

# Paul Charette

## List of Publications by Year in descending order

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71  
papers

1,318  
citations

331259

21  
h-index

360668

35  
g-index

71  
all docs

71  
docs citations

71  
times ranked

1700  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Teleoperated Microsurgical Robot and Associated Virtual Environment for Eye Surgery. Presence: Teleoperators and Virtual Environments, 1993, 2, 265-280.	0.3	128
2	Fabrication of silicon nitride waveguides for visible-light using PECVD: a study of the effect of plasma frequency on optical properties. Optics Express, 2008, 16, 13509.	1.7	123
3	Biosensing based on surface plasmon resonance and living cells. Biosensors and Bioelectronics, 2009, 24, 1667-1673.	5.3	123
4	Long range surface plasmon resonance for increased sensitivity in living cell biosensing through greater probing depth. Sensors and Actuators B: Chemical, 2012, 174, 94-101.	4.0	115
5	Integrated active mixing and biosensing using surface acoustic waves (SAW) and surface plasmon resonance (SPR) on a common substrate. Lab on A Chip, 2010, 10, 111-115.	3.1	69
6	An integrated hybrid interference and absorption filter for fluorescence detection in lab-on-a-chip devices. Lab on A Chip, 2009, 9, 1371.	3.1	62
7	Hydrophilic Mechano-Bactericidal Nanopillars Require External Forces to Rapidly Kill Bacteria. Nano Letters, 2020, 20, 5720-5727.	4.5	57
8	Cell detachment and label-free cell sorting using modulated surface acoustic waves (SAWs) in droplet-based microfluidics. Lab on A Chip, 2014, 14, 3556.	3.1	35
9	Strain measurement in biaxially loaded inhomogeneous, anisotropic elastic membranes. Biomechanics and Modeling in Mechanobiology, 2002, 1, 197-210.	1.4	34
10	Implementation Study of Single Photon Avalanche Diodes (SPAD) in $0.8\text{-}\mu\text{m}$ CMOS Technology. IEEE Transactions on Nuclear Science, 2015, 62, 710-718.	1.2	33
11	Surface Plasmon Resonance Monitoring of Cell Monolayer Integrity: Implication of Signaling Pathways Involved in Actin-Driven Morphological Remodeling. Cellular and Molecular Bioengineering, 2008, 1, 229-239.	1.0	32
12	CMOS buried Quad p-n junction photodetector for multi-wavelength analysis. Optics Express, 2012, 20, 2053.	1.7	31
13	A complete high performance heterodyne interferometer displacement transducer for microactuator control. Review of Scientific Instruments, 1992, 63, 241-248.	0.6	30
14	Early detection of bacteria using SPR imaging and event counting: experiments with <i>Listeria monocytogenes</i> and <i>Listeria innocua</i> . RSC Advances, 2019, 9, 15554-15560.	1.7	30
15	Robust phase-unwrapping method for phase images with high noise content. Applied Optics, 1996, 35, 3506.	2.1	27
16	Passivation of KMPR microfluidic channels with bovine serum albumin (BSA) for improved hemocompatibility characterized with metal-clad waveguides. Sensors and Actuators B: Chemical, 2012, 173, 447-454.	4.0	26
17	Fabrication of high resistivity cold-implanted InGaAsP photoconductors for efficient pulsed terahertz devices. Optical Materials Express, 2011, 1, 1165.	1.6	25
18	Strain-induced effects in colloidal quantum dots: lifetime measurements and blinking statistics. Nanotechnology, 2010, 21, 134024.	1.3	24

#	ARTICLE	IF	CITATIONS
19	Numerical method for high accuracy index of refraction estimation for spectro-angular surface plasmon resonance systems. <i>Optics Express</i> , 2008, 16, 19493.	1.7	23
20	In vivo intravital endoscopic confocal fluorescence microscopy of normal and acutely injured rat lungs. <i>Laboratory Investigation</i> , 2010, 90, 824-834.	1.7	23
21	Identification of the molecular mechanisms in cellular processes that elicit a surface plasmon resonance (SPR) response using simultaneous surface plasmon-enhanced fluorescence (SPEF) microscopy. <i>Biosensors and Bioelectronics</i> , 2013, 50, 125-131.	5.3	22
22	Improved two-temperature modeling of ultrafast thermal and optical phenomena in continuous and nanostructured metal films. <i>Physical Review B</i> , 2020, 102, .	1.1	20
23	Real-Time Microfluidic Blood-Counting System for PET and SPECT Preclinical Pharmacokinetic Studies. <i>Journal of Nuclear Medicine</i> , 2016, 57, 1460-1466.	2.8	18
24	Instrumentation and procedures for estimating the constitutive parameters of inhomogeneous elastic membranes. <i>Biomechanics and Modeling in Mechanobiology</i> , 2002, 1, 211-218.	1.4	15
25	A CMOS Buried Quad p-n Junction Photodetector Model. <i>IEEE Sensors Journal</i> , 2016, 16, 1611-1620.	2.4	14
26	Blood compatible microfluidic system for pharmacokinetic studies in small animals. <i>Lab on A Chip</i> , 2012, 12, 4683.	3.1	13
27	Improved resolution in SPR and MCWG microscopy by combining images acquired with distinct mode propagation directions. <i>Optics Letters</i> , 2015, 40, 1165.	1.7	13
28	Environmental isolation platform for microrobot system development. <i>Review of Scientific Instruments</i> , 1992, 63, 3492-3498.	0.6	10
29	Label-free visualization and quantification of single cell signaling activity using metal-clad waveguide (MCWG)-based microscopy. <i>Biosensors and Bioelectronics</i> , 2018, 100, 429-436.	5.3	10
30	Spatial resolution versus contrast trade-off enhancement in high-resolution surface plasmon resonance imaging (SPRI) by metal surface nanostructure design. <i>Optics Express</i> , 2018, 26, 10616.	1.7	10
31	CMOS BQJ detector chip with integrated charge-amplifiers for fluorescence measurements. <i>Sensors and Actuators B: Chemical</i> , 2014, 190, 288-294.	4.0	9
32	Metal clad waveguide (MCWG) based imaging using a high numerical aperture microscope objective. <i>Optics Express</i> , 2017, 25, 1666.	1.7	9
33	High efficiency microfluidic beta detector for pharmacokinetic studies in small animals. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2011, 652, 735-738.	0.7	8
34	Large deformation mechanical testing of biological membranes using speckle interferometry in transmission I: Experimental apparatus. <i>Applied Optics</i> , 1997, 36, 2238.	2.1	7
35	Simultaneous coherent imaging and strain measurement using coupled photorefractive holography and shearography. <i>Optics Letters</i> , 2008, 33, 797.	1.7	7
36	Large deformation mechanical testing of biological membranes using speckle interferometry in transmission II: Finite element modeling. <i>Applied Optics</i> , 1997, 36, 2246.	2.1	6

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37	Monitoring of native chemical ligation on solid substrate by surface plasmon resonance. <i>Biopolymers</i> , 2008, 90, 415-420.	1.2	6
38	Modelling and experimental validation of thin-film effects in thermopile-based microscale calorimeters. <i>Sensors and Actuators A: Physical</i> , 2009, 150, 199-206.	2.0	6
39	Monitoring individual cell-signaling activity using combined metal-clad waveguide and surface-enhanced fluorescence imaging. <i>Analyst, The</i> , 2018, 143, 5559-5567.	1.7	6
40	Dielectrophoretic cell trapping for improved surface plasmon resonance imaging sensing. <i>Electrophoresis</i> , 2019, 40, 1417-1425.	1.3	6
41	Polarization-sensitive scanned fiber confocal microscope. <i>Optical Engineering</i> , 1996, 35, 3084.	0.5	5
42	Nanoplasmonics-enhanced label-free imaging of endothelial cell monolayer integrity. <i>Biosensors and Bioelectronics</i> , 2019, 141, 111478.	5.3	5
43	Performance improvement of plasmonic sensors using a combination of AC electrokinetic effects for (bio)target capture. <i>Electrophoresis</i> , 2019, 40, 1426-1435.	1.3	5
44	Critical process temperatures for resistive InGaAsP/InP heterostructures heavily implanted by Fe or Ga ions. <i>Nuclear Instruments &amp; Methods in Physics Research B</i> , 2015, 359, 99-106.	0.6	4
45	Numerical characterization of Love waves dispersion in viscoelastic guiding-layer under viscous fluid. <i>Journal of Applied Physics</i> , 2020, 128, .	1.1	4
46	Love Wave Sensor with High Penetration Depth for Potential Application in Cell Monitoring. <i>Biosensors</i> , 2022, 12, 61.	2.3	4
47	Towards semi-insulating InGaAsP/InP layers by post-growth processing using Fe ion implantation and rapid thermal annealing. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 165106.	1.3	3
48	Hybrid metallic ion-exchanged waveguides for SPR biological sensing. , 2015, , .		3
49	Accelerated binding kinetics by surface acoustic waves (SAW) micromixing in surface plasmon resonance (SPR) system for biodetection. , 2011, , .		2
50	Removal of living cells from biosensing surfaces in droplet-based microfluidics using surface acoustic waves. <i>Proceedings of Meetings on Acoustics</i> , 2013, , .	0.3	2
51	Opto-Electrical Modeling of CMOS Buried Quad Junction Photodetector. <i>Key Engineering Materials</i> , 0, 605, 470-473.	0.4	2
52	Towards miniaturized pH sensor based on carbon nanotubes assembled by DEP on titanium electrodes?. , 2018, , .		2
53	Ring resonator designed for biosensing applications manufactured on 300 mm SOI in an industrial environment. <i>Japanese Journal of Applied Physics</i> , 2019, 58, SBBE02.	0.8	2
54	Plasma-Enhanced Chemical Vapor Deposition of Si-Rich Silicon Nitride Films Optimized for Waveguide-Based Sensing Applications in the Visible Range. <i>Japanese Journal of Applied Physics</i> , 2012, 51, 110205.	0.8	2

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55	Development of a Love-Wave Biosensor Based on an Analytical Model. Chemosensors, 2022, 10, 81.	1.8	2
56	Simultaneous strain and coherent imaging using coupled photorefractive holography and shearography through scattering media. Journal of Biomedical Optics, 2008, 13, 044010.	1.4	1
57	Plasma-Enhanced Chemical Vapor Deposition of Si-Rich Silicon Nitride Films Optimized for Waveguide-Based Sensing Applications in the Visible Range. Japanese Journal of Applied Physics, 2012, 51, 110205.	0.8	1
58	MICRO-FABRICATION PROCESS FOR AN INTEGRATED BIOSENSOR COMPOSED OF A SPR TRANSDUCER COUPLED TO A MICROCALORIMETRIC SENSOR. International Journal of Nanoscience, 2012, 11, 1240010.	0.4	1
59	BQJ Photodetector Signal Processing. Key Engineering Materials, 2014, 605, 91-94.	0.4	1
60	In situ characterization of biofluid using an optimized hybrid acousto-optic sensor array on a microfluidic cell. , 2017, , .		1
61	SiN half-etch horizontal slot waveguides for integrated photonics: numerical modeling, fabrication, and characterization of passive components. Optics Express, 2022, 30, 4202.	1.7	1
62	Accelerated surface plasmon resonance biosensing by surface acoustic waves microstreaming. , 2011, , .		0
63	Enhancements to surface plasmon resonance imaging for biosensing. , 2015, , .		0
64	CMOS buried multi-junction (BMJ) detector for bio-chemical analysis. , 2015, , .		0
65	Evanescent Field Coupler Optimized for High Refractive Index Differences (ECHRID)â€”A Platform for a SOI Photonics Optical Interface. IEEE Journal of Selected Topics in Quantum Electronics, 2016, 22, 434-442.	1.9	0
66	Monitoring of native chemical ligation by surface plasmon resonance. Advances in Experimental Medicine and Biology, 2009, 611, 427-429.	0.8	0
67	Surface Plasmon Resonance to Study Cell Signaling and GPCR Functional Selectivity in Live Cells. Methods in Pharmacology and Toxicology, 2015, , 183-195.	0.1	0
68	Buried Quad Junction Photodetector Signal Processing for Multi-Label Fluorescence Detection. Sensor Letters, 2015, 13, 430-434.	0.4	0
69	Resolution optimized prism-based SPR imaging for the study of individual bacteria interactions with surfaces. , 2019, , .		0
70	The ultra high sensitivity blood counter: a compact, MRI-compatible, radioactivity counter for pharmacokinetic studies in ÅµL volumes. Biomedical Physics and Engineering Express, 2022, , .	0.6	0
71	Surface micropatterning for the formation of an in vitro functional endothelial model for cell-based biosensors. Biosensors and Bioelectronics, 2022, , 114481.	5.3	0