

# Sergey V Ushakov

## List of Publications by Year in descending order

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70  
papers

3,410  
citations

126858

33  
h-index

143943

57  
g-index

71  
all docs

71  
docs citations

71  
times ranked

3890  
citing authors

#	ARTICLE	IF	CITATIONS
1	Thermochemistry and phase stability of the polymorphs of yttrium tantalate, YTaO <sub>4</sub> . Journal of the European Ceramic Society, 2021, 41, 1629-1638.	2.8	20
2	Measurements of Density of Liquid Oxides with an Aero-Acoustic Levitator. Materials, 2021, 14, 822.	1.3	13
3	Thermal Analysis of High Entropy Rare Earth Oxides. Materials, 2020, 13, 3141.	1.3	26
4	Thermodynamic assessment of BaO-Ln <sub>2</sub> O <sub>3</sub> (Ln=La, Pr, Eu, Gd, Er) systems. Journal of the American Ceramic Society, 2020, 103, 3896-3904.	1.9	3
5	Carbides and Nitrides of Zirconium and Hafnium. Materials, 2019, 12, 2728.	1.3	56
6	Energetics of hydration on uranium oxide and peroxide surfaces. Journal of Materials Research, 2019, 34, 3319-3325.	1.2	9
7	Polymer-Derived Ultra-High Temperature Ceramics (UHTCs) and Related Materials. Advanced Engineering Materials, 2019, 21, 1900269.	1.6	80
8	Reply to comments: <i>in situ</i> determination of the HfO <sub>2</sub> -Ta <sub>2</sub> O <sub>5</sub> temperature phase diagram up to 3000°C. Journal of the American Ceramic Society, 2019, 102, 7028-7030.	1.9	5
9	<i>In situ</i> determination of the HfO <sub>2</sub> -Ta <sub>2</sub> O <sub>5</sub> temperature phase diagram up to 3000°C. Journal of the American Ceramic Society, 2019, 102, 4848-4861.	1.9	76
10	Energetics of melting of Yb <sub>2</sub> O <sub>3</sub> and Lu <sub>2</sub> O <sub>3</sub> from drop and catch calorimetry and first principles computations. Journal of Chemical Thermodynamics, 2019, 132, 405-410.	1.0	12
11	Thermodynamics of reaction between gas-turbine ceramic coatings and ingested CMAS corrodents. Journal of the American Ceramic Society, 2019, 102, 2948-2964.	1.9	43
12	Size driven thermodynamic crossovers in phase stability in zirconia and hafnia. Journal of the American Ceramic Society, 2018, 101, 31-35.	1.9	25
13	Phase transformations in oxides above 2000°C: experimental technique development. Advances in Applied Ceramics, 2018, 117, s82-s89.	0.6	11
14	Combined computational and experimental investigation of high temperature thermodynamics and structure of cubic ZrO <sub>2</sub> and HfO <sub>2</sub> . Scientific Reports, 2018, 8, 14962.	1.6	35
15	Probing disorder in pyrochlore oxides using <i>in situ</i> synchrotron diffraction from levitated solids: A thermodynamic perspective. Scientific Reports, 2018, 8, 10658.	1.6	33
16	Thermochemistry of BaSm <sub>2</sub> O <sub>4</sub> and thermodynamic assessment of the BaO-Sm <sub>2</sub> O <sub>3</sub> system. Journal of the American Ceramic Society, 2018, 101, 5827-5835.	1.9	9
17	Calorimetric Measurements of Surface Energy of Amorphous HfO <sub>2</sub> Nanoparticles Produced by Gas Phase Condensation. Journal of Physical Chemistry C, 2017, 121, 10392-10397.	1.5	11
18	Solid-liquid phase equilibria of Fe-Cr-Al alloys and spinels. Journal of Nuclear Materials, 2017, 492, 128-133.	1.3	21

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19	Drop-catch (DnC) calorimetry using aerodynamic levitation and laser heating. Journal of the American Ceramic Society, 2017, 100, 754-760.	1.9	25
20	Structure and thermal expansion of Lu <sub>2</sub> O <sub>3</sub> and Yb <sub>2</sub> O <sub>3</sub> up to the melting points. Journal of Nuclear Materials, 2017, 495, 385-391.	1.3	33
21	Tunable Low Density Palladium Nanowire Foams. Chemistry of Materials, 2017, 29, 9814-9818.	3.2	32
22	A combined experimental and theoretical study of enthalpy of phase transition and fusion of yttria above 2000 Å°C using drop-catch calorimetry and first-principles calculation. Acta Materialia, 2017, 124, 204-209.	3.8	14
23	The Structure of Liquid and Amorphous Hafnia. Materials, 2017, 10, 1290.	1.3	31
24	Phase transformations and indications for acoustic mode softening in Tb-Gd orthophosphate. Journal of Physics Condensed Matter, 2016, 28, 035403.	0.7	15
25	Structure and Thermal Expansion of YSZ and La <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> Above 1500 Å°C from Neutron Diffraction on Levitated Samples. Journal of the American Ceramic Society, 2015, 98, 3381-3388.	1.9	28
26	Thermodynamics of formation of coffinite, USiO <sub>4</sub> . Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 6551-6555.	3.3	72
27	Thermodynamic complexity of carbon capture in alkylamine-functionalized metal-organic frameworks. Journal of Materials Chemistry A, 2015, 3, 4248-4254.	5.2	29
28	Thermodynamics of solid phases containing rare earth oxides. Journal of Chemical Thermodynamics, 2015, 88, 126-141.	1.0	72
29	In Situ Diffraction from Levitated Solids Under Extreme Conditions Structure and Thermal Expansion in the Eu <sub>2</sub> O <sub>3</sub> -ZrO <sub>2</sub> System. Journal of the American Ceramic Society, 2015, 98, 1292-1299.	1.9	28
30	Combined computational and experimental investigation of the refractory properties of La <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> . Acta Materialia, 2015, 84, 275-282.	3.8	36
31	Energetics of metastudtite and implications for nuclear waste alteration. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17737-17742.	3.3	61
32	Direct Measurement of Fusion Enthalpy of LaAlO <sub>3</sub> and Comparison of Energetics of Melt, Glass, and Amorphous Thin Films. Journal of the American Ceramic Society, 2014, 97, 1589-1594.	1.9	12
33	Ultra-high temperature oxidation of a hafnium carbide-based solid solution ceramic composite. Corrosion Science, 2014, 80, 402-407.	3.0	28
34	Energetics of CO <sub>2</sub> and H <sub>2</sub> O Adsorption on Zinc Oxide. Langmuir, 2014, 30, 9091-9097.	1.6	47
35	Direct Calorimetric Measurement of Enthalpy of Adsorption of Carbon Dioxide on CD-MOF-2, a Green Metal-Organic Framework. Journal of the American Chemical Society, 2013, 135, 6790-6793.	6.6	140
36	Noble Gas Adsorption in Copper Trimesate, HKUST-1: An Experimental and Computational Study. Journal of Physical Chemistry C, 2013, 117, 20116-20126.	1.5	92

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37	Amorphous Alumina Nanoparticles: Structure, Surface Energy, and Thermodynamic Phase Stability. <i>Journal of Physical Chemistry C</i> , 2013, 117, 17123-17130.	1.5	132
38	Yttria-stabilized zirconia crystallization in Al <sub>2</sub> O <sub>3</sub> /YSZ multilayers. <i>Journal of Materials Research</i> , 2012, 27, 939-943.	1.2	5
39	Yttria-stabilized hafnia: Thermochemistry of formation and hydration of nanoparticles. <i>Journal of Materials Research</i> , 2012, 27, 1022-1028.	1.2	7
40	Fluorite-pyrochlore transformation in Eu <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> —direct calorimetric measurement of phase transition, formation and surface enthalpies. <i>RSC Advances</i> , 2012, 2, 3328.	1.7	50
41	Study of La <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> and La <sub>2</sub> Hf <sub>2</sub> O <sub>7</sub> Melting by Thermal Analysis and X-ray Diffraction. <i>ECS Meeting Abstracts</i> , 2012, MA2012-02, 2329-2329.	0.0	2
42	Experimental Approaches to the Thermodynamics of Ceramics Above 1500°C. <i>Journal of the American Ceramic Society</i> , 2012, 95, 1463-1482.	1.9	68
43	Experimental Methodologies for Assessing the Surface Energy of Highly Hygroscopic Materials: The Case of Nanocrystalline Magnesia. <i>Journal of Physical Chemistry C</i> , 2011, 115, 23929-23935.	1.5	38
44	Yttrium Substitution in MTiO <sub>3</sub> (M=Ca, Sr, Ba and Ca+Sr+Ba) Perovskites and Implication for Incorporation of Fission Products into Ceramic Waste Forms. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3112-3116.	1.9	7
45	Direct Measurement of Surface Energy of CeO <sub>2</sub> by Differential Scanning Calorimetry. <i>Journal of the American Ceramic Society</i> , 2011, 94, 3679-3682.	1.9	38
46	Application of scanning calorimetry to estimate soil organic matter loss after fires. <i>Journal of Thermal Analysis and Calorimetry</i> , 2011, 104, 351-356.	2.0	2
47	Direct measurements of fusion and phase transition enthalpies in lanthanum oxide. <i>Journal of Materials Research</i> , 2011, 26, 845-847.	1.2	23
48	Hafnia: Energetics of thin films and nanoparticles. <i>Journal of Applied Physics</i> , 2010, 107, .	1.1	36
49	Synthesis and calorimetric studies of oxide multilayer systems: Solid oxide fuel cell cathode and electrolyte materials. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, C5A1-C5A5.	0.6	4
50	Calorimetric Measurement of Surface and Interface Enthalpies of Yttria-Stabilized Zirconia (YSZ). <i>Chemistry of Materials</i> , 2010, 22, 2937-2945.	3.2	65
51	Surface Enthalpy, Enthalpy of Water Adsorption, and Phase Stability in Nanocrystalline Monoclinic Zirconia. <i>Journal of the American Ceramic Society</i> , 2009, 92, 133-140.	1.9	102
52	Monoclinic to tetragonal transformations in hafnia and zirconia: A combined calorimetric and density functional study. <i>Physical Review B</i> , 2009, 80, .	1.1	109
53	Thermochemistry of lanthanum zirconate pyrochlore. <i>Journal of Materials Research</i> , 2009, 24, 3350-3357.	1.2	74
54	Energetics of La <sub>2</sub> O <sub>3</sub> —HfO <sub>2</sub> —SiO <sub>2</sub> Glasses. <i>Journal of the American Ceramic Society</i> , 2008, 91, 1088-1094.	1.9	7

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55	Thermochemistry of nanoparticles on a substrate: Zinc oxide on amorphous silica. Journal of Materials Research, 2008, 23, 1907-1915.	1.2	10
56	Surface Energetics of Nanocrystalline YSZ Powders. Materials Research Society Symposia Proceedings, 2008, 1122, 6.	0.1	0
57	Fluorite and Pyrochlore Phases in the HfO <sub>2</sub> -La <sub>2</sub> O <sub>3</sub> -Gd <sub>2</sub> O <sub>3</sub> Systems: Characterization and Calorimetric Study of Samples Quenched From Melts Formed by Laser Heating and Aerodynamic Levitation. Materials Research Society Symposia Proceedings, 2008, 1122, 7.	0.1	1
58	Thermochemistry of A <sub>2</sub> M <sub>3</sub> O <sub>12</sub> negative thermal expansion materials. Journal of Materials Research, 2007, 22, 2512-2521.	1.2	54
59	Energetics of Defect Fluorite and Pyrochlore Phases in Lanthanum and Gadolinium Hafnates. Journal of the American Ceramic Society, 2007, 90, 1171-1176.	1.9	44
60	Surface Energy and Thermodynamic Stability of $\gamma$ -Alumina: Effect of Dopants and Water. Chemistry of Materials, 2006, 18, 1867-1872.	3.2	96
61	Energy Crossovers in Nanocrystalline Zirconia. Journal of the American Ceramic Society, 2005, 88, 160-167.	1.9	252
62	Direct measurements of water adsorption enthalpy on hafnia and zirconia. Applied Physics Letters, 2005, 87, 164103.	1.5	153
63	Thermodynamics of Oxide Systems Relevant to Alternative Gate Dielectrics. , 2005, , 57-108.		26
64	Formation enthalpy of ThSiO <sub>4</sub> and enthalpy of the thorite $\rightarrow$ huttonite phase transition. Geochimica Et Cosmochimica Acta, 2005, 69, 4675-4683.	1.6	53
65	Effect of La and Y on Crystallization Temperatures of Hafnia and Zirconia. Journal of Materials Research, 2004, 19, 693-696.	1.2	83
66	Formation enthalpies of rare earth titanate pyrochlores. Journal of Solid State Chemistry, 2004, 177, 1858-1866.	1.4	151
67	Crystallization in hafnia- and zirconia-based systems. Physica Status Solidi (B): Basic Research, 2004, 241, 2268-2278.	0.7	149
68	Thermochemistry of the alkali rare-earth double phosphates, A <sub>3</sub> RE(PO <sub>4</sub> ) <sub>2</sub> . Journal of Materials Research, 2004, 19, 2165-2175.	1.2	60
69	Effect of La and Y on Crystallization Temperatures of Hafnia and Zirconia. , 2004, 19, 693.		1
70	Thermochemistry of rare-earth orthophosphates. Journal of Materials Research, 2001, 16, 2623-2633.	1.2	225