

# Arvo Kikas

## List of Publications by Year in descending order

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109  
papers

2,246  
citations

186265

28  
h-index

265206

42  
g-index

110  
all docs

110  
docs citations

110  
times ranked

2146  
citing authors

#	ARTICLE	IF	CITATIONS
1	High-resolution study of the correlation satellites in photoelectron spectra of the rare gases. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1996, 77, 241-266.	1.7	116
2	Ti 2p and O 1s X-ray absorption of TiO <sub>2</sub> polymorphs. <i>Solid State Communications</i> , 1997, 104, 199-203.	1.9	105
3	Physical and electrochemical characteristics of supercapacitors based on carbide derived carbon electrodes in aqueous electrolytes. <i>Journal of Power Sources</i> , 2011, 196, 4109-4116.	7.8	94
4	Collapse of Vibrational Structure in the Auger Resonant Raman Spectrum of CO by Frequency Detuning. <i>Physical Review Letters</i> , 1997, 79, 1451-1454.	7.8	85
5	Transition-Metal- and Nitrogen-Doped Carbide-Derived Carbon/Carbon Nanotube Composites as Cathode Catalysts for Anion-Exchange Membrane Fuel Cells. <i>ACS Catalysis</i> , 2021, 11, 1920-1931.	11.2	85
6	Nitrogen-doped carbide-derived carbon/carbon nanotube composites as cathode catalysts for anion exchange membrane fuel cell application. <i>Applied Catalysis B: Environmental</i> , 2020, 272, 119012.	20.2	72
7	The vibrationally resolved C 1s core photoelectron spectra of methane and ethane. <i>Journal of Chemical Physics</i> , 1997, 106, 1661-1668.	3.0	69
8	Bifunctional Oxygen Electrocatalysis on Mixed Metal Phthalocyanine-Modified Carbon Nanotubes Prepared via Pyrolysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 41507-41516.	8.0	65
9	Autoionization phenomena involving the 2p <sup>5</sup> 3d configuration of argonlike ions in ionic solids. <i>Physical Review B</i> , 1993, 47, 11736-11748.	3.2	61
10	Auger decay of the dissociating core-excited states in the HCl and DCl molecules. <i>Journal of Chemical Physics</i> , 1996, 104, 4475-4480.	3.0	51
11	Electrocatalytic oxygen reduction reaction on iron phthalocyanine-modified carbide-derived carbon/carbon nanotube composite electrocatalysts. <i>Electrochimica Acta</i> , 2020, 334, 135575.	5.2	50
12	Transition metal-containing nitrogen-doped nanocarbon catalysts derived from 5-methylresorcinol for anion exchange membrane fuel cell application. <i>Journal of Colloid and Interface Science</i> , 2021, 584, 263-274.	9.4	50
13	Non-precious metal cathodes for anion exchange membrane fuel cells from ball-milled iron and nitrogen doped carbide-derived carbons. <i>Renewable Energy</i> , 2021, 167, 800-810.	8.9	50
14	Sulphur and nitrogen co-doped graphene-based electrocatalysts for oxygen reduction reaction in alkaline medium. <i>Electrochemistry Communications</i> , 2019, 109, 106603.	4.7	46
15	Mesoporous textured Fe-N-C electrocatalysts as highly efficient cathodes for proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2022, 520, 230819.	7.8	46
16	Mesoporous iron-nitrogen co-doped carbon material as cathode catalyst for the anion exchange membrane fuel cell. <i>Journal of Power Sources Advances</i> , 2021, 8, 100052.	5.1	43
17	Surface analysis of spray deposited copper indium disulfide films. <i>Thin Solid Films</i> , 2008, 516, 7110-7115.	1.8	42
18	Transition metal and nitrogen-doped mesoporous carbons as cathode catalysts for anion-exchange membrane fuel cells. <i>Applied Catalysis B: Environmental</i> , 2022, 306, 121113.	20.2	42

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19	Effects of precursors on nucleation in atomic layer deposition of HfO <sub>2</sub> . Applied Surface Science, 2004, 230, 292-300.	6.1	39
20	Study of the structural phase transformation of iron oxide nanoparticles from an Fe <sup>2+</sup> ion source by precipitation under various synthesis parameters and temperatures. Materials Chemistry and Physics, 2015, 149-150, 473-479.	4.0	37
21	Electroreduction of oxygen on cobalt phthalocyanine-modified carbide-derived carbon/carbon nanotube composite catalysts. Journal of Solid State Electrochemistry, 2021, 25, 57-71.	2.5	37
22	Engineering structure and properties of hafnium oxide films by atomic layer deposition temperature. Thin Solid Films, 2005, 479, 1-11.	1.8	36
23	Effect of Ball-Milling on the Oxygen Reduction Reaction Activity of Iron and Nitrogen Co-doped Carbide-Derived Carbon Catalysts in Acid Media. ACS Applied Energy Materials, 2019, 2, 7952-7962.	5.1	36
24	Transition metal phthalocyanine-modified shungite-based cathode catalysts for alkaline membrane fuel cell. International Journal of Hydrogen Energy, 2021, 46, 4365-4377.	7.1	36
25	Bimetal Phthalocyanine-Modified Carbon Nanotube-Based Bifunctional Catalysts for Zinc-Air Batteries. ChemElectroChem, 2021, 8, 2662-2670.	3.4	34
26	Effect of cobalt doping and annealing on properties of titania thin films prepared by sol-gel process. Applied Surface Science, 2011, 257, 6897-6907.	6.1	31
27	Electrospun Polyacrylonitrile-Derived Co or Fe Containing Nanofibre Catalysts for Oxygen Reduction Reaction at the Alkaline Membrane Fuel Cell Cathode. ChemCatChem, 2020, 12, 4568-4581.	3.7	31
28	Iron and cobalt containing electrospun carbon nanofibre-based cathode catalysts for anion exchange membrane fuel cell. International Journal of Hydrogen Energy, 2021, 46, 31275-31287.	7.1	30
29	Continuum resonance in ethylene: Evidence from vibrationally resolved core photoionization. Physical Review A, 1998, 58, 1879-1884.	2.5	28
30	In Situ XPS Studies of Electrochemically Negatively Polarized Molybdenum Carbide Derived Carbon Double Layer Capacitor Electrode. Journal of the Electrochemical Society, 2013, 160, A1084-A1093.	2.9	25
31	Silicon carbide-derived carbon electrocatalysts dual doped with nitrogen and phosphorus for the oxygen reduction reaction in an alkaline medium. Electrochemistry Communications, 2021, 125, 106976.	4.7	24
32	Structural and Magnetic Studies on Iron Oxide and Iron-Magnesium Oxide Thin Films Deposited Using Ferrocene and (Dimethylaminomethyl)ferrocene Precursors. ECS Journal of Solid State Science and Technology, 2013, 2, N45-N54.	1.8	23
33	Effects of N and O groups for oxygen reduction reaction on one- and two-dimensional carbonaceous materials. Electrochimica Acta, 2020, 344, 136052.	5.2	23
34	Character of F core excitons in alkali fluorides studied by resonant Auger spectroscopy. Physical Review B, 1994, 49, 3116-3123.	3.2	22
35	Nitrogen and Phosphorus Dual-Doped Silicon Carbide-Derived Carbon/Carbon Nanotube Composite for the Anion-Exchange Membrane Fuel Cell Cathode. ACS Applied Energy Materials, 2022, 5, 2949-2958.	5.1	21
36	Multi-atom resonant photoemission in transition metal chlorides. Solid State Communications, 2000, 115, 275-279.	1.9	20

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37	Influences from the C1s shape resonance on the vibrational progression in the Auger decay of CO. <i>Physical Review A</i> , 1998, 58, 2037-2042.	2.5	19
38	Impact of ball-milling of carbide-derived carbons on the generation of hydrogen peroxide via electroreduction of oxygen in alkaline media. <i>Journal of Electroanalytical Chemistry</i> , 2020, 878, 114690.	3.8	19
39	High-resolution photoelectron satellite spectrum of He excited by synchrotron radiation at 96.5 eV photon energy. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1995, 28, L293-L297.	1.5	17
40	Vibrationally selective resonant Auger spectroscopy of the 3p core-to-Rydberg excitation in CO. <i>Physical Review A</i> , 1997, 56, 480-487.	2.5	17
41	XPS and AFM investigation of hafnium dioxide thin films prepared by atomic layer deposition on silicon. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2007, 156-158, 150-154.	1.7	16
42	Bifunctional multi-metallic nitrogen-doped nanocarbon catalysts derived from 5-methylresorcinol. <i>Electrochemistry Communications</i> , 2021, 124, 106932.	4.7	16
43	Monte Carlo Simulation of Electron-Phonon Scattering in the XUV-Induced Electron Emission of NaCl. <i>Physica Status Solidi (B): Basic Research</i> , 1986, 137, 495-500.	1.5	15
44	Site-selective participator decay of core-excited butadiene. <i>Journal of Chemical Physics</i> , 1996, 105, 10719-10724.	3.0	15
45	Limitations of the ionic model in describing core-hole decay: molecular versus crystalline KCl. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 2003, 36, L85-L91.	1.5	15
46	Monte Carlo Simulation of the Production of Charge Carriers in NaCl Crystals by XUV Irradiation. <i>Physica Status Solidi (B): Basic Research</i> , 1985, 130, 211-218.	1.5	14
47	Auger decay of core-excited higher Rydberg states of carbon monoxide. <i>Journal of Physics B: Atomic, Molecular and Optical Physics</i> , 1997, 30, 4267-4278.	1.5	14
48	Resonant Auger spectra of TiO <sub>2</sub> at Ti 2p and O 1s absorption edges. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 93, 193-199.	1.7	14
49	Oxygen reduction reaction on Pd nanoparticles supported on novel mesoporous carbon materials. <i>Electrochimica Acta</i> , 2021, 394, 139132.	5.2	14
50	Core excitons in NaF photoabsorption of NaF: Resonant Auger spectroscopy. <i>Physical Review B</i> , 2001, 64, .	3.2	13
51	Study of Thin Oxide Films by Electron, Ion and Synchrotron Radiation Beams. <i>Mikrochimica Acta</i> , 2002, 139, 165-169.	5.0	13
52	Effect of phase composition on X-ray absorption spectra of ZrO <sub>2</sub> thin films. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2007, 156-158, 303-306.	1.7	13
53	Platinum Sputtered on Nb-doped TiO <sub>2</sub> Films Prepared by ALD: Highly Active and Durable Carbon-free ORR Electrocatalyst. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164505.	2.9	13
54	Angle-resolved spectator decay of vibrationally selected C 1s(2f) excited states in carbon monoxide. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 1998, 95, 25-36.	1.7	12

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55	Influence of the heating temperature on the properties of nickel doped TiO <sub>2</sub> films prepared by sol-gel method. Applied Surface Science, 2010, 256, 4538-4542.	6.1	12
56	Peat-derived carbon-based non-platinum group metal type catalyst for oxygen reduction and evolution reactions. Electrochemistry Communications, 2020, 113, 106700.	4.7	12
57	Monte Carlo simulation of the crossluminescence excitation spectrum in a CSBR crystal. Solid State Communications, 1990, 76, 1313-1316.	1.9	10
58	K <sub>LMM</sub> resonant Auger spectra of solid KF. Physical Review B, 1994, 50, 9079-9085.	3.2	10
59	Resonant inelastic x-ray scattering at the F <sub>1s</sub> photoabsorption edge in LiF: Interplay of excitonic and conduction states, and Stokes doubling. Physical Review B, 2004, 70, .	3.2	10
60	Effect of different annealing temperatures and SiO <sub>2</sub> /Si(100) substrate on the properties of nickel containing titania thin sol-gel films. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 953-965.	1.8	10
61	The electronic structure of ionic liquids based on the TFSI anion: A gas phase UPS and DFT study. Journal of Molecular Liquids, 2019, 294, 111580.	4.9	10
62	The quantum yield spectra of electron emission of solids in XUV region. Physica Status Solidi (B): Basic Research, 1982, 114, 487-493.	1.5	9
63	Auger Spectra of K <sup>+</sup> 2p <sub>3/2</sub> Excitations in Potassium Halides. Europhysics Letters, 1991, 15, 683-686.	2.0	9
64	Polypyrrole and Polythiophene Modified Carbon Nanotube-Based Cathode Catalysts for Anion Exchange Membrane Fuel Cell. ChemElectroChem, 2022, 9, .	3.4	9
65	Autoionization phenomena involving the 2p <sub>3/2</sub> configuration of argon-like ions in ionic solids. Journal of Electron Spectroscopy and Related Phenomena, 1994, 68, 287-296.	1.7	8
66	Insulating properties of ultrathin KF layers on Cu(100): Resonant Auger spectroscopy. Surface Science, 2005, 584, 49-54.	1.9	8
67	Oxygen reduction reaction on Pd nanocatalysts prepared by plasma-assisted synthesis on different carbon nanomaterials. Nanotechnology, 2021, 32, 035401.	2.6	8
68	Liquid-assisted grinding/compression: a facile mechanosynthetic route for the production of high-performing Co-N-C electrocatalyst materials. Green Chemistry, 2022, 24, 305-314.	9.0	8
69	M <sub>4,5</sub> N <sub>4,5</sub> Auger decay spectra of the resonantly excited 3d <sub>9/2</sub> configuration of xenonlike ions in solids. Physical Review B, 1994, 49, 14836-14844.	3.2	7
70	Interplay of atomic and solid-state effects in inner-shell-resonant photoelectron spectra. Physical Review B, 1996, 53, R5978-R5981.	3.2	7
71	2p-3d resonant Auger scattering by K <sup>+</sup> ions of KMnF <sub>3</sub> without the influence of the crystal-field splitting. Physical Review B, 1995, 51, 3202-3205.	3.2	6
72	Vibrationally selective resonant Auger spectroscopy in CO: evidence of the valence character of the 3s 'Rydberg level'. Journal of Physics B: Atomic, Molecular and Optical Physics, 1999, 32, 267-275.	1.5	6

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73	Resonant photoemission of CoCl <sub>2</sub> . Journal of Electron Spectroscopy and Related Phenomena, 1999, 101-103, 745-749.	1.7	6
74	Resonant inelastic X-ray scattering at the Be 1s edge in BeO. Journal of Electron Spectroscopy and Related Phenomena, 2007, 156-158, 299-302.	1.7	6
75	Substrate-induced effects in the creation and decay of potassium 2p core excitations in ultrathin films of KCl on copper. Journal of Physics Condensed Matter, 2008, 20, 145206.	1.8	6
76	Electron spectroscopic study of passive oxide layer formation on Fe-19Cr-18Ni-1Al-TiC austenitic stainless steel. Journal of Electron Spectroscopy and Related Phenomena, 2010, 182, 108-114.	1.7	6
77	Multivariable oxygen sensing based on photoluminescence and photoconductivity of TiO <sub>2</sub> nanoparticles. Sensors and Actuators B: Chemical, 2020, 303, 127236.	7.8	6
78	Multi-purpose heterogeneous catalyst material from an amorphous cobalt metal-organic framework. Materials Advances, 2021, 2, 4009-4015.	5.4	6
79	Synthesis and Characterization of Cobalt and Nitrogen Co-Doped Peat-Derived Carbon Catalysts for Oxygen Reduction in Acidic Media. Catalysts, 2021, 11, 715.	3.5	6
80	Auger Decay of K+L <sub>23</sub> Excitations in Potassium Halides. Physica Scripta, 1992, T41, 237-240.	2.5	5
81	Auger decay processes of resonantly excited 3d <sup>n</sup> 4f configuration of xenon-like ions in solids. Journal of Electron Spectroscopy and Related Phenomena, 1994, 68, 277-286.	1.7	5
82	Auger and photoelectron spectra of K <sup>+</sup> in solids at resonant 2p <sub>6</sub> to 2p <sub>53d</sub> excitation. Journal of Electron Spectroscopy and Related Phenomena, 1995, 72, 127-131.	1.7	5
83	Secondary photoelectron spectra of NaCl and KBr excited by XUV radiation: Experiments and computer simulations. Solid State Communications, 1990, 76, 1383-1386.	1.9	4
84	Inner-shell excitation of intrinsic luminescence and resonantly excited X-ray fluorescence at Be 1s edge in oriented BeO crystals. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 575, 172-175.	1.6	4
85	UPS and DFT investigation of the electronic structure of gas-phase trimesic acid. Journal of Electron Spectroscopy and Related Phenomena, 2016, 213, 11-16.	1.7	4
86	Atomic-layer design and properties of Pr-doped HfO <sub>2</sub> thin films. Journal of Alloys and Compounds, 2021, 868, 159100.	5.5	4
87	MNN resonant Auger spectra of Ce in CeCl <sub>3</sub> . Journal of Electron Spectroscopy and Related Phenomena, 1995, 72, 119-123.	1.7	3
88	Appearance of crystal-field splitting in 2p-resonant electron spectra of K <sup>+</sup> in ionic solids. Journal of Electron Spectroscopy and Related Phenomena, 1995, 76, 589-594.	1.7	3
89	Na K PHOTOABSORPTION AND RESONANT KLL AUGER SPECTRA IN NaF AND NaCl. Surface Review and Letters, 2002, 09, 1303-1308.	1.1	3
90	Potential barrier effects in Cs 3d resonance photoemission of CsF. Journal of Electron Spectroscopy and Related Phenomena, 2004, 137-140, 377-381.	1.7	3

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91	Resonant inelastic X-ray scattering at the K edge of oxygen and fluorine in insulators. Journal of Electron Spectroscopy and Related Phenomena, 2005, 144-147, 845-848.	1.7	3
92	Pt coated Cr2O3 thin films for resistive gas sensors. Open Physics, 2009, 7, .	1.7	3
93	Cobalt-Containing Nitrogen-Doped Carbon Materials Derived from Saccharides as Efficient Electrocatalysts for Oxygen Reduction Reaction. Catalysts, 2022, 12, 568.	3.5	3
94	Monte Carlo simulation of the cross-luminescence excitation spectrum in a CsBr crystal. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1991, 308, 211-214.	1.6	2
95	Probing of electron-phonon scattering in ionic solids by XUV-induced electron emission spectroscopy. Surface Science, 1992, 269-270, 583-589.	1.9	2
96	Combined luminescence and X-ray emission study of self-trapped excitons in oxides. IOP Conference Series: Materials Science and Engineering, 2010, 15, 012088.	0.6	2
97	Resonant inelastic x-ray scattering and UV-VUV luminescence at the Be 1s edge in BeO. Journal of Physics Condensed Matter, 2010, 22, 375505.	1.8	2
98	The sub-bandgap energy loss satellites in the RIXS spectra of beryllium compounds. Journal of Electron Spectroscopy and Related Phenomena, 2011, 184, 366-370.	1.7	2
99	The benefit of the European User Community from transnational access to national radiation facilities. Journal of Synchrotron Radiation, 2014, 21, 638-639.	2.4	2
100	L23MM resonant auger spectra of Mn in KMnF3. Journal of Electron Spectroscopy and Related Phenomena, 1995, 72, 113-117.	1.7	1
101	3d-Resonant photo- and auger emission of Ce in CeO2. Journal of Electron Spectroscopy and Related Phenomena, 1995, 76, 583-587.	1.7	1
102	NEXAFS of ionic solids as seen through resonant electron spectra. Physica B: Condensed Matter, 1995, 208-209, 47-48.	2.7	1
103	Vacuum ultraviolet and X-ray emission spectroscopy of anion and cation excitons in oxide crystals. Journal of Surface Investigation, 2012, 6, 100-105.	0.5	1
104	Electronic structure of LBO and BBO as revealed by boron and oxygen RIXS spectra. Journal of Electron Spectroscopy and Related Phenomena, 2013, 188, 32-37.	1.7	1
105	Auger Transitions as Luminescence Killers in Ionic Solids. Physica Scripta, 1992, T41, 19-22.	2.5	1
106	Cobalt and Nitrogen Co-Doped Peat Derived Carbon Based Catalysts for Oxygen Reduction. ECS Transactions, 2020, 97, 605-613.	0.5	1
107	Substrate-induced effects in the creation and decay of core excitations in ultrathin films of potassium chloride on copper. Journal of Electron Spectroscopy and Related Phenomena, 2007, 156-158, 294-298.	1.7	0
108	Transition Metal-Containing Nitrogen-Doped Nanocarbons Derived from 5-Methylresorcinol for Anion Exchange Membrane Fuel Cell Application. ECS Meeting Abstracts, 2020, MA2020-02, 2361-2361.	0.0	0

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109	Characterisation of Novel Nitrogen Doped Reduced Graphene Oxide. ECS Transactions, 2022, 108, 99-109.	0.5	0