

# Viktor V Brus

## List of Publications by Year in descending order

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121  
papers

3,430  
citations

172457

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168389

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125  
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125  
docs citations

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times ranked

3808  
citing authors

#	ARTICLE	IF	CITATIONS
1	A High-Performance Solution-Processed Organic Photodetector for Near-Infrared Sensing. <i>Advanced Materials</i> , 2020, 32, e1906027.	21.0	270
2	Radiation Hardness and Self-Healing of Perovskite Solar Cells. <i>Advanced Materials</i> , 2016, 28, 8726-8731.	21.0	195
3	Side-Chain Engineering of Nonfullerene Acceptors for Near-Infrared Organic Photodetectors and Photovoltaics. <i>ACS Energy Letters</i> , 2019, 4, 1401-1409.	17.4	182
4	Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. <i>Advanced Materials</i> , 2019, 31, e1900904.	21.0	168
5	Influence of Radiation on the Properties and the Stability of Hybrid Perovskites. <i>Advanced Materials</i> , 2018, 30, 1702905.	21.0	162
6	Towards understanding the doping mechanism of organic semiconductors by Lewis acids. <i>Nature Materials</i> , 2019, 18, 1327-1334.	27.5	144
7	Unraveling the Light-Induced Degradation Mechanisms of $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Films. <i>Advanced Electronic Materials</i> , 2017, 3, 1700158.	5.1	130
8	Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1901438.	19.5	115
9	Defect Dynamics in Proton Irradiated $\text{CH}_3\text{NH}_3\text{PbI}_3$ Perovskite Solar Cells. <i>Advanced Electronic Materials</i> , 2017, 3, 1600438.	5.1	96
10	Capacitance Spectroscopy for Quantifying Recombination Losses in Nonfullerene Small-Molecule Bulk Heterojunction Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1502250.	19.5	95
11	Electrical and optical properties of TiN thin films. <i>Inorganic Materials</i> , 2014, 50, 40-45.	0.8	89
12	Light dependent open-circuit voltage of organic bulk heterojunction solar cells in the presence of surface recombination. <i>Organic Electronics</i> , 2016, 29, 1-6.	2.6	80
13	Charge Generation and Recombination in an Organic Solar Cell with Low Energetic Offsets. <i>Advanced Energy Materials</i> , 2018, 8, 1701073.	19.5	60
14	Design of narrow bandgap non-fullerene acceptors for photovoltaic applications and investigation of non-geminate recombination dynamics. <i>Journal of Materials Chemistry C</i> , 2020, 8, 15175-15182.	5.5	50
15	On impedance spectroscopy analysis of nonideal heterojunctions. <i>Semiconductor Science and Technology</i> , 2012, 27, 035024.	2.0	43
16	Organic Electrochemical Transistors Based on the Conjugated Polyelectrolyte $\text{PCPDTBT-6SO}_3\text{K}$ (CPE-K). <i>Advanced Materials</i> , 2020, 32, e1908120.	21.0	42
17	Electrical and photoelectrical properties of photosensitive heterojunctions $\text{n-TiO}_2/\text{p-CdTe}$ . <i>Semiconductor Science and Technology</i> , 2011, 26, 125006.	2.0	41
18	Raman spectroscopy of Cu-Sn-S ternary compound thin films prepared by the low-cost spray-pyrolysis technique. <i>Applied Optics</i> , 2016, 55, B158.	1.8	41

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19	Quantifying interface states and bulk defects in high-efficiency solution-processed small-molecule solar cells by impedance and capacitance characteristics. <i>Progress in Photovoltaics: Research and Applications</i> , 2015, 23, 1526-1535.	8.1	40
20	On the recombination order of surface recombination under open circuit conditions. <i>Organic Electronics</i> , 2020, 86, 105905.	2.6	38
21	On quantum efficiency of nonideal solar cells. <i>Solar Energy</i> , 2012, 86, 786-791.	6.1	36
22	Stability of graphene-silicon heterostructure solar cells. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2014, 211, 843-847.	1.8	36
23	Atomic-Level Insight into the Postsynthesis Band Gap Engineering of a Lewis Base Polymer Using Lewis Acid Tris(pentafluorophenyl)borane. <i>Chemistry of Materials</i> , 2019, 31, 6715-6725.	6.7	35
24	Specific features of the optical and electrical properties of polycrystalline CdTe films grown by the thermal evaporation method. <i>Physics of the Solid State</i> , 2014, 56, 1947-1951.	0.6	32
25	A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Short-Circuit Conditions. <i>Advanced Energy Materials</i> , 2021, 11, 2002760.	19.5	32
26	Electrical and optical properties of TiO <sub>2</sub> and TiO <sub>2</sub> :Fe thin films. <i>Inorganic Materials</i> , 2012, 48, 1026-1032.	0.8	31
27	Electrical and photoelectrical properties of P3HT/n-Si hybrid organic-inorganic heterojunction solar cells. <i>Organic Electronics</i> , 2013, 14, 3109-3116.	2.6	31
28	Graphite traces on water surface – A step toward low-cost pencil-on-semiconductor electronics and optoelectronics. <i>Carbon</i> , 2014, 78, 613-616.	10.3	31
29	Fine Art of Thermoelectricity. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 4737-4742.	8.0	30
30	Mechanisms of charge transport in anisotype n-TiO <sub>2</sub> /p-CdTe heterojunctions. <i>Semiconductors</i> , 2011, 45, 1077-1081.	0.5	29
31	Graphene/semi-insulating single crystal CdTe Schottky-type heterojunction X- and $\beta$ -Ray Radiation Detectors. <i>Scientific Reports</i> , 2019, 9, 1065.	3.3	27
32	Effect of Palladium-Tetrakis(Triphenylphosphine) Catalyst Traces on Charge Recombination and Extraction in Non-Fullerene-based Organic Solar Cells. <i>Advanced Functional Materials</i> , 2021, 31, 2009363.	14.9	27
33	Unraveling Device Physics of Dilute Donor Narrow-Bandgap Organic Solar Cells with Highly Transparent Active Layers. <i>Advanced Materials</i> , 2022, 34, .	21.0	26
34	Photosensitive Schottky-type heterojunctions prepared by the drawing of graphite films. <i>Applied Physics Letters</i> , 2014, 104, .	3.3	25
35	Secondary phases in Cu <sub>2</sub> ZnSnS <sub>4</sub> films obtained by spray pyrolysis at different substrate temperatures and Cu contents. <i>Materials Letters</i> , 2018, 216, 173-175.	2.6	25
36	The importance of sulfonate to the self-doping mechanism of the water-soluble conjugated polyelectrolyte PCPDTBT-SO <sub>3</sub> <sup>-</sup> K <sup>+</sup> . <i>Materials Chemistry Frontiers</i> , 2020, 4, 3556-3566.	5.9	25

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37	Optical constants and polarimetric properties of $\text{Nb}_2\text{O}_5/\text{MnO}_2$ thin films. <i>Optical Materials</i> , 2012, 34, 1940-1945.	3.6	24
38	Electrical and optical properties of graphite/ZnO nanorods heterojunctions. <i>Carbon</i> , 2014, 77, 1011-1019.	10.3	24
39	Graphitic carbon/n-CdTe Schottky-type heterojunction solar cells prepared by electron-beam evaporation. <i>Solar Energy</i> , 2015, 112, 78-84.	6.1	24
40	Structural, optical and electrical properties of $\text{Cu}_2\text{ZnSnS}_4$ films prepared from a non-toxic DMSO-based sol-gel and synthesized in low vacuum. <i>Journal of Physics and Chemistry of Solids</i> , 2017, 100, 154-160.	4.0	24
41	Electrical and photoelectric properties of anisotype n-TiN/p-Si heterojunctions. <i>Semiconductors</i> , 2013, 47, 1174-1179.	0.5	23
42	Fabrication and characterization of anisotype heterojunctions n-TiN/p-CdTe. <i>Semiconductor Science and Technology</i> , 2014, 29, 015007.	2.0	23
43	Temperature and Light Modulated Open-Circuit Voltage in Nonfullerene Organic Solar Cells with Different Effective Bandgaps. <i>Advanced Energy Materials</i> , 2021, 11, 2003091.	19.5	23
44	Light-dependent $I$ - $V$ characteristics of $\text{TiO}_2/\text{CdTe}$ heterojunction solar cells. <i>Semiconductor Science and Technology</i> , 2012, 27, 055008.	2.0	22
45	Kinetic properties of TiN thin films prepared by reactive magnetron sputtering. <i>Physics of the Solid State</i> , 2013, 55, 2234-2238.	0.6	22
46	Hall of Fame Article: Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance (Adv. Mater. 30/2019). <i>Advanced Materials</i> , 2019, 31, 1970219.	21.0	21
47	Optical properties of $\text{TiO}_2\text{-MnO}_2$ thin films prepared by electron-beam evaporation. <i>Technical Physics</i> , 2012, 57, 1148-1151.	0.7	20
48	CdTe $X/\beta$ -ray Detectors with Different Contact Materials. <i>Sensors</i> , 2021, 21, 3518.	3.8	20
49	Physical properties of carbon nanowalls synthesized by the ICP-PECVD method vs. the growth time. <i>Scientific Reports</i> , 2021, 11, 19287.	3.3	20
50	Electrical properties of anisotype heterojunctions n-CdZnO/p-CdTe. <i>Semiconductors</i> , 2012, 46, 1152-1157.	0.5	18
51	Open-circuit analysis of thin film heterojunction solar cells. <i>Solar Energy</i> , 2012, 86, 1600-1604.	6.1	18
52	Understanding Interfacial Recombination Processes in Narrow-Band-Gap Organic Solar Cells. <i>ACS Energy Letters</i> , 2022, 7, 1626-1634.	17.4	18
53	Low-temperature spray-pyrolysis of $\text{FeS}_2$ films and their electrical and optical properties. <i>Physics of the Solid State</i> , 2016, 58, 37-41.	0.6	17
54	Balance Between Light Absorption and Recombination Losses in Solution-Processed Small Molecule Solar Cells with Normal or Inverted Structures. <i>Advanced Energy Materials</i> , 2018, 8, 1801807.	19.5	17

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55	Fabricating Low-Cost Ionic-Organic Electronic Ratchets with Graphite Pencil and Adhesive Tape. Advanced Electronic Materials, 2016, 2, 1500344.	5.1	16
56	On the impedance spectroscopy of structures with a potential barrier. Semiconductors, 2012, 46, 1012-1015.	0.5	15
57	Transport properties of metal-semiconductor junctions on n-type InP prepared by electrophoretic deposition of Pt nanoparticles. Semiconductor Science and Technology, 2014, 29, 045017.	2.0	15
58	Temperature dependent electrical properties and barrier parameters of photosensitive heterojunctions n-TiN-N/p-Cd <sub>x</sub> Zn <sub>1-x</sub> Te. Semiconductor Science and Technology, 2015, 30, 075006.	2.0	15
59	Optical properties and mechanisms of current flow in Cu <sub>2</sub> ZnSnS <sub>4</sub> films prepared by spray pyrolysis. Physics of the Solid State, 2016, 58, 1058-1064.	0.6	15
60	Molybdenum oxide thin films in CdTe-based electronic and optoelectronic devices. Physica Status Solidi - Rapid Research Letters, 2016, 10, 346-349.	2.4	15
61	Coupling between structural properties and charge transport in nano-crystalline and amorphous graphitic carbon films, deposited by electron-beam evaporation. Nanotechnology, 2020, 31, 505706.	2.6	15
62	The effect of interface state continuum on the impedance spectroscopy of semiconductor heterojunctions. Semiconductor Science and Technology, 2013, 28, 025013.	2.0	14
63	Conjugated Polyelectrolyte/Graphene Hetero-Bilayer Nanocomposites Exhibit Temperature Switchable Type of Conductivity. Advanced Electronic Materials, 2017, 3, 1600515.	5.1	14
64	On Optoelectronic Processes in Organic Solar Cells: From Opaque to Transparent. Advanced Optical Materials, 2021, 9, 2001484.	7.3	14
65	2D nanocomposite photoconductive sensors fully dry drawn on regular paper. Nanotechnology, 2015, 26, 255501.	2.6	13
66	Charge transport features of CdTe-based X- and $\gamma$ -ray detectors with Ti and TiO <sub>2</sub> Schottky contacts. Nuclear Physics, 2022, 131, .	1.6	13
67	Determination of the charge carrier density in organic solar cells: A tutorial. Journal of Applied Physics, 2022, 131, .	2.5	13
68	Isotype surface-barrier n-TiN/n-Si heterostructure. Semiconductors, 2014, 48, 219-223.	0.5	12
69	Fabrication and investigation of photosensitive MoO <sub>x</sub> /n-CdTe heterojunctions. Semiconductor Science and Technology, 2016, 31, 105006.	2.0	12
70	Modification of the properties of tin sulfide films grown by spray pyrolysis. Inorganic Materials, 2016, 52, 851-857.	0.8	12
71	Understanding the Device Physics in Polymer-Based Ionic-Organic Ratchets. Advanced Materials, 2017, 29, 1606464.	21.0	12
72	Capabilities of CdTe-Based Detectors With $\{\text{MoO}\}_x$ Contacts for Detection of X- and $\gamma$ -Radiation. IEEE Transactions on Nuclear Science, 2017, 64, 1168-1172.	2.0	12

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73	Performance Comparison of X- and $\gamma$ -Ray CdTe Detectors With $\text{MoO}_3$ , $\text{TiO}_2$ , and TiN Schottky Contacts. IEEE Transactions on Nuclear Science, 2018, 65, 1365-1370.	2.0	12
74	Effects of Recombination Order on Open-Circuit Voltage Decay Measurements of Organic and Perovskite Solar Cells. Energies, 2021, 14, 4800.	3.1	12
75	Charge transport mechanisms in anisotype n-TiO <sub>2</sub> /p-Si heterostructures. Semiconductors, 2013, 47, 799-803.	0.5	11
76	Doping Effects and Charge Transfer Dynamics at Hybrid Perovskite/Graphene Interfaces. Advanced Materials Interfaces, 2018, 5, 1800826.	3.7	11
77	Light-Induced Defect Generation in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> Thin Films and Single Crystals. Solar Rrl, 2020, 4, 1900216.	5.8	11
78	On Charge Carrier Density in Organic Solar Cells Obtained via Capacitance Spectroscopy. Advanced Electronic Materials, 2020, 6, 2000517.	5.1	11
79	Optical Expediency of Back Electrode Materials for Organic Near-Infrared Photodiodes. ACS Applied Materials & Interfaces, 2021, 13, 27217-27226.	8.0	11
80	Surface-barrier heterojunctions TiO <sub>2</sub> /CdZnTe. Semiconductor Science and Technology, 2013, 28, 015014.	2.0	10
81	Creation and annealing of metastable defect states in CH <sub>3</sub> NH <sub>3</sub> PbI <sub>3</sub> at low temperatures. Applied Physics Letters, 2018, 112, .	3.3	10
82	Temperature and light dependent electrical properties of Graphene/n-Si-CH <sub>3</sub> -terminated solar cells. Solar Energy, 2014, 107, 74-81.	6.1	9
83	Visualization of Charge Transfer from Bacteria to a Self-Doped Conjugated Polymer Electrode Surface Using Conductive Atomic Force Microscopy. ACS Applied Materials & Interfaces, 2020, 12, 40778-40785.	8.0	9
84	Structure and optical properties of thin films CZTS obtained by the RF magnetron sputtering. , 2018, , .		9
85	Temperature and light dependent diode current in high-efficiency solution-processed small-molecule solar cells. Organic Electronics, 2014, 15, 2141-2147.	2.6	8
86	Solution-Processed Ion-Free Organic Ratchets with Asymmetric Contacts. Advanced Materials, 2018, 30, 1804794.	21.0	8
87	Structural, electrical, and photoelectric properties of p-NiO/n-CdTe heterojunctions. Optical Engineering, 2018, 57, 1.	1.0	8
88	Visible to Near-Infrared Photodiodes with Advanced Radiation Resistance. Advanced Theory and Simulations, 2022, 5, .	2.8	8
89	Structural and photoluminescent properties of TiN thin films. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rgBT /Overlock 10	0.6	6
90	Electrical and Photoelectric Properties of the TiN/p-InSe Heterojunction. Semiconductors, 2016, 50, 334-338.	0.5	6

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91	Specific features of the recombination loss of the photocurrent in n-TiN/p-Si anisotype heterojunctions. Semiconductors, 2014, 48, 1504-1506.	0.5	5
92	Electrical properties of MOS diodes In/TiO <sub>2</sub> /p-CdTe. Semiconductors, 2014, 48, 487-491.	0.5	5
93	Electrical properties of thin-film semiconductor heterojunctions n-TiO <sub>2</sub> /p-CuInS <sub>2</sub> . Semiconductors, 2014, 48, 1046-1050.	0.5	5
94	Electrical properties of anisotype n-TiN/p-Hg <sub>3</sub> In <sub>2</sub> Te <sub>6</sub> heterojunctions. Technical Physics Letters, 2014, 40, 231-233.	0.7	5
95	Structural and optical properties of Cu <sub>2</sub> ZnSn(S,Se) <sub>4</sub> films obtained by magnetron sputtering of a Cu <sub>2</sub> ZnSn alloy target. Physics of the Solid State, 2017, 59, 1643-1647.	0.6	5
96	A Review on the Materials Science and Device Physics of Semitransparent Organic Photovoltaics. Energies, 2022, 15, 4639.	3.1	5
97	Diodes based on semi-insulating CdTe crystals with Mo/MoO <sub>x</sub> contacts for X-ray detectors. Physica Status Solidi C: Current Topics in Solid State Physics, 2017, 14, 1600232.	0.8	4
98	Effect of surface treatment on the quality of ohmic contacts to single-crystal p-CdTe. Journal of Surface Investigation, 2017, 11, 276-279.	0.5	4
99	Graphite/p-SiC Schottky Diodes Prepared by Transferring Drawn Graphite Films onto SiC. Semiconductors, 2018, 52, 236-241.	0.5	4
100	The effect of CoO impurity and substrate temperature on optical properties of TiO <sub>2</sub> thin films. , 2011, , .		3
101	11th International Conference "Correlation Optics" Propolis films for hybrid biomaterial-inorganic electronics and optoelectronics. Applied Optics, 2014, 53, B121.	1.8	3
102	Electrical properties of anisotype n-CdO/p-Si heterojunctions. Semiconductors, 2014, 48, 899-904.	0.5	3
103	Electrical and photoelectric properties of n-TiN/p-Hg <sub>3</sub> In <sub>2</sub> Te <sub>6</sub> heterostructures. Semiconductors, 2016, 50, 1020-1024.	0.5	3
104	n-Type Ionic "Organic Electronic Ratchets for Energy Harvesting. ACS Applied Materials & Interfaces, 2019, 11, 1081-1087.	8.0	3
105	Heterojunction Solar Cells. International Journal of Photoenergy, 2014, 2014, 1-2.	2.5	2
106	Charge-transport mechanisms in heterostructures based on TiO <sub>2</sub> :Cr <sub>2</sub> O <sub>3</sub> thin films. Semiconductors, 2014, 48, 1174-1177.	0.5	2
107	Optical properties of spin-coated SnS <sub>2</sub> thin films. , 2018, , .		2
108	Influence of technological conditions on optical and structural properties of molybdenum oxide thin films. , 2018, , .		2

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109	Transient grating spectroscopy of photocarrier dynamics in semiconducting polymer thin films. Applied Physics Letters, 2020, 117, .	3.3	2
110	Fabrication and Properties of the Photosensitive Anisotype n-Cd <sub>x</sub> Zn <sub>1-x</sub> O/p-CdTe Heterojunctions. Acta Physica Polonica A, 2014, 126, 1163-1166.	0.5	1
111	Silicon nanowire array architecture for heterojunction electronics. Semiconductors, 2017, 51, 542-548.	0.5	1
112	CdTe Based X/Î <sup>3</sup> -ray Detector with MoOx Contacts. Journal of Nano- and Electronic Physics, 2017, 9, 03035-1-03035-4.	0.5	1
113	Prospects of In/CdTe X- and Î <sup>3</sup> -ray detectors with MoO Ohmic contacts. , 2018, , .		1
114	Heterojunction photodiode on cleaved SiC. , 2018, , .		1
115	Electrical properties of an n-TiO2/n-GaP semiconductor heterostructure. Russian Physics Journal, 2013, 56, 233-235.	0.4	0
116	The effect of surface treatment on electrical and photoelectrical properties of anisotype heterojunctions n-TiN/p-Si. Proceedings of SPIE, 2013, , .	0.8	0
117	Structural parameters and polarization properties of TiN thin films prepared by reactive magnetron sputtering. , 2015, , .		0
118	Physical properties of the heterojunction ÐœÐ¼ÐžÑ.../n-CdTe as a function of the parameters of CdTe crystals. , 2018, , .		0
119	Optical constants and polarimetric properties of AlN thin films. , 2018, , .		0
120	Anomalous light absorption by a monolayer graphene-water complex. , 2018, , .		0
121	Absorption of light by a monolayer graphene-water complex. , 2018, , .		0