

Viktor V Brus

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/6625217/publications.pdf>

Version: 2024-02-01

121
papers

3,430
citations

196777

29
h-index

190340

53
g-index

125
all docs

125
docs citations

125
times ranked

4430
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 1 | Visible to Near-Infrared Photodiodes with Advanced Radiation Resistance. <i>Advanced Theory and Simulations</i> , 2022, 5, . | 1.3 | 8 |
| 2 | Understanding Interfacial Recombination Processes in Narrow-Band-Gap Organic Solar Cells. <i>ACS Energy Letters</i> , 2022, 7, 1626-1634. | 8.8 | 18 |
| 3 | Unraveling Device Physics of Dilute Donor Narrow-Bandgap Organic Solar Cells with Highly Transparent Active Layers. <i>Advanced Materials</i> , 2022, 34, . | 11.1 | 26 |
| 4 | A Review on the Materials Science and Device Physics of Semitransparent Organic Photovoltaics. <i>Energies</i> , 2022, 15, 4639. | 1.6 | 5 |
| 5 | Determination of the charge carrier density in organic solar cells: A tutorial. <i>Journal of Applied Physics</i> , 2022, 131, . | 1.1 | 13 |
| 6 | On Optoelectronic Processes in Organic Solar Cells: From Opaque to Transparent. <i>Advanced Optical Materials</i> , 2021, 9, 2001484. | 3.6 | 14 |
| 7 | Charge transport features of CdTe-based X- and γ -ray detectors with Ti and TiO ₂ Schottky contacts. <i>Sensors</i> , 2021, 21, 3518. | 0.7 | 13 |
| 8 | A Simple Approach for Unraveling Optoelectronic Processes in Organic Solar Cells under Short-Circuit Conditions. <i>Advanced Energy Materials</i> , 2021, 11, 2002760. | 10.2 | 32 |
| 9 | Temperature and Light Modulated Open-Circuit Voltage in Nonfullerene Organic Solar Cells with Different Effective Bandgaps. <i>Advanced Energy Materials</i> , 2021, 11, 2003091. | 10.2 | 23 |
| 10 | 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. | 7.8 | 27 |
| 11 | CdTe X γ -ray Detectors with Different Contact Materials. <i>Sensors</i> , 2021, 21, 3518. | 2.1 | 20 |
| 12 | Optical Expediency of Back Electrode Materials for Organic Near-Infrared Photodiodes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 27217-27226. | 4.0 | 11 |
| 13 | Effects of Recombination Order on Open-Circuit Voltage Decay Measurements of Organic and Perovskite Solar Cells. <i>Energies</i> , 2021, 14, 4800. | 1.6 | 12 |
| 14 | Physical properties of carbon nanowalls synthesized by the ICP-PECVD method vs. the growth time. <i>Scientific Reports</i> , 2021, 11, 19287. | 1.6 | 20 |
| 15 | Light-Induced Defect Generation in CH ₃ NH ₃ PbI ₃ Thin Films and Single Crystals. <i>Solar Rrl</i> , 2020, 4, 1900216. | 3.1 | 11 |
| 16 | A High-Performance Solution-Processed Organic Photodetector for Near-Infrared Sensing. <i>Advanced Materials</i> , 2020, 32, e1906027. | 11.1 | 270 |
| 17 | On the recombination order of surface recombination under open circuit conditions. <i>Organic Electronics</i> , 2020, 86, 105905. | 1.4 | 38 |
| 18 | Visualization of Charge Transfer from Bacteria to a Self-Doped Conjugated Polymer Electrode Surface Using Conductive Atomic Force Microscopy. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 40778-40785. | 4.0 | 9 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | On Charge Carrier Density in Organic Solar Cells Obtained via Capacitance Spectroscopy. <i>Advanced Electronic Materials</i> , 2020, 6, 2000517. | 2.6 | 11 |
| 20 | The importance of sulfonate to the self-doping mechanism of the water-soluble conjugated polyelectrolyte PCPDTBT-SO ₃ ⁻ K. <i>Materials Chemistry Frontiers</i> , 2020, 4, 3556-3566. | 3.2 | 25 |
| 21 | 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. | 2.7 | 50 |
| 22 | Organic Electrochemical Transistors Based on the Conjugated Polyelectrolyte PCPDTBT-SO ₃ ⁻ K (CPE- K). <i>Advanced Materials</i> , 2020, 32, e1908120. | 11.1 | 42 |
| 23 | Coupling between structural properties and charge transport in nano-crystalline and amorphous graphitic carbon films, deposited by electron-beam evaporation. <i>Nanotechnology</i> , 2020, 31, 505706. | 1.3 | 15 |
| 24 | Transient grating spectroscopy of photocarrier dynamics in semiconducting polymer thin films. <i>Applied Physics Letters</i> , 2020, 117, . | 1.5 | 2 |
| 25 | Quantifying the Nongeminate Recombination Dynamics in Nonfullerene Bulk Heterojunction Organic Solar Cells. <i>Advanced Energy Materials</i> , 2019, 9, 1901438. | 10.2 | 115 |
| 26 | 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. | 11.1 | 21 |
| 27 | Towards understanding the doping mechanism of organic semiconductors by Lewis acids. <i>Nature Materials</i> , 2019, 18, 1327-1334. | 13.3 | 144 |
| 28 | Graphene/semi-insulating single crystal CdTe Schottky-type heterojunction X- and β -Ray Radiation Detectors. <i>Scientific Reports</i> , 2019, 9, 1065. | 1.6 | 27 |
| 29 | Solution-Processed Semitransparent Organic Photovoltaics: From Molecular Design to Device Performance. <i>Advanced Materials</i> , 2019, 31, e1900904. | 11.1 | 168 |
| 30 | 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. | 3.2 | 35 |
| 31 | Side-Chain Engineering of Nonfullerene Acceptors for Near-Infrared Organic Photodetectors and Photovoltaics. <i>ACS Energy Letters</i> , 2019, 4, 1401-1409. | 8.8 | 182 |
| 32 | n-Type Ionic Organic Electronic Ratchets for Energy Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 1081-1087. | 4.0 | 3 |
| 33 | Creation and annealing of metastable defect states in CH ₃ NH ₃ PbI ₃ at low temperatures. <i>Applied Physics Letters</i> , 2018, 112, . | 1.5 | 10 |
| 34 | Fine Art of Thermoelectricity. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 4737-4742. | 4.0 | 30 |
| 35 | Graphite/p-SiC Schottky Diodes Prepared by Transferring Drawn Graphite Films onto SiC. <i>Semiconductors</i> , 2018, 52, 236-241. | 0.2 | 4 |
| 36 | Secondary phases in Cu ₂ ZnSnS ₄ films obtained by spray pyrolysis at different substrate temperatures and Cu contents. <i>Materials Letters</i> , 2018, 216, 173-175. | 1.3 | 25 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 37 | Charge Generation and Recombination in an Organic Solar Cell with Low Energetic Offsets. <i>Advanced Energy Materials</i> , 2018, 8, 1701073. | 10.2 | 60 |
| 38 | Influence of Radiation on the Properties and the Stability of Hybrid Perovskites. <i>Advanced Materials</i> , 2018, 30, 1702905. | 11.1 | 162 |
| 39 | Solution-Processed Ion-Free Organic Ratchets with Asymmetric Contacts. <i>Advanced Materials</i> , 2018, 30, 1804794. | 11.1 | 8 |
| 40 | 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. | 10.2 | 17 |
| 41 | Performance Comparison of X- and γ -Ray CdTe Detectors With MoO _x , TiO _x , and TiN Schottky Contacts. <i>IEEE Transactions on Nuclear Science</i> . 2018, 65, 1365-1370. | 1.2 | 12 |
| 42 | Doping Effects and Charge Transfer Dynamics at Hybrid Perovskite/Graphene Interfaces. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800826. | 1.9 | 11 |
| 43 | Structure and optical properties of thin films CZTS obtained by the RF magnetron sputtering. , 2018, , . | | 9 |
| 44 | Optical properties of spin-coated SnS ₂ thin films. , 2018, , . | | 2 |
| 45 | Influence of technological conditions on optical and structural properties of molybdenum oxide thin films. , 2018, , . | | 2 |
| 46 | Structural, electrical, and photoelectric properties of p-NiO/n-CdTe heterojunctions. <i>Optical Engineering</i> , 2018, 57, 1. | 0.5 | 8 |
| 47 | Physical properties of the heterojunction $\text{In}_{0.3}\text{Cd}_{0.7}\text{Te}/\text{n-CdTe}$ as a function of the parameters of CdTe crystals. , 2018, , . | | 0 |
| 48 | Prospects of In/CdTe X- and γ -ray detectors with MoO Ohmic contacts. , 2018, , . | | 1 |
| 49 | Heterojunction photodiode on cleaved SiC. , 2018, , . | | 1 |
| 50 | Optical constants and polarimetric properties of AlN thin films. , 2018, , . | | 0 |
| 51 | Anomalous light absorption by a monolayer graphene-water complex. , 2018, , . | | 0 |
| 52 | Absorption of light by a monolayer graphene-water complex. , 2018, , . | | 0 |
| 53 | Diodes based on semi-insulating CdTe crystals with Mo/MoO _x contacts for X- and γ -ray detectors. <i>Physica Status Solidi C: Current Topics in Solid State Physics</i> , 2017, 14, 1600232. | 0.8 | 4 |
| 54 | Defect Dynamics in Proton Irradiated CH ₃ NH ₃ PbI ₃ Perovskite Solar Cells. <i>Advanced Electronic Materials</i> , 2017, 3, 1600438. | 2.6 | 96 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 55 | Understanding the Device Physics in Polymer-Based Ionic Organic Ratchets. <i>Advanced Materials</i> , 2017, 29, 1606464. | 11.1 | 12 |
| 56 | Silicon nanowire array architecture for heterojunction electronics. <i>Semiconductors</i> , 2017, 51, 542-548. | 0.2 | 1 |
| 57 | Capabilities of CdTe-Based Detectors With MoO_x Contacts for Detection of X- and γ -Radiation. <i>IEEE Transactions on Nuclear Science</i> , 2017, 64, 1168-1172. | 1.2 | 12 |
| 58 | Effect of surface treatment on the quality of ohmic contacts to single-crystal p-CdTe. <i>Journal of Surface Investigation</i> , 2017, 11, 276-279. | 0.1 | 4 |
| 59 | Conjugated Polyelectrolyte/Graphene Hetero-Bilayer Nanocomposites Exhibit Temperature Switchable Type of Conductivity. <i>Advanced Electronic Materials</i> , 2017, 3, 1600515. | 2.6 | 14 |
| 60 | Structural and optical properties of $\text{Cu}_2\text{ZnSn}(\text{S},\text{Se})_4$ films obtained by magnetron sputtering of a Cu_2ZnSn alloy target. <i>Physics of the Solid State</i> , 2017, 59, 1643-1647. | 0.2 | 5 |
| 61 | 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. | 2.6 | 130 |
| 62 | 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. | 1.9 | 24 |
| 63 | CdTe Based X/β -ray Detector with MoO_x Contacts. <i>Journal of Nano- and Electronic Physics</i> , 2017, 9, 03035-1-03035-4. | 0.2 | 1 |
| 64 | Capacitance Spectroscopy for Quantifying Recombination Losses in Nonfullerene Small-Molecule Bulk Heterojunction Solar Cells. <i>Advanced Energy Materials</i> , 2016, 6, 1502250. | 10.2 | 95 |
| 65 | Fabricating Low-Cost Ionic Organic Electronic Ratchets with Graphite Pencil and Adhesive Tape. <i>Advanced Electronic Materials</i> , 2016, 2, 1500344. | 2.6 | 16 |
| 66 | Electrical and Photoelectric Properties of the $\text{TiN}/\text{p-InSe}$ Heterojunction. <i>Semiconductors</i> , 2016, 50, 334-338. | 0.2 | 6 |
| 67 | Optical properties and mechanisms of current flow in $\text{Cu}_2\text{ZnSnS}_4$ films prepared by spray pyrolysis. <i>Physics of the Solid State</i> , 2016, 58, 1058-1064. | 0.2 | 15 |
| 68 | Fabrication and investigation of photosensitive $\text{MoO}_x/\text{n-CdTe}$ heterojunctions. <i>Semiconductor Science and Technology</i> , 2016, 31, 105006. | 1.0 | 12 |
| 69 | Electrical and photoelectric properties of $\text{n-TiN}/\text{p-Hg}_3\text{In}_2\text{Te}_6$ heterostructures. <i>Semiconductors</i> , 2016, 50, 1020-1024. | 0.2 | 3 |
| 70 | Radiation Hardness and Self-Healing of Perovskite Solar Cells. <i>Advanced Materials</i> , 2016, 28, 8726-8731. | 11.1 | 195 |
| 71 | Modification of the properties of tin sulfide films grown by spray pyrolysis. <i>Inorganic Materials</i> , 2016, 52, 851-857. | 0.2 | 12 |
| 72 | Low-temperature spray-pyrolysis of FeS_2 films and their electrical and optical properties. <i>Physics of the Solid State</i> , 2016, 58, 37-41. | 0.2 | 17 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 73 | Molybdenum oxide thin films in CdTe-based electronic and optoelectronic devices. Physica Status Solidi - Rapid Research Letters, 2016, 10, 346-349. | 1.2 | 15 |
| 74 | Light dependent open-circuit voltage of organic bulk heterojunction solar cells in the presence of surface recombination. Organic Electronics, 2016, 29, 1-6. | 1.4 | 80 |
| 75 | Raman spectroscopy of Cu-Sn-S ternary compound thin films prepared by the low-cost spray-pyrolysis technique. Applied Optics, 2016, 55, B158. | 0.9 | 41 |
| 76 | Temperature dependent electrical properties and barrier parameters of photosensitive heterojunctions n-TiN/p-Cd _{1-x} Zn _x Te. Semiconductor Science and Technology, 2015, 30, 075006. | 1.0 | 15 |
| 77 | 2D nanocomposite photoconductive sensors fully dry drawn on regular paper. Nanotechnology, 2015, 26, 255501. | 1.3 | 13 |
| 78 | Structural parameters and polarization properties of TiN thin films prepared by reactive magnetron sputtering. , 2015, , . | | 0 |
| 79 | Quantifying interface states and bulk defects in high-efficiency solution-processed small-molecule solar cells by impedance and capacitance characteristics. Progress in Photovoltaics: Research and Applications, 2015, 23, 1526-1535. | 4.4 | 40 |
| 80 | Graphitic carbon/n-CdTe Schottky-type heterojunction solar cells prepared by electron-beam evaporation. Solar Energy, 2015, 112, 78-84. | 2.9 | 24 |
| 81 | Specific features of the recombination loss of the photocurrent in n-TiN/p-Si anisotype heterojunctions. Semiconductors, 2014, 48, 1504-1506. | 0.2 | 5 |
| 82 | Heterojunction Solar Cells. International Journal of Photoenergy, 2014, 2014, 1-2. | 1.4 | 2 |
| 83 | Fabrication and Properties of the Photosensitive Anisotype n-Cd _x Zn _{1-x} O/p-CdTe Heterojunctions. Acta Physica Polonica A, 2014, 126, 1163-1166. | 0.2 | 1 |
| 84 | 11th International Conference "Correlation Optics": Propolis films for hybrid biomaterial-inorganic electronics and optoelectronics. Applied Optics, 2014, 53, B121. | 0.9 | 3 |
| 85 | Structural and photoluminescent properties of TiN thin films. Optics and Spectroscopy (English) Tj ETQq1 1 0.784314 rgBT /Overlock 0,2 6 | | |
| 86 | Electrical and optical properties of TiN thin films. Inorganic Materials, 2014, 50, 40-45. | 0.2 | 89 |
| 87 | Isotype surface-barrier n-TiN/n-Si heterostructure. Semiconductors, 2014, 48, 219-223. | 0.2 | 12 |
| 88 | Electrical properties of MOS diodes In/TiO ₂ /p-CdTe. Semiconductors, 2014, 48, 487-491. | 0.2 | 5 |
| 89 | Stability of graphene-silicon heterostructure solar cells. Physica Status Solidi (A) Applications and Materials Science, 2014, 211, 843-847. | 0.8 | 36 |
| 90 | Fabrication and characterization of anisotype heterojunctions n-TiN/p-CdTe. Semiconductor Science and Technology, 2014, 29, 015007. | 1.0 | 23 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 91 | Electrical properties of thin-film semiconductor heterojunctions n-TiO ₂ /p-CuInS ₂ . Semiconductors, 2014, 48, 1046-1050. | 0.2 | 5 |
| 92 | Charge-transport mechanisms in heterostructures based on TiO ₂ :Cr ₂ O ₃ thin films. Semiconductors, 2014, 48, 1174-1177. | 0.2 | 2 |
| 93 | Electrical properties of anisotype n-CdO/p-Si heterojunctions. Semiconductors, 2014, 48, 899-904. | 0.2 | 3 |
| 94 | Transport properties of metal-semiconductor junctions on n-type InP prepared by electrophoretic deposition of Pt nanoparticles. Semiconductor Science and Technology, 2014, 29, 045017. | 1.0 | 15 |
| 95 | Temperature and light dependent diode current in high-efficiency solution-processed small-molecule solar cells. Organic Electronics, 2014, 15, 2141-2147. | 1.4 | 8 |
| 96 | Temperature and light dependent electrical properties of Graphene/n-Si-CH ₃ -terminated solar cells. Solar Energy, 2014, 107, 74-81. | 2.9 | 9 |
| 97 | Specific features of the optical and electrical properties of polycrystalline CdTe films grown by the thermal evaporation method. Physics of the Solid State, 2014, 56, 1947-1951. | 0.2 | 32 |
| 98 | Electrical and optical properties of graphite/ZnO nanorods heterojunctions. Carbon, 2014, 77, 1011-1019. | 5.4 | 24 |
| 99 | Graphite traces on water surface – A step toward low-cost pencil-on-semiconductor electronics and optoelectronics. Carbon, 2014, 78, 613-616. | 5.4 | 31 |
| 100 | Electrical properties of anisotype n-TiN/p-Hg ₃ In ₂ Te ₆ heterojunctions. Technical Physics Letters, 2014, 40, 231-233. | 0.2 | 5 |
| 101 | Photosensitive Schottky-type heterojunctions prepared by the drawing of graphite films. Applied Physics Letters, 2014, 104, . | 1.5 | 25 |
| 102 | Electrical and photoelectrical properties of P3HT/n-Si hybrid organic-inorganic heterojunction solar cells. Organic Electronics, 2013, 14, 3109-3116. | 1.4 | 31 |
| 103 | The effect of interface state continuum on the impedance spectroscopy of semiconductor heterojunctions. Semiconductor Science and Technology, 2013, 28, 025013. | 1.0 | 14 |
| 104 | Electrical properties of an n-TiO ₂ /n-GaP semiconductor heterostructure. Russian Physics Journal, 2013, 56, 233-235. | 0.2 | 0 |
| 105 | Electrical and photoelectric properties of anisotype n-TiN/p-Si heterojunctions. Semiconductors, 2013, 47, 1174-1179. | 0.2 | 23 |
| 106 | Kinetic properties of TiN thin films prepared by reactive magnetron sputtering. Physics of the Solid State, 2013, 55, 2234-2238. | 0.2 | 22 |
| 107 | The effect of surface treatment on electrical and photoelectrical properties of anisotype heterojunctions n-TiN/p-Si. Proceedings of SPIE, 2013, , . | 0.8 | 0 |
| 108 | Surface barrier heterojunctions TiO ₂ /CdZnTe. Semiconductor Science and Technology, 2013, 28, 015014. | 1.0 | 10 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|-----|-----------|
| 109 | Charge transport mechanisms in anisotype n-TiO ₂ /p-Si heterostructures. Semiconductors, 2013, 47, 799-803. | 0.2 | 11 |
| 110 | Optical properties of TiO ₂ -MnO ₂ thin films prepared by electron-beam evaporation. Technical Physics, 2012, 57, 1148-1151. | 0.2 | 20 |
| 111 | Electrical properties of anisotype heterojunctions n-CdZnO/p-CdTe. Semiconductors, 2012, 46, 1152-1157. | 0.2 | 18 |
| 112 | On the impedance spectroscopy of structures with a potential barrier. Semiconductors, 2012, 46, 1012-1015. | 0.2 | 15 |
| 113 | Electrical and optical properties of TiO ₂ and TiO ₂ :Fe thin films. Inorganic Materials, 2012, 48, 1026-1032. | 0.2 | 31 |
| 114 | Optical constants and polarimetric properties of TiO ₂ -MnO ₂ thin films. Optical Materials, 2012, 34, 1940-1945. | 1.7 | 24 |
| 115 | On impedance spectroscopy analysis of nonideal heterojunctions. Semiconductor Science and Technology, 2012, 27, 035024. | 1.0 | 43 |
| 116 | On quantum efficiency of nonideal solar cells. Solar Energy, 2012, 86, 786-791. | 2.9 | 36 |
| 117 | Light-dependent I-V characteristics of TiO ₂ /CdTe heterojunction solar cells. Semiconductor Science and Technology, 2012, 27, 055008. | 1.0 | 22 |
| 118 | Open-circuit analysis of thin film heterojunction solar cells. Solar Energy, 2012, 86, 1600-1604. | 2.9 | 18 |
| 119 | Electrical and photoelectrical properties of photosensitive heterojunctions n-TiO ₂ /p-CdTe. Semiconductor Science and Technology, 2011, 26, 125006. | 1.0 | 41 |
| 120 | The effect of CoO impurity and substrate temperature on optical properties of TiO ₂ thin films. , 2011, , . | | 3 |
| 121 | Mechanisms of charge transport in anisotype n-TiO ₂ /p-CdTe heterojunctions. Semiconductors, 2011, 45, 1077-1081. | 0.2 | 29 |