

Jozef Piotrowski

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133 papers	1,672 citations	18 h-index	35 g-index
151 ext. papers	1,929 ext. citations	2.2 avg, IF	4.16 L-index

#	Paper	IF	Citations
133	Intrinsic infrared detectors. <i>Progress in Quantum Electronics</i> , 1988 , 12, 87-289	9.1	130
132	Near room-temperature IR photo-detectors. <i>Infrared Physics</i> , 1991 , 31, 1-48		85
131	Uncooled long wavelength infrared photon detectors. <i>Infrared Physics and Technology</i> , 2004 , 46, 115-131	1.7	82
130	Ultimate performance of infrared photodetectors and figure of merit of detector material. <i>Infrared Physics and Technology</i> , 1997 , 38, 63-68	2.7	76
129	Photovoltaic effects in GaN structures with p-n junctions. <i>Applied Physics Letters</i> , 1995 , 67, 2028-2030	3.4	70
128	Kinetics of photoconductivity in n-type GaN photodetector. <i>Applied Physics Letters</i> , 1995 , 67, 3792-3794	3.4	66
127	Long-wavelength InAsSb photoconductors operated at near room temperatures (200-300 K). <i>Applied Physics Letters</i> , 1996 , 68, 99-101	3.4	57
126	InAsSb heterojunction photodiode operating at near room temperature. <i>Applied Physics Letters</i> , 1995 , 67, 2645-2647	3.4	55
125	Progress in MOCVD growth of HgCdTe heterostructures for uncooled infrared photodetectors. <i>Infrared Physics and Technology</i> , 2007 , 49, 173-182	2.7	37
124	Monolithic optically immersed HgCdTe IR detectors. <i>Infrared Physics</i> , 1989 , 29, 251-253		30
123	New generation of infrared photodetectors. <i>Sensors and Actuators A: Physical</i> , 1998 , 67, 146-152	3.9	28
122	Composition and thickness control of Cd _x Hg _{1-x} Te layers grown by open tube isothermal vapour phase epitaxy. <i>Journal of Crystal Growth</i> , 1987 , 83, 122-126	1.6	25
121	Analysis of Free-Space Optics Development. <i>Metrology and Measurement Systems</i> , 2017 , 24, 653-674		24
120	Comment on "Temperature limits on infrared detectivities of InAs/In _x Ga _{1-x} Sb superlattices and bulk Hg _{1-x} Cd _x Te" [J. Appl. Phys. 74, 4774 (1993)]. <i>Journal of Applied Physics</i> , 1996 , 80, 2542-2544	2.5	24
119	The p-to-n conversion of HgCdTe, HgZnTe and HgMnTe by anodic oxidation and subsequent heat treatment. <i>Semiconductor Science and Technology</i> , 1990 , 5, 530-532	1.8	24
118	Stacked multijunction photodetectors of long-wavelength radiation. <i>Journal of Electronic Materials</i> , 2003 , 32, 672-676	1.9	22
117	Modification of Mercury Cadmium Telluride, Mercury Manganese Tellurium, and Mercury Zinc Telluride by Ion Etching. <i>Physica Status Solidi A</i> , 1989 , 114, K37-K40		22

116	MOCVD grown HgCdTe device structure for ambient temperature LWIR detectors. <i>Semiconductor Science and Technology</i> , 2013 , 28, 105017	1.8	18
115	Characterisation of reactive-ion-etching-induced type-conversion in p-type HgCdTe using scanning laser microscopy. <i>Journal of Crystal Growth</i> , 1998 , 184-185, 1219-1222	1.6	18
114	Multi-heterojunction large area HgCdTe long wavelength infrared photovoltaic detector for operation at near room temperatures. <i>Journal of Electronic Materials</i> , 1998 , 27, 740-746	1.9	18
113	Numerical analysis of longwavelength extracted photodiodes. <i>Infrared Physics</i> , 1993 , 34, 565-572		18
112	MOCVD HgCdTe heterostructures for uncooled infrared photodetectors 2005 ,		17
111	Estimation of doping density in HgCdTe p-n junctions using scanning laser microscopy. <i>Applied Physics Letters</i> , 1998 , 72, 52-54	3.4	17
110	Improved performance of IR photodetectors with 3D gap engineering 1995 ,		17
109	High capability, quasi-closed growth system for isothermal vapour phase epitaxy of (Hg, Cd)Te. <i>Thin Solid Films</i> , 1988 , 161, 157-169	2.2	17
108	Uncooled photoconductive (Cd,Hg)Te detectors for the 8-14 μ m region. <i>Infrared Physics</i> , 1979 , 19, 649-652		17
107	Mercury annealing of reactive ion etching induced p- to n-type conversion in extrinsically doped p-type HgCdTe. <i>Journal of Applied Physics</i> , 1998 , 83, 5555-5557	2.5	16
106	ZnHgTe as a material for ambient temperature 10.6 μ m photodetectors. <i>Applied Physics Letters</i> , 1989 , 54, 143-144	3.4	16
105	Demonstration of HOT LWIR T2SLs InAs/InAsSb photodetectors grown on GaAs substrate. <i>Infrared Physics and Technology</i> , 2018 , 95, 222-226	2.7	16
104	A novel multi-heterojunction HgCdTe long-wavelength infrared photovoltaic detector for operation under reduced cooling conditions. <i>Semiconductor Science and Technology</i> , 1998 , 13, 1209-1214	1.8	15
103	Growth of HgZnTe by cast-recrystallization. <i>Journal of Crystal Growth</i> , 1988 , 89, 237-241	1.6	15
102	On the performance of non-cooled CdHgTe photoelectromagnetic detectors for 10.6 μ m radiation. <i>Infrared Physics</i> , 1980 , 20, 133-138		15
101	Micromachined silicon bolometers as detectors of soft X-ray, ultraviolet, visible and infrared radiation. <i>Sensors and Actuators A: Physical</i> , 1997 , 60, 154-159	3.9	14
100	Uncooled photovoltaic Hg 1-x Cd x Te LWIR detectors 2000 , 4130, 175		14
99	Engineering steps for optimizing high temperature LWIR HgCdTe photodiodes. <i>Infrared Physics and Technology</i> , 2017 , 81, 276-281	2.7	13

98	Optimization of a HOT LWIR HgCdTe Photodiode for Fast Response and High Detectivity in Zero-Bias Operation Mode. <i>Journal of Electronic Materials</i> , 2017 , 46, 6045-6055	1.9	13
97	Interfacial Misfit Array Technique for GaSb Growth on GaAs (001) Substrate by Molecular Beam Epitaxy. <i>Journal of Electronic Materials</i> , 2018 , 47, 299-304	1.9	13
96	Low-temperature growth of GaSb epilayers on GaAs (001) by molecular beam epitaxy. <i>Opto-electronics Review</i> , 2016 , 24,	2.4	13
95	Dark currents, responsivity, and response time in graded gap HgCdTe structures 2010 ,		13
94	Fourier-transformed photoreflectance and fast differential reflectance of HgCdTe layers. The issues of spectral resolution and Fabry-Pérot oscillations. <i>Measurement Science and Technology</i> , 2011 , 22, 125601	2	13
93	A complete quantitative model of the isothermal vapor phase epitaxy of (Hg,Cd)Te. <i>Journal of Electronic Materials</i> , 1988 , 17, 223-228	1.9	13
92	Complex Behavior of Time Response of HgCdTe HOT Photodetectors. <i>Journal of Electronic Materials</i> , 2015 , 44, 3163-3173	1.9	12
91	Room temperature IR photodetector with electromagnetic carrier depletion. <i>Electronics Letters</i> , 1990 , 26, 1689	1.1	12
90	Generation-Recombination Effect in High-Temperature HgCdTe Heterostructure Nonequilibrium Photodiodes. <i>Journal of Electronic Materials</i> , 2009 , 38, 1666-1676	1.9	11
89	Photoelectromagnetic effect in $\text{Cd}_x\text{Hg}_{1-x}\text{Te}$ graded-gap structures. <i>Infrared Physics</i> , 1984 , 24, 21-24		11
88	Heteroepitaxial homogeneous $\text{Cd}_x\text{Hg}_{1-x}\text{Te}$ films. <i>Thin Solid Films</i> , 1978 , 52, 405-413	2.2	11
87	Uncooled or minimally cooled 10 μm photodetectors with subnanosecond response time 2007 ,		10
86	Passivation effects on reactive-ion-etch-formed n-on-p junctions in HgCdTe. <i>Journal of Electronic Materials</i> , 2002 , 31, 743-748	1.9	10
85	Background limited performance in p-doped GaAs/Ga _{0.71} In _{0.29} As _{0.39} P _{0.61} quantum well infrared photodetectors. <i>Applied Physics Letters</i> , 1995 , 67, 22-24	3.4	10
84	Mercury zinc telluride longwavelength high temperature photoconductors. <i>Infrared Physics</i> , 1990 , 30, 113-119		10
83	Ultimate detectivity of (CdHg)Te infrared photoconductors. <i>Infrared Physics</i> , 1979 , 19, 143-149		10
82	Molecular beam epitaxial growth and characterization of InAs layers on GaAs (001) substrate. <i>Optical and Quantum Electronics</i> , 2016 , 48, 1	2.4	10
81	Optimization of the interfacial misfit array growth mode of GaSb epilayers on GaAs substrate. <i>Journal of Crystal Growth</i> , 2018 , 483, 26-30	1.6	10

80	Bandgap energy determination of InAsSb epilayers grown by molecular beam epitaxy on GaAs substrates. <i>Progress in Natural Science: Materials International</i> , 2019 , 29, 472-476	3.6	9
79	Modeling of HgCdTe LWIR detector for high operation temperature conditions. <i>Metrology and Measurement Systems</i> , 2013 , 20, 159-170		9
78	Dember IR photodetectors. <i>Solid-State Electronics</i> , 1991 , 34, 265-269	1.7	9
77	Investigation of trap levels in HgCdTe IR detectors through low frequency noise spectroscopy. <i>Semiconductor Science and Technology</i> , 2016 , 31, 035004	1.8	9
76	Uncooled MWIR and LWIR photodetectors in Poland. <i>Opto-electronics Review</i> , 2010 , 18,	2.4	8
75	Auger generation suppression in narrow-gap semiconductors using the magnetoconcentration effect. <i>Journal of Applied Physics</i> , 1992 , 71, 5706-5708	2.5	8
74	High-temperature 10.6 μ m HgZnTe photodetectors. <i>Infrared Physics</i> , 1989 , 29, 267-270		8
73	Influence of dislocations on the performance of Hg _{1-x} CdxTe graded gap photoresistors. <i>Infrared Physics</i> , 1988 , 28, 279-286		8
72	Electrical Properties of Midwave and Longwave InAs/GaSb Superlattices Grown on GaAs Substrates by Molecular Beam Epitaxy. <i>Nanoscale Research Letters</i> , 2018 , 13, 196	5	8
71	Investigation on the InAs _{1-x} Sbx epilayers growth on GaAs (001) substrate by molecular beam epitaxy. <i>Journal of Semiconductors</i> , 2018 , 39, 033003	2.3	7
70	Demonstration of the Very Long Wavelength Infrared Type-II Superlattice InAs/InAsSb GaAs Immersed Photodetector Operating at Thermoelectric Cooling. <i>IEEE Electron Device Letters</i> , 2019 , 40, 1396-1398	4.4	7
69	Near-room temperature MWIR HgCdTe photodiodes limited by vacancies and dislocations related to Shockley-Read-Hall centres. <i>Solid-State Electronics</i> , 2011 , 63, 8-8	1.7	7
68	Mid and long infrared detection modules for picosecond range measurements 2009 ,		7
67	Uncooled infrared photodetectors in Poland. <i>Opto-electronics Review</i> , 2006 , 14,	2.4	7
66	Computer simulation of HgCdTe photovoltaic devices based on complex heterostructures 1999 , 3629, 74		7
65	A modified hot wall epitaxy technique for the growth of CdTe and Hg _{1-x} CdxTe epitaxial layers. <i>Thin Solid Films</i> , 1990 , 191, 239-245	2.2	7
64	Mercury cadmium telluride longwavelength photoconductors operating at 200-300 K. <i>Solid-State Electronics</i> , 1990 , 33, 351-355	1.7	7
63	Comparison of the performance of uncooled CdHgTe PC and PEM 10.6 μ m detectors. <i>Infrared Physics</i> , 1985 , 25, 329-331		7

62	Recent progress in MOCVD growth for thermoelectrically cooled HgCdTe medium wavelength infrared photodetectors. <i>Solid-State Electronics</i> , 2016 , 118, 61-65	1.7	6
61	Recent advances in InGaAs detector technology. <i>Physica Status Solidi A</i> , 2004 , 201, 2281-2287		6
60	Enhanced numerical modelling of non-cooled long-wavelength multi-junction (Cd,Hg)Te photodiodes. <i>IET Circuits, Devices and Systems</i> , 2003 , 150, 65		6
59	Refractive GaAs microlenses monolithically integrated with InGaAs and HgCdTe photodetectors 2003 ,		6
58	Calculation of the carrier lifetime in Hg _{1-x} Zn _x Te. <i>Infrared Physics</i> , 1988 , 28, 311-319		6
57	Studies of Dark Current Reduction in InAsSb Mid-Wave Infrared HOT Detectors through Two Step Passivation Technique. <i>Acta Physica Polonica A</i> , 2017 , 132, 325-328	0.6	6
56	Ambient temperature HgCdTe photoconductor can achieve detectivity higher than 10 ¹⁰ cm Hz ^{1/2} /W at 10.6 μm. <i>Electronics Letters</i> , 1988 , 24, 1590	1.1	6
55	Recent advances in manufacturing of miniaturized uncooled IR detection modules. <i>Semiconductor Science and Technology</i> , 2019 , 34, 033002	1.8	5
54	Epitaxial InAs detectors optically immersed to GaAs microlenses 2001 ,		5
53	Influence of dislocations on the performance of 3 to 5 μm Hg _{1-x} Cd _x Te graded gap photoresistors. <i>Physica Status Solidi A</i> , 1989 , 113, 467-476		5
52	The performance of Hg _{1-x} Zn _x Te photodiodes. <i>Applied Physics A: Solids and Surfaces</i> , 1990 , 50, 379-384		5
51	Interference photoelectromagnetic effect in graded-gap semiconductors. <i>Infrared Physics</i> , 1984 , 24, 371-380		5
50	Extension of Usable Spectral Range of Peltier Cooled Photodetectors. <i>Acta Physica Polonica A</i> , 2009 , 116, S-52-S-55	0.6	5
49	Response time improvement of LWIR HOT MCT detectors 2017 ,		4
48	Electrical properties of HgCdTe films grown by MOCVD and doped with As. <i>Opto-electronics Review</i> , 2013 , 21,	2.4	4
47	Room Temperature IR Photodetectors 2010 , 513-537		4
46	Fast infrared detectors for beam diagnostics with synchrotron radiation. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2007 , 580, 190-193	1.2	4
45	Uncooled long-wavelength infrared photon detectors 2004 ,		4

44	Uncooled long wave infrared photodetectors with optimized spectral response at selected spectral ranges 2005 ,		4
43	Design and fabrication of GaSb/InGaAsSb/AlGaAsSb mid-IR photodetectors 2001 , 4413, 339		4
42	Optimisation of InGaAs infrared photovoltaic detectors. <i>IEE Proceedings: Optoelectronics</i> , 1999 , 146, 173-175		4
41	Advanced GaSb/InGaAsSb/AlGaAsSb 2-2.4µm Photovoltaic Detectors. <i>Materials Research Society Symposia Proceedings</i> , 1999 , 607, 89		4
40	Recent advances in IR detector technology. <i>Microelectronics Journal</i> , 1992 , 23, 305-313	1.8	4
39	Auger-limited carrier lifetime in HgZnTe ambient temperature 10.6µm photoresistors. <i>Infrared Physics</i> , 1989 , 29, 149-154		4
38	Electrical and optical performance of mid-wavelength infrared InAsSb heterostructure detectors 2017 ,		4
37	Study on the specific contact resistance of evaporated or electroplated golden contacts to n- and p- type InAs epitaxial layers grown by MBE. <i>Materials Science in Semiconductor Processing</i> , 2018 , 81, 60-63	4.3	3
36	Advanced InGaAs/InAlAs/InP avalanche photodiodes for high-speed detection of 1.55 µm infrared radiation 2008 ,		3
35	Improvements in MOCVD growth of Hg 1-x Cd x Te heterostructures for uncooled infrared photodetectors 2005 ,		3
34	Modeling and optimization of InGaAs infrared photovoltaic detectors. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2000 , 439, 647-650	1.2	3
33	The influence of doping on ultimate performance of photodiodes for the 8-14 µm spectral range. <i>Infrared Physics</i> , 1981 , 21, 201-205		3
32	Thermal figure of merit M* limit for (CdHg)Te photoconductive detectors. <i>Infrared Physics</i> , 1978 , 18, 309-314		3
31	p-Type Doping of GaSb by Beryllium Grown on GaAs (001) Substrate by Molecular Beam Epitaxy. <i>Journal of Semiconductor Technology and Science</i> , 2016 , 16, 695-701	1.5	3
30	Higher Operating Temperature IR Detectors of the MOCVD Grown HgCdTe Heterostructures. <i>Journal of Electronic Materials</i> , 2020 , 49, 6908-6917	1.9	3
29	Photoelectromagnetic, magnetoconcentration, and Demer infrared detectors 1997 , 506-525		3
28	Investigation of hillocks formation on (1 0 0) HgCdTe layers grown by MOCVD on GaAs epi-ready substrates. <i>Infrared Physics and Technology</i> , 2017 , 84, 87-93	2.7	2
27	Uncooled middle wavelength infrared photoconductors based on (111) and (100) oriented HgCdTe. <i>Optical Engineering</i> , 2017 , 56, 091602	1.1	2

26	The Numerical & Experimental Enhanced Analysis of HOT MCT Barrier Infrared Detectors. <i>Journal of Electronic Materials</i> , 2017 , 46, 5471-5478	1.9	2
25	Fast Response Hot (111) HGCDTE MWIR Detectors. <i>Metrology and Measurement Systems</i> , 2017 , 24, 509-514		2
24	Uncooled Infrared Detectors in Poland, History and Recent Progress. <i>Procedia Engineering</i> , 2012 , 47, 1506-1512		2
23	Uncooled infrared photodetectors in Poland 2005 ,		2
22	Electromagnetically carrier depleted IR photodetector 1991 , 1540, 622		2
21	Response time study in unbiased long wavelength HgCdTe detectors. <i>Optical Engineering</i> , 2017 , 56, 1	1.1	2
20	Long term stability study of InAsSb mid-wave infrared HOT detectors passivated through two step passivation technique 2018 ,		2
19	Comparative Study of the Molecular Beam Epitaxial Growth of InAs/GaSb Superlattices on GaAs and GaSb Substrates. <i>Acta Physica Polonica A</i> , 2017 , 132, 322-324	0.6	2
18	Study of the Effectiveness of Anodic Films as Surface Passivation for InAsSb Mid-Wave Infrared HOT Detectors. <i>Acta Physica Polonica A</i> , 2018 , 134, 981-985	0.6	2
17	Recent progress in LWIR HOT photoconductors based on MOCVD grown (100) HgCdTe. <i>Semiconductor Science and Technology</i> , 2016 , 31, 105004	1.8	2
16	High operating temperature LWIR and VLWIR InAs _{1-x} Sb _x optically immersed photodetectors grown on GaAs substrates. <i>Infrared Physics and Technology</i> , 2019 , 97, 116-122	2.7	2
15	A broadband test fixture for characterizing circuits mounted inside TO-8 package 2015 ,		1
14	Extension of spectral range of Peltier cooled photodetectors to 16 μ m 2009 ,		1
13	Material growth, device design, and applications for uncooled LWIR HgCdTe detectors 2006 , 6206, 283		1
12	Resonant cavity enhanced InGaAs photodiodes for high speed detection of 1.55 μ m infrared radiation 2005 , 5783, 47		1
11	Advanced InGaAs detectors on GaAs substrates 2000 ,		1
10	Recent progress in uncooled photodetection of the mid-infrared radiation 2012 ,		1
9	Molecular beam epitaxy growth and characterization of interband cascade infrared detectors on GaAs substrates. <i>Journal of Crystal Growth</i> , 2020 , 534, 125512	1.6	0

- 8 Minority carrier lifetime in HgCdTe(100) epilayers and their potential application to background radiation limited MWIR photodiodes. *Semiconductor Science and Technology*, **2021**, 36, 055003 1.8 o
- 7 Flexible Coplanar Line of Low Heat Load to Cooled Infrared Detector. *Procedia Engineering*, **2015**, 120, 1183-1186
- 6 Isothermal vapor phase epitaxy and rf sputtering for band gap engineered HgCdTe **1997**, 3179, 251
- 5 Reactive Ion Etching (RIE) Induced p- to n-Type Conversion in Extrinsicly Doped p-Type HgCdTe. *Materials Research Society Symposia Proceedings*, **1997**, 484, 353
- 4 InAs photodetectors for high-speed detection of infrared radiation **2003**, 4833, 200
- 3 Optical fiber medical pyrometer with infrared photodetector **2003**, 5124, 64
- 2 New generation of 1- to 12-um laser radiation photodetectors **1995**, 2202, 208
- 1 New Generation of 2-12 μ m Laser Radiation Photodetectors **1994**, 925-928