Andrea Armani

List of Publications by Citations

109 papers	3,069 citations	26 h-index	52 g-index
174 ext. papers	3,888 ext. citations	7.2 avg, IF	5.63 L-index

#	Paper	IF	Citations
109	Label-free, single-molecule detection with optical microcavities. *Science*, **2007**, 317, 783-7	33.3	847
108	Label-free biological and chemical sensors. *Nanoscale*, **2010**, 2, 1544-59	7.7	285
107	Heavy water detection using ultra-high-Q microcavities. *Optics Letters*, **2006**, 31, 1896-8	3	195
106	Electrical thermo-optic tuning of ultrahigh-Q microtoroid resonators. *Applied Physics Letters*, **2004**, 85, 5439-5441	3.4	88
105	Bioconjugation strategies for microtoroidal optical resonators. *Sensors*, **2010**, 10, 9317-36	3.8	75
104	Hybrid microcavity humidity sensor. *Applied Physics Letters*, **2013**, 102, 241101	3.4	74
103	Ultra-high-Q microcavity operation in H2O and D2O. *Applied Physics Letters*, **2005**, 87, 151118	3.4	64
102	Soft lithographic fabrication of high Q polymer microcavity arrays. *Nano Letters*, **2007**, 7, 1823-6	11.5	52
101	Low-tech solutions for the COVID-19 supply chain crisis. *Nature Reviews Materials*, **2020**, 1-4	73.3	51
100	Ultra-low-threshold Er:Yb sol-gel microlaser on silicon. *Optics Express*, **2009**, 17, 23265-71	3.3	44
99	Flexible UV Exposure Sensor Based on UV Responsive Polymer. *ACS Sensors*, **2016**, 1, 1251-1255	9.2	43
98	Hybrid integrated label-free chemical and biological sensors. *Sensors*, **2014**, 14, 5890-928	3.8	43
97	Replica-molded high-Q polymer microresonators. *Optics Letters*, **2004**, 29, 533-5	3	40
96	Ultimate quality factor of silica microtoroid resonant cavities. *Applied Physics Letters*, **2010**, 96, 153304	3.4	37
95	Emerging material systems for integrated optical Kerr frequency combs. *Advances in Optics and Photonics*, **2020**, 12, 135	16.7	37
94	Silica microtoroid resonator sensor with monolithically integrated waveguides. *Optics Express*, **2013**, 21, 23592-603	3.3	36
93	Wavelength-normalized spectroscopic analysis of and growth rates. *Biomedical Optics Express*, **2016**, 7, 4034-4042	3.5	35

92	Determination of binding kinetics using whispering gallery mode microcavities. *Applied Physics Letters*, **2011**, 99, 103703-1037033	3.4	33
91	Simultaneous measurement of quality factor and wavelength shift by phase shift microcavity ring down spectroscopy. *Optics Express*, **2012**, 20, 9090-8	3.3	33
90	Gold nanorod plasmonic upconversion microlaser. *Nano Letters*, **2013**, 13, 5827-31	11.5	32
89	Label free detection of 5Thydroxymethylcytosine within CpG islands using optical sensors. *Biosensors and Bioelectronics*, **2015**, 65, 198-203	11.8	30
88	Hybrid silica-polymer ultra-high-Q microresonators. *Optics Letters*, **2010**, 35, 459-61	3	30
87	Two-Photon Microscopy Analysis of Gold Nanoparticle Uptake in 3D Cell Spheroids. *PLoS ONE*, **2016**, 11, e0167548	3.7	30
86	Low-threshold parametric oscillation in organically modified microcavities. *Science Advances*, **2018**, 4, eaao4507	14.3	26
85	Blue upconversion laser based on thulium-doped silica microcavity. *Optics Letters*, **2013**, 38, 4346-9	3	26
84	Thermal nonlinear effects in hybrid optical microresonators. *Applied Physics Letters*, **2010**, 97, 223306	3.4	26
83	How to organize an online conference. *Nature Reviews Materials*, **2020**, 1-4	73.3	25
82	Cascaded Raman microlaser in air and buffer. *Optics Letters*, **2012**, 37, 4068-70	3	24
81	Power enhancement and phase regimes in embedded microring resonators in analogy with electromagnetically induced transparency. *Optics Express*, **2013**, 21, 20179-86	3.3	22
80	Studying polymer thin films with hybrid optical microcavities. *Optics Letters*, **2011**, 36, 2152-4	3	21
79	Characterization of thermo-optic coefficient and material loss of high refractive index silica sol-gel films in the visible and near-IR. *Optical Materials Express*, **2012**, 2, 671	2.6	20
78	Metal nanoparticle arrays for near-field optical lithography **2002**, 4810, 7		20
77	Raman laser from an optical resonator with a grafted single-molecule monolayer. *Nature Photonics*, **2020**, 14, 95-101	33.9	20
76	Rapid Diagnostic for Point-of-Care Malaria Screening. *ACS Sensors*, **2018**, 3, 1264-1270	9.2	20
75	Bioconjugation Strategies for Label-Free Optical Microcavity Sensors. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 121-133	3.8	19

74	Recycling microcavity optical biosensors. *Optics Letters*, **2011**, 36, 1092-4	3	19
73	Excitation of Cy5 in self-assembled lipid bilayers using optical microresonators. *Applied Physics Letters*, **2011**, 98, 143703	3.4	19
72	Heterodyned toroidal microlaser sensor. *Applied Physics Letters*, **2013**, 103, 123302	3.4	18
71	Flexible Light-Emitting Nanocomposite Based on ZnO Nanotetrapods. *Nano Letters*, **2016**, 16, 7389-7393	11.5	18
70	Titanium-enhanced Raman microcavity laser. *Optics Letters*, **2014**, 39, 1354-7	3	17
69	Low-loss silica-on-silicon waveguides. *Optics Letters*, **2011**, 36, 3729-31	3	17
68	Photocleavage of Poly(methyl acrylate) with Centrally Located o-Nitrobenzyl Moiety: Influence of Environment on Kinetics. *Macromolecules*, **2015**, 48, 8746-8751	5.5	16
67	Photoelastic ultrasound detection using ultra-high-Q silica optical resonators. *Optics Express*, **2014**, 22, 28169-79	3.3	16
66	Monitoring DNA hybridization using optical microcavities. *Optics Letters*, **2013**, 38, 4690-3	3	16
65	Plasmonically Enhanced Kerr Frequency Combs. *ACS Photonics*, **2017**, 4, 2828-2834	6.3	16
64	High Efficiency Raman Lasers Based on Zr-Doped Silica Hybrid Microcavities. *ACS Photonics*, **2016**, 3, 2383-2388	6.3	15
63	On-Chip Ultra-High-Q Silicon Oxynitride Optical Resonators. *ACS Photonics*, **2017**, 4, 2376-2381	6.3	15
62	Optically tunable microresonator using an azobenzene monolayer. *AIP Advances*, **2020**, 10, 045117	1.5	14
61	Temperature sensor based on a hybrid ITO-silica resonant cavity. *Optics Express*, **2015**, 23, 1930-7	3.3	13
60	An Integrated Photonic Gas Sensor Enhanced by Optimized Fano Effects in Coupled Microring Resonators With an Athermal Waveguide. *Journal of Lightwave Technology*, **2015**, 33, 4521-4530	4	13
59	Raman-Kerr frequency combs in Zr-doped silica hybrid microresonators. *Optics Letters*, **2018**, 43, 2949-2952	3	13
58	High-Speed "4D" Computational Microscopy of Bacterial Surface Motility. *ACS Nano*, **2017**, 11, 9340-9351	16.7	13
57	Lightweight UV-C disinfection system. *Biomedical Optics Express*, **2020**, 11, 4326-4332	3.5	13

56	Stimulated Anti-Stokes Raman Emission Generated by Gold Nanorod Coated Optical Resonators. *ACS Photonics*, **2018**, 5, 3550-3556	6.3	12
55	Leveraging bimodal kinetics to improve detection specificity. *Optics Letters*, **2012**, 37, 1643-5	3	12
54	Quantifying pulsed electric field-induced membrane nanoporation in single cells. *Biochimica Et Biophysica Acta - Biomembranes*, **2016**, 1858, 2795-2803	3.8	11
53	On-Chip Biological and Chemical Sensing With Reversed Fano Lineshape Enabled by Embedded Microring Resonators. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 35-44	3.8	11
52	Low threshold anti-Stokes Raman laser on-chip. *Photonics Research*, **2019**, 7, 926	6	11
51	Engineering photonics solutions for COVID-19. *APL Photonics*, **2020**, 5, 090901	5.2	11
50	Optothermal transport behavior in whispering gallery mode optical cavities. *Applied Physics Letters*, **2014**, 105, 051111	3.4	10
49	Ultraviolet light detection using an optical microcavity. *Optics Letters*, **2013**, 38, 3422-5	3	10
48	Nanowatt threshold, alumina sensitized neodymium laser integrated on silicon. *Optics Express*, **2013**, 21, 27238-45	3.3	10
47	Optical microcavities with a thiol-functionalized gold nanoparticle polymer thin film coating. *Applied Physics Letters*, **2012**, 100, 013305	3.4	10
46	Fabrication of silica ultra high quality factor microresonators. *Journal of Visualized Experiments*, **2012**,	1.6	9
45	Nonlinear nanophotonic devices in the ultraviolet to visible wavelength range. *Nanophotonics*, **2020**, 9, 3781-3804	6.3	9
44	Optimizing the Signal to Noise Ratio of Microcavity Sensors. *IEEE Photonics Technology Letters*, **2014**, 26, 2023-2026	2.2	8
43	Selective patterning of Si-based biosensor surfaces using isotropic silicon etchants. *Journal of Colloid and Interface Science*, **2012**, 369, 477-81	9.3	8
42	Photobleaching of Cy5 Conjugated Lipid Bilayers Determined With Optical Microresonators. *IEEE Journal of Selected Topics in Quantum Electronics*, **2012**, 18, 1160-1165	3.8	8
41	Suspended bridge-like silica 2□ beam splitter on silicon. *Optics Letters*, **2011**, 36, 3012-4	3	8
40	Photocleavage of Covalently Immobilized Amphiphilic Block Copolymer: From Bilayer to Monolayer. *Macromolecules*, **2016**, 49, 5773-5781	5.5	8
39	Normal dispersion silicon oxynitride microresonator Kerr frequency combs. *Applied Physics Letters*, **2019**, 115, 051105	3.4	7

38	Mass transport effects in suspended waveguide biosensors integrated in microfluidic channels. *Sensors*, **2012**, 12, 14327-43	3.8	7
37	Tailoring the behavior of optical microcavities with high refractive index sol-gel coatings. *Optics Letters*, **2012**, 37, 2844-6	3	7
36	Investigating membrane nanoporation induced by bipolar pulsed electric fields via second harmonic generation. *Applied Physics Letters*, **2016**, 109, 113701	3.4	7
35	Characterization of the mechanical properties of resected porcine organ tissue using optical fiber photoelastic polarimetry. *Biomedical Optics Express*, **2017**, 8, 4663-4670	3.5	6
34	Towards more accurate microcavity sensors: maximum likelihood estimation applied to a combination of quality factor and wavelength shifts. *Optics Express*, **2013**, 21, 22817-28	3.3	6
33	Supercontinuum Generation in High Order Waveguide Mode with near-Visible Pumping Using Aluminum Nitride Waveguides. *ACS Photonics*, **2021**, 8, 1344-1352	6.3	6
32	Optical detection of CO and CO2 temperature dependent desorption from carbon nanotube clusters. *Nanotechnology*, **2014**, 25, 395201	3.4	5
31	Thermo-optic coefficient of polyisobutylene ultrathin films measured with integrated photonic devices. *Langmuir*, **2012**, 28, 849-54	4	5
30	Serpentine low loss trapezoidal silica waveguides on silicon. *Optics Express*, **2012**, 20, 22298-307	3.3	5
29	COVID-19 Diagnostics: Past, Present, and Future. *ACS Photonics*,	6.3	5
28	Portable polarimetric fiber stress sensor system for visco-elastic and biomimetic material analysis. *Applied Physics Letters*, **2015**, 106, 191105	3.4	4
27	Conference demographics and footprint changed by virtual platforms. *Nature Sustainability*, **2022**, 5, 149-156	22.1	4
26	Single Molecule Detection Using Optical Microcavities. *Springer Series in Optical Sciences*, **2010**, 253-273	0.5	4
25	High-resolution analysis of the mechanical behavior of tissue. *Applied Physics Letters*, **2017**, 110, 243701	3.4	3
24	Label-free, single molecule resonant cavity detection: a double-blind experimental study. *Sensors*, **2015**, 15, 6324-41	3.8	3
23	Real-time detection of lipid bilayer assembly and detergent-initiated solubilization using optical cavities. *Applied Physics Letters*, **2015**, 106, 071103	3.4	3
22	All-optical reversible control of integrated resonant cavity by a self-assembled azobenzene monolayer. *Optics Express*, **2020**, 28, 22462-22477	3.3	3
21	Role of extracellular matrix in the biomechanical behavior of pancreatic tissue. *ACS Biomaterials Science and Engineering*, **2018**, 4, 1916-1923	5.5	2

20	Optimal design of suspended silica on-chip splitter. *Optics Express*, **2013**, 21, 7748-57	3.3	2
19	A portable optical diagnostic system for rapid malaria screening **2019**,		2
18	Stretchable optical diffraction grating from poly(acrylic acid)/polyethylene oxide stereocomplex. *Optics Letters*, **2021**, 46, 5493-5496	3	2
17	General strategy for doping rare earth metals into Au@ZnO core–shell nanospheres. *Journal of Materials Research*, **2019**, 34, 3877-3886	2.5	2
16	High frequency ultrasound detection with ultra-high-Q silica microspheres **2015**,		1
15	Improving the performance of label-free optical biosensors **2011**,		1
14	Optical devices for label-free detection **2010**,		1
13	Improving the specificity and stability of label-free optical biosensors **2011**,		1
12	Characterization of high-Q optical microcavities using confocal microscopy. *Optics Letters*, **2008**, 33, 2931-3	3	1
11	Label-free detection of cytokines using optical microcavities **2008**,		1
10	Soft Lithographic Fabrication of Microresonators. *LEOS Summer Topical Meeting*, **2007**,		1
9	Chemical and biological detectors using ultrahigh-Q microresonators **2006**, 6376, 41		1
8	Multifunctional photoresponsive organic molecule for electric field sensing and modulation. *Journal of Materials Chemistry C*, **2022**, 10, 1204-1211	7.1	1
7	Environmentally stable integrated ultra-high-Q optical cavities **2018**,		1
6	Cascaded Stokes and anti-Stokes laser based on an optical resonator with a self-assembled organic monolayer. *Optics Letters*, **2020**, 45, 4244-4247	3	1
5	On-chip asymmetric microcavity optomechanics. *Optics Express*, **2016**, 24, 29613-29623	3.3	1
4	Biomechanical Analysis of Porcine Cartilage Elasticity. *Annals of Biomedical Engineering*, **2019**, 47, 202-212	4.7	1
3	Spatiotemporal Fluorescent Detection Measurements Using Embedded Waveguide Sensors. *IEEE Journal of Selected Topics in Quantum Electronics*, **2014**, 20, 166-172	3.8	

2 Ultraviolet Sensor Based on a Silica Optical Microresonator. *Materials Research Society Symposia Proceedings*, **2014**, 1698, 1

1 Power enhancement and phase regimes in embedded microring resonators in analogy with electromagnetically induced transparency: erratum. *Optics Express*, **2013**, 21, 28414 3.3