Franciszek Krok

List of Publications by Year
in descending order

103 papers	1,742 citations	304743 22 h-index	345221 36 g-index
107 all docs	107 docs citations	107 times ranked	1887 citing authors

#	Article	IF	Citations
1	Tuning the electronic properties of a clean TiO2(1 1 0) surface via repeated sputtering and annealing: A KPFM and LC-AFM study. Applied Surface Science, 2022, 571, 151303.	6.1	4
2	Influence of Interfacial Oxidation on Friction in Structural Superlubricity. Tribology Letters, 2021, 69, 1.	2.6	1
3	Into the origin of electrical conductivity for the metalâ€“semiconductor junction at the atomic level. Applied Surface Science, 2021, 570, 150958.	6.1	1
4	Photoluminescence imaging of defects in TiO2: The influence of grain boundaries and doping on charge carrier dynamics. Applied Surface Science, 2021, 569, 150909.	6.1	14
5	Automatic microscopic image analysis by moving window local Fourier Transform and Machine Learning. Micron, 2020, 130, 102800.	2.2	22
6	Mapping the conducting channels formed along extended defects in SrTiO3 by means of scanning near-field optical microscopy. Scientific Reports, 2020, 10, 17763.	3.3	9
7	The Electronic Properties of Extended Defects in SrTiO3â€"A Case Study of a Real Bicrystal Boundary. Crystals, 2020, 10, 665.	2.2	8
8	Scanning-Probe-Induced Assembling of Gold Striations on Mono- and Bi-Layered MoS2 on SiO2. MRS Advances, 2020, 5, 2201-2207.	0.9	1
9	Towards the understanding of the gold interaction with AIII-BV semiconductors at the atomic level. Nanoscale, 2020, 12, 9067-9081.	5.6	6
10	Molecular Structure and Electronic Properties of <i>para</i>-Hexaphenyl Monolayer on Atomically Flat Rutile TiO₂(110). Journal of Physical Chemistry C, 2020, 124, 5681-5689.	3.1	3
11	Localized electrochemical redox reactions in yttria-stabilized zirconia single crystals. JPhys Energy, 2020, 2, 034008.	5.3	5
12	Initial Stage of para-Hexaphenyl Thin-Film Growth Controlled by the Step Structure of the Ion-Beam-Modified TiO2(110) Surface. Journal of Physical Chemistry C, 2019, 123, 20257-20269.	3.1	1
13	Nanostructure phase and interface engineering via controlled Au self-assembly on GaAs(001) surface. Applied Surface Science, 2019, 492, 703-710.	6.1	2
14	Kelvin probe force microscopy work function characterization of transition metal oxide crystals under ongoing reduction and oxidation. Beilstein Journal of Nanotechnology, 2019, 10, 1596-1607.	2.8	11
15	Self-reduction of the native TiO2 (110) surface during cooling after thermal annealing â€“ in-operando investigations. Scientific Reports, 2019, 9, 12563.	3.3	20
16	Perforated alumina templates as a tool for engineering of CoPd film magnetic properties. Journal of Magnetism and Magnetic Materials, 2019, 477, 182-189.	2.3	7
17	â€œCommandâ€•surfaces with thermo-switchable antibacterial activity. Materials Science and Engineering C, 2019, 103, 109806.	7.3	34
18	Current channeling along extended defects during electroreduction of SrTiO3. Scientific Reports, 2019, 9, 2502.	3.3	20

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19	A bottom-up process of self-formation of highly conductive titanium oxide (TiO) nanowires on reduced SrTiO₃. Nanoscale, 2019, 11, 89-97.	5.6	13
20	In situ study of redox processes on the surface of SrTiO3 single crystals. Applied Surface Science, 2018, 432, 46-52.	6.1	28
21	Local surface conductivity of transition metal oxides mapped with true atomic resolution. Nanoscale, 2018, 10, 11498-11505.	5.6	21
22	Fabrication of ion bombardment induced rippled TiO₂ surfaces to influence subsequent organic thin film growth. Journal of Physics Condensed Matter, 2018, 30, 283001.	1.8	3
23	Electrical nanopatterning of TiO2 single crystal surfaces <i>in situ</i> via local resistance and potential switching. APL Materials, 2018, 6, .	5.1	7
24	Recent developments in ion beam-induced nanostructures on AIII-BV compound semiconductors. Journal of Physics Condensed Matter, 2018, 30, 304005.	1.8	12
25	Thermally controlled growth of surface nanostructures on ion-modified AIII-BV semiconductor crystals. Applied Surface Science, 2018, 427, 349-356.	6.1	9
26	Controlled growth of hexagonal gold nanostructures during thermally induced self-assembling on Ge(001) surface. Scientific Reports, 2017, 7, 42420.	3.3	28
27	Stability and Decomposition of Perovskite-Type Titanates upon High-Temperature Reduction. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700222.	2.4	14
28	Retrieving the Quantitative Chemical Information at Nanoscale from Scanning Electron Microscope Energy Dispersive X-ray Measurements by Machine Learning. Nano Letters, 2017, 17, 6520-6525.	9.1	30
29	Tuning the surface structure and conductivity of niobium-doped rutile TiO₂ single crystals via thermal reduction. Physical Chemistry Chemical Physics, 2017, 19, 30339-30350.	2.8	9
30	The influence of nanoporous anodic titanium oxide substrates on the growth of the crystalline hydroxyapatite coatings. Materials Chemistry and Physics, 2017, 186, 167-178.	4.0	21
31	Urinary Extracellular Vesicles: Potential Biomarkers of Renal Function in Diabetic Patients. Journal of Diabetes Research, 2016, 2016, 1-12.	2.3	26
32	Influence of TiO2(110) surface roughness on growth and stability of thin organic films. Journal of Chemical Physics, 2016, 145, 144703.	3.0	6
33	Data on step-by-step atomic force microscopy monitoring of changes occurring in single melanoma cells undergoing ToF SIMS specialized sample preparation protocol. Data in Brief, 2016, 8, 1322-1332.	1.0	1
34	Protocol of single cells preparation for time of flight secondary ionÂmass spectrometry. Analytical Biochemistry, 2016, 511, 52-60.	2.4	19
35	Defect-Assisted Hard-X-Ray Microscopy with Capillary Optics. Physical Review Letters, 2016, 116, 233902.	7.8	16
36	Dynamics of thermally induced assembly of Au nanoislands from a thin Au layer on Ge(001). CrystEngComm, 2016, 18, 5674-5680.	2.6	4

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37	SEM studies of vacuum condition influence on thermally induced Au self-organization on Ge(001) surface. Surface and Coatings Technology, 2015, 277, 165-169.	4.8	3
38	Highly charged ion induced nanostructures at surfaces by strong electronic excitations. Progress in Surface Science, 2015, 90, 377-395.	8.3	31
39	Growth of <i>para</i>-Hexaphenyl Thin Films on Flat, Atomically Clean versus Air-Passivated TiO₂(110) Surfaces. Journal of Physical Chemistry C, 2015, 119, 17004-17015.	3.1	17
40	Synthesis of new metastable nanoalloys of immiscible metals with a pulse laser technique. Scientific Reports, 2015, 5, 9849.	3.3	71
41	Energy dependence of nanopillars formation on InSb semiconductor surfaces under gallium FIB and noble gas ions beam irradiation. Applied Surface Science, 2015, 327, 86-92.	6.1	20
42	Probing the electronic transport on the reconstructed Au/Ge(001) surface. Beilstein Journal of Nanotechnology, 2014, 5, 1463-1471.	2.8	10
43	Island shape anisotropy in organic thin film growth induced by ion-beam irradiated rippled surfaces. Physical Chemistry Chemical Physics, 2014, 16, 26112-26118.	2.8	11
44	Atomic Force Microscopy for Surface Imaging and Characterization of Supported Nanostructures. Springer Series in Surface Sciences, 2013, , 621-653.	0.3	0
45	Temperature-dependent orientation of self-organized nanopatterns on ion-irradiated TiO<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml:mn>2</mml:mn></mml:msub></mml:math>(110). Physical Review B, 2013, 88, .	3.2	18
46	Dynamics of the defect-mediated desorption of alkali halide surfaces. Low Temperature Physics, 2012, 38, 774-778.	0.6	4
47	Electronic properties of STM-constructed dangling-bond dimer lines on a Ge(001)-(2<mml:math) Tj ETQq1 1 0.784314 rgBT /Overlock	3.2	41
48	Probing atomic-scale friction on reconstructed surfaces of single-crystal semiconductors. Physical Review B, 2012, 85, .	3.2	8
49	Publisher's Note: Probing atomic-scale friction on reconstructed surfaces of single-crystal semiconductors [Phys. Rev. B85, 085308 (2012)]. Physical Review B, 2012, 85, .	3.2	0
50	Surface Properties of Nanostructures Supported on Semiconductor Substrates. Springer Series in Surface Sciences, 2012, , 117-149.	0.3	0
51	Multi-Probe Characterization of 1D and 2D Nanostructures Assembled on Ge(001) Surface by Gold Atom Deposition and Annealing. Advances in Atom and Single Molecule Machines, 2012, , 141-152.	0.0	4
52	Atomic-Scale Friction on Stepped Surfaces of Ionic Crystals. Physical Review Letters, 2011, 106, 186104.	7.8	49
53	Bias Potential for Tipâ€“Plane Systems in Kelvin Probe Force Microscopy Imaging of Non-uniform Surface Potential Distributions. Japanese Journal of Applied Physics, 2010, 49, 025201.	1.5	4
54	Scanning probe microscopy study of height-selected Ag/Ge(111) nanomesas driven by quantum size effects. Physical Review B, 2010, 81, .	3.2	6

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55	Ballistic versus electronic processes in ion-induced nanostructuring of ionic surfaces. Physical Review B, 2009, 79, .	3.2	20
56	Temperature-dependent surface modification of InSb(001) crystal by low-energy ion bombardment. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 2752-2756.	1.4	12
57	Nanometer-scale surface modification of KBr (001) single crystal by Ar ion bombardment. Surface and Coatings Technology, 2009, 203, 2458-2462.	4.8	9
58	Characterization of starch nanoparticles. Journal of Physics: Conference Series, 2009, 146, 012027.	0.4	19
59	Nanometer-scale patterning of alkali halide surfaces by ion bombardment. Applied Surface Science, 2008, 255, 1766-1775.	6.1	11
60	Study of the chemical and morphological evolution of InSb(001) surface under low energy ion bombardment. Vacuum, 2008, 83, 745-751.	3.5	10
61	AFM tip-induced ripple pattern on AIII-BV semiconductor surfaces. Applied Surface Science, 2008, 254, 5431-5434.	6.1	17
62	Lateral resolution and potential sensitivity in Kelvin probe force microscopy: Towards understanding of the sub-nanometer resolution. Physical Review B, 2008, 77, .	3.2	64
63	PTCDA molecules on an InSb(001) surface studied with atomic force microscopy. Nanotechnology, 2007, 18, 135302.	2.6	14
64	Leaky atomic traps: Upward diffusion of Au from nanoscale pits on ionic-crystal surfaces. Physical Review B, 2007, 76, .	3.2	16
65	Metal nanostructures assembled at semiconductor surfaces studied with high resolution scanning probes. Nanotechnology, 2007, 18, 044016.	2.6	9
66	Scanning Force Microscopies for Imaging and Characterization of Nanostructured Materials. Nanostructure Science and Technology, 2007, , 223-256.	0.1	1
67	Surface structure investigations using noncontact atomic force microscopy. Applied Surface Science, 2006, 252, 7614-7623.	6.1	22
68	Ion energy dependence of nanodot formation by nitrogen-bombarded InP. Solar Energy Materials and Solar Cells, 2006, 90, 1504-1512.	6.2	2
69	Non-contact atomic force microscopy studies of (2Ã—4) InP(001) surface. Surface Science, 2006, 600, 2379-2384.	1.9	4
70	Alkali halide decomposition and desorption by photonsâ€"the role of excited point defects and surface topographies. Journal of Physics Condensed Matter, 2006, 18, S1547-S1562.	1.8	10
71	Epitaxial nanostructures assembled on InSb(001) by submonolayer deposition of gold. Microelectronic Engineering, 2005, 81, 394-399.	2.4	14
72	Fluence dependence of the surface roughness of InP after <mml:math altimg="si7.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/co	1.4	4

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73	Atomic force microscopy studies of alkali halide surfaces nanostructured by DIET. Surface Science, 2005, 593, 147-154.	1.9	18
74	Surface structure of Au/InSb(001) system investigated with scanning force microscopy. Vacuum, 2004, 74, 223-227.	3.5	16
75	Dynamic force microscopy and Kelvin probe force microscopy of KBr film on InSb() surface at submonolayer coverage. Surface Science, 2004, 566-568, 63-67.	1.9	26
76	Desorption and surface topography changes induced by He+ ion bombardment of alkali halides. Nuclear Instruments & Methods in Physics Research B, 2004, 226, 601-608.	1.4	10
77	Ion beam-induced nanostructuring of InSb(001) surfaces studied with atomic force microscopy. Nuclear Instruments & Methods in Physics Research B, 2003, 212, 264-269.	1.4	7
78	Ion-beam-induced surface modification and nanostructuring of AIIIBV semiconductors. Progress in Surface Science, 2003, 74, 331-341.	8.3	10
79	Modification of granular potato starch by multiple deep-freezing and thawing. Carbohydrate Polymers, 2003, 52, 1-10.	10.2	75
80	STM/nc-AFM investigation of (nÃ—6) reconstructed GaAs(001) surface. Surface Science, 2003, 530, 149-154.	1.9	8
81	Ion beam-induced nanostructuring of AIIIBV semiconductor surfaces studied with dynamic force microscopy and Kelvin probe force spectroscopy. Applied Surface Science, 2003, 210, 112-116.	6.1	7
82	Characterization and properties of a modified Si solar cell emitter by a porous Si layer. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 101, 291-296.	3.5	13
83	Non-contact Atomic Force Microscopy of Starch Granules Surface. Part II. Selected Cereal Starches. Starch/Staerke, 2003, 55, 8-16.	2.1	41
84	Non-contact Atomic Force Microscopy of Starch Granules Surface. Part I. Potato and Tapioca Starches. Starch/Staerke, 2003, 55, 1-7.	2.1	52
85	Potato starch granule nanostructure studied by high resolution non-contact AFM. International Journal of Biological Macromolecules, 2003, 33, 1-7.	7.5	71
86	Atomic Structure of InSb(001) and GaAs(001) Surfaces Imaged with Noncontact Atomic Force Microscopy. Physical Review Letters, 2003, 90, 226101.	7.8	40
87	Scanning-tunneling/atomic-force microscopy study of the growth of KBr films on InSb(). Surface Science, 2002, 506, 12-22.	1.9	20
88	Ultrathin Ionic Films Epitaxially Grown on III-V Semiconductors Studied With Atomic Resolution. , 2002, , 499-509.		0
89	Atomic-resolution images of radiation damage in KBr. Surface Science, 2001, 474, L197-L202.	1.9	70
90	Frenkel defect interactions at surfaces of irradiated alkali halides studied by non-contact atomic-force microscopy. Surface Science, 2001, 482-485, 903-909.	1.9	29

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91	Surface topography dependent desorption of sodium chloride. Radiation Effects and Defects in Solids, 2001, 156, 69-74.	1.2	2
92	Nano-scale modification of ionic surfaces induced by electronic transitions. Progress in Surface Science, 2001, 67, 123-138.	8.3	45
93	Non-contact AFM investigation of influence of freezing process on the surface structure of potato starch granule. Applied Surface Science, 2000, 157, 382-386.	6.1	30
94	Time-of-flight study of water ice sputtered by slow xenon ions. Nuclear Instruments & Methods in Physics Research B, 2000, 164-165, 861-867.	1.4	9
95	Surface Topography Dependent Desorption of Alkali Halides. Physical Review Letters, 2000, 85, 2621-2624.	7.8	43
96	Deep-freezing of potato starch. International Journal of Biological Macromolecules, 2000, 27, 307-314.	7.5	80
97	Dependence of radiative stabilization on the projectile charge state after double-electron-transfer processes in slow, highly charged ion-molecule collisions. Physical Review A, 1997, 56, 4692-4699.	2.5	4
98	Ion flux-dependence of secondary charged particle emissions from non-metallic surfaces. Physica Scripta, 1997, T73, 320-321.	2.5	2
99	Multiple electron capture processes between highly charged ions and molecules. Physica Scripta, 1997, T73, 273-275.	2.5	7
100	Thermal stability and impedance spectroscopy studies of (Cu, Ni) substituted Bi4V2O11 ceramics. Ionics, 1997, 3, 299-304.	2.4	1
101	Impedance study of BIMGVOX ceramics. Ionics, 1996, 2, 474-477.	2.4	2
102	Electrode polarization in CdF2 crystals. Physica Status Solidi A, 1978, 47, K103-K105.	1.7	6
103	The influence of surface modification on optoelectronic properties of monocrystalline silicon solar cells. , 0, , .		2