Gerasimos Konstantatos

List of Publications by Citations

132 papers	17,379 citations	51 h-index	131 g-index
138 ext. papers	19,543 ext. citations	13.4 avg, IF	7 L-index

#	Paper	IF	Citations
132	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810	7.7	2015
131	Solution-processed PbS quantum dot infrared photodetectors and photovoltaics. *Nature Materials*, **2005**, 4, 138-42	27	1620
130	Hybrid graphene-quantum dot phototransistors with ultrahigh gain. *Nature Nanotechnology*, **2012**, 7, 363-8	28.7	1588
129	Ultrasensitive solution-cast quantum dot photodetectors. *Nature*, **2006**, 442, 180-3	50.4	1442
128	Nanostructured materials for photon detection. *Nature Nanotechnology*, **2010**, 5, 391-400	28.7	1036
127	Prospects of nanoscience with nanocrystals. *ACS Nano*, **2015**, 9, 1012-57	16.7	849
126	Depleted-heterojunction colloidal quantum dot solar cells. *ACS Nano*, **2010**, 4, 3374-80	16.7	707
125	Hybrid 2D-0D MoS2 -PbS quantum dot photodetectors. *Advanced Materials*, **2015**, 27, 176-80	24	507
124	Fast, sensitive and spectrally tuneable colloidal-quantum-dot photodetectors. *Nature Nanotechnology*, **2009**, 4, 40-4	28.7	395
123	Highly Sensitive, Encapsulated MoS2 Photodetector with Gate Controllable Gain and Speed. *Nano Letters*, **2015**, 15, 7307-13	11.5	381
122	Broadband image sensor array based on graphene–CMOS integration. *Nature Photonics*, **2017**, 11, 366-371	33.9	350
121	Sensitive solution-processed visible-wavelength photodetectors. *Nature Photonics*, **2007**, 1, 531-534	33.9	342
120	Sensitive solution-processed Bi2S3 nanocrystalline photodetectors. *Nano Letters*, **2008**, 8, 4002-6	11.5	239
119	The role of surface passivation for efficient and photostable PbS quantum dot solar cells. *Nature Energy*, **2016**, 1,	62.3	233
118	Recent Progress and Future Prospects of 2D-Based Photodetectors. *Advanced Materials*, **2018**, 30, e1801164	21.4	221
117	Synthesis of monodispersed wurtzite structure CuInSe2 nanocrystals and their application in high-performance organic-inorganic hybrid photodetectors. *Journal of the American Chemical Society*, **2010**, 132, 12218-21	16.4	221
116	Solution-processed solar cells based on environmentally friendly AgBiS2 nanocrystals. *Nature Photonics*, **2016**, 10, 521-525	33.9	218

115	Near-Unity Photoluminescence Quantum Yield in CsPbBr3 Nanocrystal Solid-State Films via Postsynthesis Treatment with Lead Bromide. *Chemistry of Materials*, **2017**, 29, 7663-7667	9.6	218
114	Solution-processed inorganic bulk nano-heterojunctions and their application to solar cells. *Nature Photonics*, **2012**, 6, 529-534	33.9	194
113	Engineering the temporal response of photoconductive photodetectors via selective introduction of surface trap states. *Nano Letters*, **2008**, 8, 1446-50	11.5	192
112	MoS -HgTe Quantum Dot Hybrid Photodetectors beyond 2 μm. *Advanced Materials*, **2017**, 29, 1606576	24	188
111	Integrating an electrically active colloidal quantum dot photodiode with a graphene phototransistor. *Nature Communications*, **2016**, 7, 11954	17.4	161
110	Photo-FETs: Phototransistors Enabled by 2D and 0D Nanomaterials. *ACS Photonics*, **2016**, 3, 2197-2210	6.3	160
109	Solution-processed heterojunction solar cells based on p-type PbS quantum dots and n-type Bi2 S3 nanocrystals. *Advanced Materials*, **2011**, 23, 3712-7	24	160
108	PbS colloidal quantum dot photoconductive photodetectors: Transport, traps, and gain. *Applied Physics Letters*, **2007**, 91, 173505	3.4	143
107	Ultrasensitive all-2D MoS phototransistors enabled by an out-of-plane MoS PN homojunction. *Nature Communications*, **2017**, 8, 572	17.4	122
106	High-efficiency colloidal quantum dot infrared light-emitting diodes via engineering at the supra-nanocrystalline level. *Nature Nanotechnology*, **2019**, 14, 72-79	28.7	112
105	Enhanced infrared photovoltaic efficiency in PbS nanocrystal/semiconducting polymer composites: 600-fold increase in maximum power output via control of the ligand barrier. *Applied Physics Letters* , **2005**, 87, 233101	3.4	111
104	Wurtzite Cu2ZnSnSe4 nanocrystals for high-performance organic–inorganic hybrid photodetectors. *NPG Asia Materials*, **2012**, 4, e2-e2	10.3	109
103	Flexible graphene photodetectors for wearable fitness monitoring. *Science Advances*, **2019**, 5, eaaw7846	14.3	107
102	Solution-Processed Quantum Dot Photodetectors. *Proceedings of the IEEE*, **2009**, 97, 1666-1683	14.3	105
101	Current status and technological prospect of photodetectors based on two-dimensional materials. *Nature Communications*, **2018**, 9, 5266	17.4	104
100	High performance photodetectors of individual InSe single crystalline nanowire. *Journal of the American Chemical Society*, **2009**, 131, 15602-3	16.4	98
99	Interface Engineering in Hybrid Quantum Dot–2D Phototransistors. *ACS Photonics*, **2016**, 3, 1324-1330	6.3	97
98	Photoelectric energy conversion of plasmon-generated hot carriers in metal-insulator-semiconductor structures. *ACS Nano*, **2013**, 7, 3581-8	16.7	97

97	Efficient Infrared Electroluminescent Devices Using Solution-Processed Colloidal Quantum Dots. *Advanced Functional Materials*, **2005**, 15, 1865-1869	15.6	93
96	Heterovalent cation substitutional doping for quantum dot homojunction solar cells. *Nature Communications*, **2013**, 4, 2981	17.4	92
95	Colloidal quantum dot photodetectors. *Infrared Physics and Technology*, **2011**, 54, 278-282	2.7	91
94	Ultrahigh Carrier Mobility Achieved in Photoresponsive Hybrid Perovskite Films via Coupling with Single-Walled Carbon Nanotubes. *Advanced Materials*, **2017**, 29, 1602432	24	87
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92	Suppressing Deep Traps in PbS Colloidal Quantum Dots via Facile Iodide Substitutional Doping for Solar Cells with Efficiency >10%. *ACS Energy Letters*, **2017**, 2, 739-744	20.1	78
91	Infrared Solution-Processed Quantum Dot Solar Cells Reaching External Quantum Efficiency of 80% at 1.35 μm and J in Excess of 34 mA cm. *Advanced Materials*, **2018**, 30, 1704928	24	73
90	Complete colloidal synthesis of Cu2SnSe3 nanocrystals with crystal phase and shape control. *Journal of the American Chemical Society*, **2014**, 136, 7954-60	16.4	69
89	Heavy-metal-free solution-processed nanoparticle-based photodetectors: doping of intrinsic vacancies enables engineering of sensitivity and speed. *ACS Nano*, **2009**, 3, 331-8	16.7	68
88	Near IR-Sensitive, Non-toxic, Polymer/Nanocrystal Solar Cells Employing Bi2S3 as the Electron Acceptor. *Advanced Energy Materials*, **2011**, 1, 1029-1035	21.8	63
87	Size and bandgap tunability in Bi2S3 colloidal nanocrystals and its effect in solution processed solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 20642-20648	13	61
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75	High carrier mobility in monolayer CVD-grown MoS through phonon suppression. *Nanoscale*, **2018**, 10, 15071-15077	7.7	40
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42	High-Efficiency Light-Emitting Diodes Based on Formamidinium Lead Bromide Nanocrystals and Solution Processed Transport Layers. *Chemistry of Materials*, **2018**, 30, 6231-6235	9.6	15
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40	Coupling Resonant Modes of Embedded Dielectric Microspheres in Solution-Processed Solar Cells. *Advanced Optical Materials*, **2013**, 1, 139-143	8.1	14
39	Metal-insulator-semiconductor heterostructures for plasmonic hot-carrier optoelectronics. *Optics Express*, **2015**, 23, 14715-23	3.3	13
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8	Multiple exciton generation in semiconductor quantum dots and electronically coupled quantum dot arrays for application to thirdgeneration photovoltaic solar cells112-147		1

7	Depleted-Heterojunction Colloidal Quantum Dot Solar Cells Employing Low-Cost Metal Contacts **2010**,		1
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3	Solution-processed infrared quantum dot solar cells256-291		
2	Semiconductor quantum dot sensitized TiO2 mesoporous solar cells292-309		
1	66-5: Invited Paper: Colloidal Quantum Dots: A Material Platform for Highly Sensitive Photodetectors and High Quantum Efficiency Light Emitters in the SWIR. *Digest of Technical Papers SID International Symposium*, **2021**, 52, 991-994	0.5	