

Oleg I Velikokhatnyi

List of Publications by Year in descending order

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35
papers

1,746
citations

331670

21
h-index

377865

34
g-index

36
all docs

36
docs citations

36
times ranked

2726
citing authors

#	ARTICLE	IF	CITATIONS
1	Rechargeable magnesium battery: Current status and key challenges for the future. <i>Progress in Materials Science</i> , 2014, 66, 1-86.	32.8	538
2	Binder-jetting 3D printing and alloy development of new biodegradable Fe-Mn-Ca/Mg alloys. <i>Acta Biomaterialia</i> , 2016, 45, 375-386.	8.3	166
3	Noble metal-free bifunctional oxygen evolution and oxygen reduction acidic media electro-catalysts. <i>Scientific Reports</i> , 2016, 6, 28367.	3.3	94
4	Experimental and Theoretical Validation of High Efficiency and Robust Electrocatalytic Response of One-Dimensional (1D) (Mn,Ir)O ₂ :10F Nanorods for the Oxygen Evolution Reaction in PEM-Based Water Electrolysis. <i>ACS Catalysis</i> , 2019, 9, 2134-2157.	11.2	89
5	Nitrogen and cobalt co-doped zinc oxide nanowires – Viable photoanodes for hydrogen generation via photoelectrochemical water splitting. <i>Journal of Power Sources</i> , 2015, 299, 11-24.	7.8	72
6	First-principles studies on alloying and simplified thermodynamic aqueous chemical stability of calcium-, zinc-, aluminum-, yttrium- and iron-doped magnesium alloys†. <i>Acta Biomaterialia</i> , 2010, 6, 1698-1704.	8.3	69
7	High performance robust F-doped tin oxide based oxygen evolution electro-catalysts for PEM based water electrolysis. <i>Journal of Materials Chemistry A</i> , 2013, 1, 4026.	10.3	66
8	Novel (Ir,Sn,Nb)O ₂ anode electrocatalysts with reduced noble metal content for PEM based water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 3001-3013.	7.1	64
9	Fluorine substituted (Mn,Ir)O ₂ :F high performance solid solution oxygen evolution reaction electro-catalysts for PEM water electrolysis. <i>RSC Advances</i> , 2017, 7, 17311-17324.	3.6	53
10	Fluorine doped (Ir,Sn,Nb)O ₂ anode electro-catalyst for oxygen evolution via PEM based water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 664-674.	7.1	47
11	Nanostructured F doped IrO ₂ electro-catalyst powders for PEM based water electrolysis. <i>Journal of Power Sources</i> , 2014, 269, 855-865.	7.8	43
12	High performance fluorine doped (Sn,Ru)O ₂ oxygen evolution reaction electro-catalysts for proton exchange membrane based water electrolysis. <i>Journal of Power Sources</i> , 2014, 245, 362-370.	7.8	42
13	Electrochemically active and robust cobalt doped copper phosphosulfide electro-catalysts for hydrogen evolution reaction in electrolytic and photoelectrochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 7855-7871.	7.1	37
14	Fluorine-Doped IrO ₂ : A Potential Electrocatalyst for Water Electrolysis. <i>Journal of Physical Chemistry C</i> , 2013, 117, 20542-20547.	3.1	35
15	Cobalt based nanostructured alloys: Versatile high performance robust hydrogen evolution reaction electro-catalysts for electrolytic and photo-electrochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 17049-17062.	7.1	35
16	First report of vertically aligned (Sn,Ir)O ₂ :F solid solution nanotubes: Highly efficient and robust oxygen evolution electrocatalysts for proton exchange membrane based water electrolysis. <i>Journal of Power Sources</i> , 2018, 392, 139-149.	7.8	33
17	Computational and Experimental Study of Fluorine Doped (Mn _{1-x} Nb _x)O ₂ Nanorod Electrocatalysts for Acid-Mediated Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2020, 3, 541-557.	5.1	30
18	WO ₃ based solid solution oxide – promising proton exchange membrane fuel cell anode electro-catalyst. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18296-18309.	10.3	28

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19	Nanostructured robust cobalt metal alloy based anode electro-catalysts exhibiting remarkably high performance and durability for proton exchange membrane fuel cells. <i>Journal of Materials Chemistry A</i> , 2015, 3, 14015-14032.	10.3	27
20	Vertically aligned nitrogen doped (Sn,Nb)O ₂ nanotubes – Robust photoanodes for hydrogen generation by photoelectrochemical water splitting. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2016, 208, 1-14.	3.5	25
21	Ab-initio study of fluorine-doped tin dioxide: A prospective catalyst support for water electrolysis. <i>Physica B: Condensed Matter</i> , 2011, 406, 471-477.	2.7	24
22	Nanostructured (Ir,Sn)O ₂ :F – Oxygen Evolution Reaction Anode Electro-Catalyst Powders for PEM Based Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2014, 161, F868-F875.	2.9	20
23	Study of fluorine doped (Nb,Ir)O ₂ solid solution electro-catalyst powders for proton exchange membrane based oxygen evolution reaction. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2016, 212, 101-108.	3.5	18
24	Computational and experimental investigation of Co and S-doped Ni ₂ P as an efficient electrocatalyst for acid mediated proton exchange membrane hydrogen evolution reaction. <i>Catalysis Science and Technology</i> , 2021, 11, 861-873.	4.1	16
25	Exploring tin tantalates and niobates as prospective catalyst supports for water electrolysis. <i>Physica B: Condensed Matter</i> , 2009, 404, 1737-1745.	2.7	14
26	Highly active robust oxide solid solution electro-catalysts for oxygen reduction reaction for proton exchange membrane fuel cell and direct methanol fuel cell cathodes. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 24079-24089.	7.1	14
27	Highly Efficient Fluorine Doped Ni ₂ P Electrocatalysts for Alkaline Mediated Oxygen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2021, 168, 064512.	2.9	10
28	First principles study of the elastic properties of magnesium and iron based bio-resorbable alloys. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2018, 230, 20-23.	3.5	9
29	Exploring calcium tantalates and niobates as prospective catalyst supports for water electrolysis. <i>Journal of Power Sources</i> , 2012, 202, 190-199.	7.8	8
30	Influence of Defects on Activity-Stability of Cu _{1.5} Mn _{1.5} O ₄ for Acid-Mediated Oxygen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2020, 167, 144511.	2.9	7
31	Theoretical Study of Magnesium and Zinc Tantalates and Niobates as Prospective Catalyst Supports for Water Electrolysis. <i>Journal of the Electrochemical Society</i> , 2012, 159, F607-F616.	2.9	5
32	A CALPHAD study on the thermodynamic stability of calcium-, zinc-, and yttrium-doped magnesium in aqueous environments. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2011, 176, 1727-1732.	3.5	3
33	Molybdenum doped bilayer photoanode nanotubes for enhanced photoelectrochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2021, , .	7.1	3
34	A Complexed Sol-Gel (CSG) Approach to High Surface Area (HSA) Durable Ultra Active Platinum-Ruthenium Electro-Catalysts for Direct Methanol Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2014, 161, F1053-F1060.	2.9	2
35	New approaches to high-energy-density cathode and anode architectures for lithium-sulfur batteries. , 2022, , 353-439.		0