# Valery V Belousov

List of Publications by Year
in descending order



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|---|---|---|---|
| 63 papers | 780 citations | 471509 17 h-index | 642732 23 g-index |
| 63 all docs | 63 docs citations | 63 times ranked | 223 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Transport Properties of BiVO[sub 4]â€“V[sub 2]O[sub 5] Liquid-Channel Grain-Boundary Structures. Journal of the Electrochemical Society, 2008, 155, F241. | 2.9 | 35 |
| 2 | Liquid-Channel Grain-Boundary Structures. Journal of the American Ceramic Society, 1996, 79, 1703-1706. | 3.8 | 34 |
| 3 | Surface ionics: A brief review. Journal of the European Ceramic Society, 2007, 27, 3459-3467. | 5.7 | 32 |
| 4 | Accelerated mass transfer involving the liquid phase in solids. Russian Chemical Reviews, 2012, 81, 44-64. | 6.5 | 32 |
| 5 | The Oxygen Permeation of Solidâˆ•Melt Composite BiVO4â€‰â€“â€‰10 wt % V2O5 Membrane. Journal of the Electrochemical Society, 2011, 158, B601. | 2.9 | 26 |
| 6 | Novel Molten Oxide Membrane for Ultrahigh Purity Oxygen Separation from Air. ACS Applied Materials & Interfaces, 2016, 8, 22324-22329. | 8.0 | 26 |
| 7 | The kinetics and mechanism of catastrophic oxidation of metals. Oxidation of Metals, 1994, 42, 511-528. | 2.1 | 25 |
| 8 | High-temperature oxidation of copper. Russian Chemical Reviews, 2013, 82, 273-288. | 6.5 | 23 |
| 9 | Next-Generation Electrochemical Energy Materials for Intermediate Temperature Molten Oxide Fuel Cells and Ion Transport Molten Oxide Membranes. Accounts of Chemical Research, 2017, 50, 273-280. | 15.6 | 23 |
| 10 | Catastrophic oxidation of metals. Russian Chemical Reviews, 1998, 67, 563-571. | 6.5 | 21 |
| 11 | Grain boundary wetting in ceramic cuprates. Journal of Materials Science, 2005, 40, 2361-2365. | 3.7 | 21 |
| 12 | Solid/melt ZnOâ€“Bi2O3 composites as ion transport membranes for oxygen separation from air. Materials Letters, 2012, 67, 139-141. | 2.6 | 20 |
| 13 | Transport properties of Bi2CuO4â€“Bi2O3 ceramic composites. Solid State Ionics, 2004, 166, 207-212. | 2.7 | 19 |
| 14 | Mechanisms of Accelerated Oxidation of Copper in the Presence of Molten Oxides. Oxidation of Metals, 2007, 67, 235-250. | 2.1 | 19 |
| 15 | A Novel Molten Oxide Fuel Cell Concept. Fuel Cells, 2016, 16, 401-403. | 2.4 | 17 |
| 16 | Electrical and mass transport processes in molten oxide membranes. Ionics, 2016, 22, 451-469. | 2.4 | 17 |
| 17 | Modeling oxygen Ion transport of molten oxide membranes based on V2O5. Ionics, 2016, 22, 369-376. | 2.4 | 17 |
| 18 | Gallium-induced defect states in Pb1âˆ’xGexTe alloys. Journal of Crystal Growth, 2000, 210, 292-295. | 1.5 | 16 |

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|---|---|---|---|
| 19 | Oxygen-permeable In2O3â€"55wt.% Î´-Bi2O3 composite membrane. Electrochemistry Communications, 2012, 20, 60-62. | 4.7 | 16 |
| 20 | A highly conductive electrolyte for molten oxide fuel cells. Chemical Communications, 2017, 53, 565-568. | 4.1 | 16 |
| 21 | Wetting of Grain Boundaries in Ceramic Materials. Colloid Journal, 2004, 66, 121-127. | 1.3 | 15 |
| 22 | Electrochemical mechanism of hot corrosion of Bi2O3-deposited copper. Corrosion Science, 2010, 52, 68-71. | 6.6 | 15 |
| 23 | Oxygen-permeable membrane materials based on solid or liquid Bi2O3. MRS Communications, 2013, 3, 225-233. | 1.8 | 15 |
| 24 | Transport properties of ZrV2O7-V2O5 composites with liquid-channel grain boundary structure. Russian Journal of Electrochemistry, 2013, 49, 878-882. | 0.9 | 15 |
| 25 | Oxygen Ion Transport in Molten Oxide Membranes for Air Separation and Energy Conversion. Journal of the Electrochemical Society, 2017, 164, H5353-H5356. | 2.9 | 15 |
| 26 | An Oxygen-Permeable Bilayer MIEC-Redox Membrane Concept. ACS Applied Materials & Interfaces, 2018, 10, 21794-21798. | 8.0 | 15 |
| 27 | Wetting of Grain Boundaries in Cuprate Ceramics. Inorganic Materials, 2003, 39, 82-89. | 0.8 | 13 |
| 28 | Catastrophic Oxidation of Copper: A Brief Review. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3715-3723. | 2.2 | 13 |
| 29 | Innovative oxide materials for electrochemical energy conversion and oxygen separation. Russian Chemical Reviews, 2017, 86, 934-950. | 6.5 | 13 |
| 30 | The â€œcatastrophicâ€•oxidation of metals. Russian Journal of Physical Chemistry A, 2008, 82, 2243-2249. | 0.6 | 12 |
| 31 | High-temperature solid/melt nanocomposites. JETP Letters, 2008, 88, 259-260. | 1.4 | 12 |
| 32 | Rapid Nondiffusional Penetration of Oxide Melts along Grain Boundaries of Oxide Ceramics. Journal of the American Ceramic Society, 1999, 82, 1342-1344. | 3.8 | 11 |
| 33 | Microstructure evolution and conductivity of BiCuO?BiO composites nearby the eutectic point. Solid State Ionics, 2004, 173, 135-139. | 2.7 | 11 |
| 34 | Kinetics and mechanism of high-temperature oxidation of copper covered by bismuth thin films. Oxidation of Metals, 1992, 38, 289-298. | 2.1 | 10 |
| 35 | Accelerated corrosion of MoO3-deposited copper. Corrosion Science, 2011, 53, 3150-3155. | 6.6 | 10 |
| 36 | Innovative MIEC-Redox Oxygen Separation Membranes with Combined Diffusion-Bubbling Mass Transfer: A Brief Review. Journal of the Electrochemical Society, 2019, 166, H573-H579. | 2.9 | 10 |

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|---|---|---|---|
| 37 | Functionally Graded IT-MOFC Electrolytes Based on Highly Conductive Î´-Bi2O3â€“0.2 wt % B2O3 Composite with Molten Grain Boundaries. ACS Applied Energy Materials, 2019, 2, 6860-6865. | 5.1 | 10 |
| 38 | Surface Energy of Bismuth Cuprate. Journal of Superconductivity and Novel Magnetism, 2002, 15, 207-210. | 0.5 | 9 |
| 39 | Accelerated Oxidation of V2O5-Deposited Copper. Oxidation of Metals, 2011, 76, 359-366. | 2.1 | 9 |
| 40 | Oxygen-permeable NiO/54Âwt% Î´-Bi2O3 composite membrane. Ionics, 2012, 18, 787-790. | 2.4 | 9 |
| 41 | Oxygen Permeation of Partly Molten Slags. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 4257-4267. | 2.2 | 8 |
| 42 | Electrical Conductivity of Bi2CuO4â€“Bi2O3 Ceramic Composites. Doklady Chemistry, 2003, 392, 229-232. | 0.9 | 6 |
| 43 | Accelerated Oxygen Mass Transfer in Copper and Vanadium Oxide-Based MIEC-Redox Membrane. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2019, 50, 857-865. | 2.1 | 6 |
| 44 | Effect of Bassetâ€™s hereditary force on bubble dynamics in liquid oxide-based diffusion-bubbling membranes. Physics of Fluids, 2020, 32, . | 4.0 | 6 |
| 45 | Perspectiveâ€”Oxygen Separation Technology Based on Liquid-Oxide Electrochemical Membranes. Journal of the Electrochemical Society, 2020, 167, 103501. | 2.9 | 6 |
| 46 | Microstructure and Conduction of Composites Bi2CuO4-Bi2O3 Near the Eutectic Melting Point. Russian Journal of Electrochemistry, 2005, 41, 522-526. | 0.9 | 5 |
| 47 | Oxygen Transport in Melts Based on V2O5. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 749-753. | 2.1 | 5 |
| 48 | Oxygen-Selective Diffusion-Bubbling Membranes with Coreâ€“Shell Structure: Bubble Dynamics and Unsteady Effects. Langmuir, 2021, 37, 8370-8381. | 3.5 | 5 |
| 49 | Bubble nucleation in coreâ€“shell structured molten oxide-based membranes with combined diffusion-bubbling oxygen mass transfer: experiment and theory. Physical Chemistry Chemical Physics, 2021, 23, 24029-24038. | 2.8 | 5 |
| 50 | Wetting and conductivity of BiVO4-V2O5 ceramic composites. Russian Journal of Electrochemistry, 2009, 45, 573-575. | 0.9 | 4 |
| 51 | Mechanism of oxygen ion transfer in oxide melts based on V2O5. Russian Journal of Physical Chemistry A, 2016, 90, 54-59. | 0.6 | 4 |
| 52 | Highly Oxygen-Permeable NiV2O6â€“25 wt % V2O5 Molten-Oxide Membrane Material. Inorganic Materials, 2018, 54, 1055-1061. | 0.8 | 4 |
| 53 | Conductivity of Bi2O3-NiO composites. Russian Journal of Electrochemistry, 2009, 45, 568-569. | 0.9 | 3 |
| 54 | Features of Oxygen Transfer in Cu<sub>2</sub>V<sub>2</sub>O<sub>7</sub>Ââ€“Â20Âwt%ÂCuV<sub>2</sub>O<sub>6</sub> Molten Oxide Membrane. Journal of the Electrochemical Society, 2018, 165, H861-H865. | 2.9 | 3 |

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|---|---|---|---|
| 55 | A coreâ€shell structured diffusionâ€bubbling membrane for efficient oxygen separation: Formation and transport properties. Journal of the American Ceramic Society, 2022, 105, 4532-4541. | 3.8 | 3 |
| 56 | Effect of Negative Photoconductivity in Pb1?xGexTe Alloys Doped with Gallium. Physica Status Solidi (B): Basic Research, 2000, 221, 549-552. | 1.5 | 2 |
| 57 | Gallium-induced deep level in Pb1â˘'x GexTe alloys. Semiconductors, 2000, 34, 894-896. | 0.5 | 2 |
| 58 | Ion transport in materials with a developed surface. Russian Journal of Physical Chemistry A, 2007, 81, 441-450. | 0.6 | 2 |
| 59 | Nanoscale ceria for new functional materials. Journal of Physics: Conference Series, 2012, 345, 012022. | 0.4 | 2 |
| 60 | Conductivity of CaF2-MgO composites. Russian Journal of Electrochemistry, 2009, 45, 570-572. | 0.9 | 1 |
| 61 | Features of Molten Oxide Fuel Cells and Molten Oxide Membranes for Electrochemical Energy Conversion and Oxygen Separation. ECS Transactions, 2017, 80, 191-198. | 0.5 | 1 |
| 62 | New Generation Molten Oxide Energy Materials R&D. Minerals, Metals and Materials Series, 2017, , 637-650. | 0.4 | 0 |
| 63 | Features of Molten Oxide Fuel Cells and Molten Oxide Membranes for Electrochemical Energy Conversion and Oxygen Separation. ECS Meeting Abstracts, 2017, , . | 0.0 | 0 |