitoring of the Fireproof Lining Wear in the Blast Furnace Hearth. 12th International Conference on Diffusion in Solids and Liquids DSL-2016. Split (Croatia). 2016.
- 151. Current state and physical and chemical foundations of pyrometallurgical processing of titanomagnetite raw materials the iron ore base of metallurgy in Russia. XX Mendeleev Congress on General and Applied Chemistry. Ekaterinburg (Russia). 2016.
- 152. Processing of Titaniferous Magnetite Ores with the Various Titan Dioxide Content. Joint International Conference on Materials Science and Engineering Application (ICMSEA 2017) and International Conference on Mechanics, Civil Engineering and Building Materials (MCEBM 2017). Nanjing, Jiangsu (China). 2017.
- 153. Blast furnace smelting of the titaniferous magnetite ores with the various content of titanium dioxide and quality of the agglomerated raw materials. European Steel Technology and Application Days, ESTAD 2017. Vienna (Austria). 2017.

- 154. Technological and environmental aspects of processing of technogenic mineral formations of mining enterprises. Congress with international participation and the Conference of young scientist "Technogen – 2017". Ekaterinburg (Russia). 2017.
- 155. The Research of phase change at the oxidizing and reduction roasting of the complex irontitanium-vanadium ores. BIT's 3th Annual World Congress of Smart Materials-2017. Bangkok (Tailand). 2017.
- 156. The physical and chemical properties of the pigmentary titanium dioxide received from the titaniferous ores. BIT's 6th Annual World Congress of Advanced Materials-2017. Xi'an (China). 2017.
- 157. The research of phase change at the oxidizing and reduction roasting of the complex irontitanium ores. 13th International Conference on Diffusion in Solids and Liquids DSL-2017. Vienna (Austria). 2017.
- 158. The association of various approaches to the monitoring of lining condition in the blast furnace hearth. 13th International Conference on Diffusion in Solids and Liquids DSL-2017. Vienna (Austria). 2017.
- 159. Current state and prospects of using titanomagnetite ores of the Sverdlovsk region. Congress with international participation and the Conference of young scientist "Technogen – 2017". Ekaterinburg (Russia). 2017.
- 160. Processing of titaniferous magnetite ores with the various titan dioxide content. ICMSEA2017& MCEBM2017. Nanjing, Jiangsu (China). 2017.
- 161. Processing of titanium-containing ores with the extraction of iron, vanadium, titanium. International scientific-practical conference "Effective technologies for the production of nonferrous, rare and noble metals". Almaty (Kazakhstan). 2018.
- 162. Research of titaniferous ores melting and properties of cast iron and slag. 14th International Conference on Diffusion in Solids and Liquids DSL-2018. Amsterdam (Netherlands). 2018.
- 163. Research of reduction roasting of titaniferous ores. 14th International Conference on Diffusion in Solids and Liquids DSL-2018. Amsterdam (Netherlands). 2018.
- 164. Pyrometallurgical utilization of red mud. Congress with international participation and the conference of young scientists "Fundamental research and applied development of the processing and utilization of technogenic formations Technogen 2019". Ekaterinburg (Russia). 2019.
- 165. Comprehensive solution of the issues of deep processing of current waste of titanomagnetite ores. Congress with international participation and the conference of young scientists "Fundamental research and applied development of the processing and utilization of technogenic formations Technogen 2019". Ekaterinburg (Russia). 2019.
- 166. Investigation of the metallurgical characteristics of titanium-containing mineral raw materials with different contents of titanium dioxide. International scientific and practical conference timed to the 90th anniversary of the foundation of the Uralmekhanobr Institute "Modern

trends in the theory and practice of mining and processing of mineral and technogenic raw materials". Ekaterinburg (Russia). 2019.

- 167. Research and improvement of technology for processing titanomagnetite concentrate of the Gusevogorsk deposit of current production. International scientific conference "Physical and chemical foundations of metallurgical processes" named after academician A.M. Samarina. Moscow (Russia). 2019.
- 168. Features of processing of titanomagnetite ores of the Kachkanar deposit. XI conference of young specialists "Prospects for the development of metallurgical technologies". Moscow (Russia). 2019.
- 169. The physical and chemical properties and processing of agglomerates and pellets with the various content of titanium dioxide. International Conference On Material Science and Engineering 2019. Dubai (United Arab Emirates). 2019.
- Physicochemical bases of pyrometallurgical processing of titanomagnetite ores.
 International conference on Chemistry and Chemical Engineering 2019. Dubai (United Arab Emirates). 2019.
- 171. Features of reducibility of titanomagnetite iron ore materials. 15th International Conference on Diffusion in Solids and Liquids DSL-2019. Athens (Greece). 2019.
- 172. Study of structural-sensitive properties of melts system B₂O₃-CaO. 15th International Conference on Diffusion in Solids and Liquids DSL-2019. Athens (Greece). 2019.
- 173. Physicochemical and thermal bases of processing of titanomagnetite concentrates with different content of titanium dioxide. "XXI Mendeleev Congress on general and applied chemistry". Saint Petersburg (Russia). 2019.
- 174. Iron, titanium and vanadium extraction from titaniferous magnetite ores. 3 International Conference On Materials Science and Materials Chemistry 2019. Vienna (Austria). 2019.
- 175. Physical-chemical and pyrometallurgical estimation of processing of complex ores with extraction of iron, vanadium, titanium. 16th International Conference on Diffusion in Solids and Liquids DSL-2020 Virtual. Malta. 2020.
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- 177. Features of the mineralogical composition of iron ore agglomerates. XI conference of young specialists "Prospects for the development of metallurgical technologies". Moscow (Russia). 2020.
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- 180. Improvement of the first redistribution of ferrous metallurgy using digital technologies in the framework of "Industry 4.0". Scientific-practical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2020.
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- 182. Study of the strength of titanomagnetite pellets during low-temperature reduction. Scientific-practical conference with international participation and elements of the school of young scientists "Prospects for the development of metallurgy and mechanical engineering using completed fundamental research and R&D". Ekaterinburg (Russia). 2020.
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