

Vladimir K Ryabchuk

List of Publications by Year in descending order

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54
papers

2,258
citations

279798

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214800

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57
all docs

57
docs citations

57
times ranked

2787
citing authors

#	ARTICLE	IF	CITATIONS
1	Recent advances in composite and heterostructured photoactive materials for the photochemical conversion of solar energy. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2022, 34, 100588.	5.9	7
2	Separation and Recombination of Photocarriers from Color Centers and Optically Silent Trap States from 100 to 450 K: The Halide Double Photochromic Perovskite Cs ₂ AgBiBr ₆ . <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 25513-25522.	8.0	2
3	Solid-state synthesis, characterization, UV-induced coloration and photocatalytic activity of The Sr ₆ Bi ₂ O ₁₁ , Sr ₃ Bi ₂ O ₆ and Sr ₂ Bi ₂ O ₅ bismuthates. <i>Catalysis Today</i> , 2020, 340, 70-85.	4.4	25
4	Phenomenological Rule from Correlations of Conduction/Valence Band Energies and Bandgap Energies in Semiconductor Photocatalysts: Calcium Bismuthates versus Strontium Bismuthates. <i>ChemCatChem</i> , 2020, 12, 1551-1555.	3.7	12
5	Optical Properties of Various Strontium Bismuthates: Luminescence and UV-induced Photocoloration. <i>ChemPhotoChem</i> , 2020, 4, 5209-5222.	3.0	4
6	Materials synthesis, characterization and DFT calculations of the visible-light-active perovskite-like barium bismuthate Ba _{1.264(4)} Bi _{1.971(4)} O ₄ photocatalyst. <i>Journal of Materials Chemistry C</i> , 2020, 8, 3509-3519.	5.5	12
7	UV-induced defect formation in cubic ZrO ₂ . Optical demonstration of Y, Yb and Er dopants interacting with photocarriers. <i>Chemical Physics Letters</i> , 2020, 742, 137136.	2.6	5
8	The Study of Photoactive Materials. <i>Reviews and Advances in Chemistry</i> , 2020, 10, 73-111.	0.5	1
9	Considerations of Trends in Heterogeneous Photocatalysis. Correlations between Conduction and Valence Band Energies with Bandgap Energies of Various Photocatalysts. <i>ChemCatChem</i> , 2019, 11, 3534-3541.	3.7	19
10	Effect of bismuth substitution for lead in CsPbBr ₃ perovskite. <i>Journal of Physics: Conference Series</i> , 2018, 993, 012004.	0.4	4
11	Influence of the Dopant Concentration on the Photoelectrochemical Behavior of Al-Doped TiO ₂ . <i>Journal of Physical Chemistry C</i> , 2018, 122, 7975-7981.	3.1	17
12	UV-induced formation of color centers in dispersed TiO ₂ particles: Effect of thermal treatment, metal (Al) doping, and adsorption of molecules. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2018, 354, 33-46.	3.9	13
13	Invalidity of Band-Gap Engineering Concept for Bi ³⁺ Heterovalent Doping in CsPbBr ₃ Halide Perovskite. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 5408-5411.	4.6	88
14	Light-driven advanced oxidation processes in the disposal of emerging pharmaceutical contaminants in aqueous media: A brief review. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2017, 6, 18-33.	5.9	67
15	Calcium Bismuthate Nanoparticulates with Orthorhombic and Rhombohedral Crystalline Lattices: Effects of Composition and Structure on Photoactivity. <i>ChemistrySelect</i> , 2017, 2, 9851-9863.	1.5	13
16	Water Will Be the Coal of the Future—The Untamed Dream of Jules Verne for a Solar Fuel. <i>Molecules</i> , 2016, 21, 1638.	3.8	20
17	Why do Hydrogen and Oxygen Yields from Semiconductor-Based Photocatalyzed Water Splitting Remain Disappointingly Low? Intrinsic and Extrinsic Factors Impacting Surface Redox Reactions. <i>ACS Energy Letters</i> , 2016, 1, 931-948.	17.4	119
18	CHAPTER 9. Interplay Between Physical and Chemical Events in Photoprocesses in Heterogeneous Systems. <i>RSC Energy and Environment Series</i> , 2016, , 218-244.	0.5	3

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19	Influence of the Dopant Concentration on the Photocatalytic Activity: Al-Doped TiO ₂ . Journal of Physical Chemistry C, 2015, 119, 24695-24703.	3.1	81
20	Thermo- and Photo-stimulated Effects on the Optical Properties of Rutile Titania Ceramic Layers Formed on Titanium Substrates. Chemistry of Materials, 2013, 25, 170-177.	6.7	38
21	Visible-NIR Light Absorption of Titania Thermochemically Fabricated from Titanium and its Alloys; UV- and Visible-Light-Induced Photochromism of Yellow Titania. Journal of Physical Chemistry C, 2013, 117, 25852-25864.	3.1	10
22	On the way to the creation of next generation photoactive materials. Environmental Science and Pollution Research, 2012, 19, 3666-3675.	5.3	60
23	Photoinduced Radical Processes on the Spinel (MgAl ₂ O ₄) Surface Involving Methane, Ammonia, and Methane/Ammonia. Langmuir, 2012, 28, 7368-7373.	3.5	2
24	On the genesis of heterogeneous photocatalysis: a brief historical perspective in the period 1910 to the mid-1980s. Photochemical and Photobiological Sciences, 2012, 11, 1121-1150.	2.9	88
25	Second Generation Visible-Light-Active Photocatalysts: Preparation, Optical Properties, and Consequences of Dopants on the Band Gap Energy of TiO ₂ . Nanostructure Science and Technology, 2010, , 35-111.	0.1	9
26	Spectroscopic Studies of Pristine and Fluorinated Nano-ZrO ₂ in Photostimulated Heterogeneous Processes. Journal of Physical Chemistry C, 2009, 113, 4566-4574.	3.1	15
27	Photoinduced Formation of Defects and Nitrogen Stabilization of Color Centers in N-Doped Titanium Dioxide. Journal of Physical Chemistry C, 2007, 111, 11456-11462.	3.1	96
28	Photoreactions occurring on metal-oxide surfaces are not all photocatalytic. Catalysis Today, 2007, 122, 91-100.	4.4	27
29	Photophysical Processes Related to Photoadsorption and Photocatalysis on Wide Band Gap Solids: A Review. ChemInform, 2005, 36, no.	0.0	0
30	Effect of Surface Photoreactions on the Photocoloration of a Wide Band Gap Metal Oxide: Probing Whether Surface Reactions Are Photocatalytic. Journal of Physical Chemistry B, 2005, 109, 5175-5185.	2.6	50
31	Dogmas and Misconceptions in Heterogeneous Photocatalysis. Some Enlightened Reflections. Journal of Physical Chemistry B, 2005, 109, 18515-18521.	2.6	189
32	Photophysical processes related to photoadsorption and photocatalysis on wide band gap solids: A review. International Journal of Photoenergy, 2004, 6, 95-113.	2.5	43
33	Photoinduced Adsorption of Hydrogen and Methane on γ -Alumina. The Photoinduced Chesorluminescence (PhICL) Effect. Langmuir, 2004, 20, 129-135.	3.5	10
34	Modeling and Experimental Examination of the Solonitsyn Memory Effect on the Surface of Wide Band Gap Metal Oxides. Journal of Physical Chemistry B, 2004, 108, 2354-2361.	2.6	8
35	Abiogenesis and photostimulated heterogeneous reactions in the interstellar medium and on primitive earth. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2003, 3, 203-224.	11.6	19
36	Spectral Dependencies of the Quantum Yield of Photochemical Processes on the Surface of Nano/Micro-Particulates of Wide-Band-Gap Metal Oxides. IV. Theoretical Modeling of the Activity and Selectivity of Semiconductor Photocatalysts with Inclusion of a Subsurface Electric Field in the Space Charge Region. Journal of Physical Chemistry B, 2003, 107, 7109-7119.	2.6	40

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37	Photoinduced Processes in Heterogeneous Gas-Solid Systems. Temperature Dependence (100-600 K) and Modeling of a Surface Chemical Reaction on Zirconia that Triggers Photophysical Events in the Solid. <i>Journal of Physical Chemistry B</i> , 2002, 106, 5956-5966.	2.6	16
38	Photo-induced processes in heterogeneous nanosystems. From photoexcitation to interfacial chemical transformations. <i>International Journal of Photoenergy</i> , 2001, 3, 1-16.	2.5	28
39	Differential Surface Stress of Single-Crystal Gold(111) in a Potassium Chloride Melt. <i>Russian Journal of Electrochemistry</i> , 2001, 37, 827-832.	0.9	3
40	Factors affecting the efficiency of a photocatalyzed process in aqueous metal-oxide dispersions. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2000, 133, 89-97.	3.9	170
41	Turnovers and photocatalysis. <i>Journal of Photochemistry and Photobiology A: Chemistry</i> , 2000, 130, 83-94.	3.9	60
42	Photoinduced chesoluminescence from radical processes on ZrO ₂ surfaces. <i>Chemical Physics Letters</i> , 2000, 325, 288-292.	2.6	15
43	Photoreactions of small molecules at the surface of alkali metal halides. <i>Catalysis Today</i> , 2000, 58, 89-102.	4.4	9
44	Spectral Dependencies of the Quantum Yield of Photochemical Processes on the Surface of Wide Band Gap Solids. 3. Gas/Solid Systems. <i>Journal of Physical Chemistry B</i> , 2000, 104, 2989-2999.	2.6	79
45	Terminology, relative photonic efficiencies and quantum yields in heterogeneous photocatalysis. Part II: Experimental determination of quantum yields. <i>Pure and Applied Chemistry</i> , 1999, 71, 321-335.	1.9	139
46	Photostimulated Generation of Defects and Surface Reactions on a Series of Wide Band Gap Metal-Oxide Solids. <i>Journal of Physical Chemistry B</i> , 1999, 103, 9190-9199.	2.6	83
47	Spectral Dependencies of the Quantum Yield of Photochemical Processes on the Surface of Wide-Band-Gap Metal Oxides. 2. Gas/Solid System Involving Scandia (Sc ₂ O ₃) Particles. <i>Journal of Physical Chemistry B</i> , 1999, 103, 1325-1331.	2.6	25
48	Spectral Dependencies of the Quantum Yield of Photochemical Processes on the Surface of Nano-/Microparticulates of Wide-Band-Gap Metal Oxides. 1. Theoretical Approach. <i>Journal of Physical Chemistry B</i> , 1999, 103, 1316-1324.	2.6	58
49	Spectroscopic and Photoluminescence Studies of a Wide Band Gap Insulating Material: Powdered and Colloidal ZrO ₂ Sols. <i>Langmuir</i> , 1998, 14, 5011-5022.	3.5	268
50	Photostimulated Reactions at the Surface of Wide Band-Gap Metal Oxides (ZrO ₂ and TiO ₂): Interdependence of Rates of Reactions on Pressure-Concentration and on Light Intensity. <i>Journal of Physical Chemistry B</i> , 1998, 102, 10906-10916.	2.6	60
51	Photochemical and Photophysical Processes on the Surface of Wide Band Gap Insulator Particulates: Gas/Solid System Involving Scandia (Sc ₂ O ₃) Particles. <i>Chemistry of Materials</i> , 1998, 10, 3484-3491.	6.7	20
52	Correlations between photosorption and photocatalytic activities of alkali metal halides. <i>Reaction Kinetics and Catalysis Letters</i> , 1989, 39, 331-337.	0.6	2
53	Photoadsorption, photooxidation and photodecomposition of simple molecules on alkali halide surfaces. <i>Reaction Kinetics and Catalysis Letters</i> , 1988, 36, 119-124.	0.6	6
54	Photoinduced oxygen adsorption of AgBr crystals at 77 K. <i>Reaction Kinetics and Catalysis Letters</i> , 1986, 32, 45-50.	0.6	1