

# Christopher B Raub

## List of Publications by Year in descending order

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Version: 2024-02-01

43  
papers

1,589  
citations

516710

16  
h-index

330143

37  
g-index

44  
all docs

44  
docs citations

44  
times ranked

2302  
citing authors

#	ARTICLE	IF	CITATIONS
1	Computational multi-wavelength phase synthesis using convolutional neural networks [Invited]. <i>Applied Optics</i> , 2022, 61, B132.	1.8	4
2	Dual-modality digital holographic and polarization microscope to quantify phase and birefringence signals in biospecimens with a complex microstructure. <i>Biomedical Optics Express</i> , 2022, 13, 805.	2.9	5
3	Synthetic training of machine learning algorithms for holographic cell imaging. , 2021, , .		2
4	Mueller matrix polarimetry and polar decomposition of articular cartilage imaged in reflectance. <i>Biomedical Optics Express</i> , 2021, 12, 5160.	2.9	9
5	Keratin 19 maintains E-cadherin localization at the cell surface and stabilizes cell-cell adhesion of MCF7 cells. <i>Cell Adhesion and Migration</i> , 2021, 15, 1-17.	2.7	12
6	An Oral-mucosa-on-a-chip sensitively evaluates cell responses to dental monomers. <i>Biomedical Microdevices</i> , 2021, 23, 7.	2.8	22
7	Simulation of digital holographic recording and reconstruction using a generalized matrix method. <i>Applied Optics</i> , 2021, 60, A21.	1.8	4
8	Tracking Single Cells Motility on Different Substrates. <i>Methods and Protocols</i> , 2020, 3, 56.	2.0	5
9	Microfluidic fabrication of stable collagen microgels with aligned microstructure using flow-driven co-deposition and ionic gelation. <i>Journal of Micromechanics and Microengineering</i> , 2020, 30, 085002.	2.6	7
10	Pulsed focused ultrasound lowers interstitial fluid pressure and increases nanoparticle delivery and penetration in head and neck squamous cell carcinoma xenograft tumors. <i>Physics in Medicine and Biology</i> , 2020, 65, 125017.	3.0	16
11	Tuning the porosity of biofabricated chitosan membranes in microfluidics with co-assembled nanoparticles as templates. <i>Materials Advances</i> , 2020, 1, 34-44.	5.4	14
12	Modulating the properties of flow-assembled chitosan membranes in microfluidics with glutaraldehyde crosslinking. <i>Journal of Materials Chemistry B</i> , 2020, 8, 2519-2529.	5.8	18
13	Microstructural densification and alignment by aspirationâ€ejection influence cancer cell interactions with threeâ€dimensional collagen networks. <i>Biotechnology and Bioengineering</i> , 2020, 117, 1826-1838.	3.3	7
14	Morphology, Motility, and Cytoskeletal Architecture of Breast Cancer Cells Depend on Keratin 19 and Substrate. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2020, 97, 1145-1155.	1.5	11
15	Quantitative scoring of epithelial and mesenchymal qualities of cancer cells using machine learning and quantitative phase imaging. <i>Journal of Biomedical Optics</i> , 2020, 25, 1.	2.6	33
16	Matting Calcium Crystals by Melamine Improves Stabilization and Prevents Dissolution. <i>Crystal Growth and Design</i> , 2019, 19, 6636-6648.	3.0	7
17	Machine Learning with Optical Phase Signatures for Phenotypic Profiling of Cell Lines. <i>Cytometry Part A: the Journal of the International Society for Analytical Cytology</i> , 2019, 95, 757-768.	1.5	21
18	Polarized reflectance from articular cartilage depends upon superficial zone collagen network microstructure. <i>Biomedical Optics Express</i> , 2019, 10, 5518.	2.9	4

#	ARTICLE	IF	CITATIONS
19	Machine learning and phase signatures in cell line classification. , 2019, , .		0
20	Anisotropic, Mesoporous Microfluidic Frameworks with Scalable, Aligned Cellulose Nanofibers. ACS Applied Materials & Interfaces, 2018, 10, 7362-7370.	8.0	49
21	Quantitative assessment of cancer cell morphology and motility using telecentric digital holographic microscopy and machine learning. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2018, 93, 334-345.	1.5	53
22	Electrical Programming of Soft Matter: Using Temporally Varying Electrical Inputs To Spatially Control Self Assembly. Biomacromolecules, 2018, 19, 364-373.	5.4	46
23	Oral mucosa-on-a-chip to assess layer-specific responses to bacteria and dental materials. Biomicrofluidics, 2018, 12, 054106.	2.4	41
24	Noninvasive assessment of articular cartilage surface damage using reflected polarized light microscopy. Journal of Biomedical Optics, 2017, 22, 065001.	2.6	6
25	Holography, machine learning, and cancer cells. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2017, 91, 754-756.	1.5	3
26	Magnetic nanoparticle-loaded alginate beads for local micro-actuation of in vitro tissue constructs. Colloids and Surfaces B: Biointerfaces, 2017, 159, 945-955.	5.0	12
27	Development of a custom biological scaffold for investigating ultrasound-mediated intracellular delivery. Materials Science and Engineering C, 2017, 70, 461-470.	7.3	4
28	Automatic phase aberration compensation for digital holographic microscopy based on deep learning background detection. Optics Express, 2017, 25, 15043.	3.4	159
29	HistoMosaic Detecting KRAS G12V Mutation Across Colorectal Cancer Tissue Slices through in Situ PCR. Analytical Chemistry, 2016, 88, 2792-2798.	6.5	7
30	Noninvasive surface damage assessment of bovine articular cartilage explants by reflected polarized light microscopy. , 2016, 2016, 2897-2900.		2
31	Sequestration of bacteria from whole blood by optimized microfluidic cross-flow filtration for Rapid Antimicrobial Susceptibility Testing. Sensors and Actuators B: Chemical, 2015, 210, 120-123.	7.8	21
32	Integrating qPLM and biomechanical test data with an anisotropic fiber distribution model and predictions of TGF- $\beta$ 1 and IGF-1 regulation of articular cartilage fiber modulus. Biomechanics and Modeling in Mechanobiology, 2013, 12, 1073-1088.	2.8	9
33	Glycosaminoglycan and Collagen Remodeling During In Vitro Dynamic Compression of Articular Cartilage: Experiments and Finite Element Modeling. , 2013, , .		0
34	Integrating qPLM and Biomechanical Test Data With an Anisotropic Fiber Distribution Model and In Vitro Regulation of Articular Cartilage Fiber Modulus. , 2013, , .		0
35	Linking optics and mechanics in an in vivo model of airway fibrosis and epithelial injury. Journal of Biomedical Optics, 2010, 15, 015004.	2.6	23
36	Regulation of Articular Cartilage Volumetric and Compressive Properties by Sequential Application of IGF-1 and TGF- $\beta$ 1 During In Vitro Growth. , 2010, , .		0

#	ARTICLE	IF	CITATIONS
37	Airway Epithelium Stimulates Smooth Muscle Proliferation. American Journal of Respiratory Cell and Molecular Biology, 2009, 41, 297-304.	2.9	69
38	Image Correlation Spectroscopy of Multiphoton Images Correlates with Collagen Mechanical Properties. Biophysical Journal, 2008, 94, 2361-2373.	0.5	168
39	IL-13 induces a bronchial epithelial phenotype that is profibrotic. Respiratory Research, 2008, 9, 27.	3.6	51
40	Correlations between second harmonic signal, microstructure, and mechanics of contracting collagen gels. Proceedings of SPIE, 2008, , .	0.8	1
41	A novel three-dimensional model to quantify metastatic melanoma invasion. Molecular Cancer Therapeutics, 2007, 6, 552-561.	4.1	25
42	Noninvasive Assessment of Collagen Gel Microstructure and Mechanics Using Multiphoton Microscopy. Biophysical Journal, 2007, 92, 2212-2222.	0.5	321
43	The use of poly(ethylene glycol) hydrogels to investigate the impact of ECM chemistry and mechanics on smooth muscle cells. Biomaterials, 2006, 27, 4881-4893.	11.4	318