Paolo Bettotti

List of Publications by Year
in descending order

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109	1,905	279701 23	289141 40
papers	citations	h-index	g-index

110	110	110	2835
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Digital Detection of Exosomes by Interferometric Imaging. Scientific Reports, 2016, 6, 37246.	1.6	200
2	Applicability conditions and experimental analysis of the variable stripe length method for gain measurements. Optics Communications, 2004, 229, 337-348.	1.0	137
3	Rewritable photonic circuits. Applied Physics Letters, 2006, 89, 211117.	1.5	118
4	Positronium Cooling and Emission in Vacuum from Nanochannels at Cryogenic Temperature. Physical Review Letters, 2010, 104, 243401.	2.9	93
5	High positronium yield and emission into the vacuum from oxidized tunable nanochannels in silicon. Physical Review B, 2010, 81, .	1.1	64
6	Porous silicon free-standing coupled microcavities. Applied Physics Letters, 2003, 82, 1550-1552.	1.5	59
7	Silicon nanostructures for photonics. Journal of Physics Condensed Matter, 2002, 14, 8253-8281.	0.7	58
8	P-type macroporous silicon for two-dimensional photonic crystals. Journal of Applied Physics, 2002, 92, 6966-6972.	1.1	57
9	Study of the pyrolysis process of an hybrid CH3SiO1.5 gel into a SiCO glass. Vibrational Spectroscopy, 2007, 45, 61-68.	1.2	54
10	Dry adhesive bonding of nanoporous inorganic membranes to microfluidic devices using the OSTE(+) dual-cure polymer. Journal of Micromechanics and Microengineering, 2013, 23, 025021.	1.5	50
11	Si nanocrystals obtained through polymer pyrolysis. Applied Physics Letters, 2003, 83, 749-751.	1.5	43
12	Spectroscopy of photonic bands in macroporous silicon photonic crystals. Physical Review B, 2002, 65, .	1.1	39
13	Birefringent porous silicon membranes for optical sensing. Optics Express, 2011, 19, 26106.	1.7	39
14	Interference lithography by a soft x-ray laser beam: Nanopatterning on photoresists. Journal of Applied Physics, 2007, 102, 034313.	1.1	35
15	Band gap characterization and slow light effects in one dimensional photonic crystals based on silicon slot-waveguides. Optics Express, 2007, 15, 11769.	1.7	35
16	Coupled-resonator-induced-transparency concept for wavelength routing applications. Optics Express, 2011, 19, 12227.	1.7	31
17	Role of microstructure in porous silicon gas sensors for NO2. Applied Physics Letters, 2004, 85, 555-557.	1.5	29
18	Dynamics of Hydration of Nanocellulose Films. Advanced Materials Interfaces, 2016, 3, 1500415.	1.9	28

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19	Role of sonication pre-treatment and cation valence in the sol-gel transition of nano-cellulose suspensions. Scientific Reports, 2017, 7, 11129.	1.6	28
20	Study on molecularly imprinted nanoparticle modified microplates for pseudo-ELISA assays. Talanta, 2018, 178, 772-779.	2.9	28
21	Scattering rings in optically anisotropic porous silicon. Applied Physics Letters, 2002, 81, 4919-4921.	1.5	27
22	Si-nanocrystals/SiO2 thin films obtained by pyrolysis of solâ€“gel precursors. Thin Solid Films, 2008, 516, 6804-6807.	0.8	27
23	Nanostructured silicon as a photonic material. Optics and Lasers in Engineering, 2003, 39, 345-368.	2.0	25
24	Gas barrier and optical properties of cellulose nanofiber coatings with dispersed TiO 2 nanoparticles. Surface and Coatings Technology, 2018, 343, 131-137.	2.2	25
25	Structure and Properties of DNA Molecules Over The Full Range of Biologically Relevant Supercoiling States. Scientific Reports, 2018, 8, 6163.	1.6	25
26	Integrated Optical Amplifierâ€“Photodetector on a Wearable Nanocellulose Substrate. Advanced Optical Materials, 2018, 6, 1800201.	3.6	24
27	Optical characterization of a SCISSOR device. Optics Express, 2011, 19, 13664.	1.7	23
28	Optimizing Picene Molecular Assembling by Supersonic Molecular Beam Deposition. Journal of Physical Chemistry C, 2012, 116, 24503-24511.	1.5	22
29	Reconfigurable optical routers based on â€¨Coupled Resonator Induced Transparency resonances. Optics Express, 2012, 20, 23856.	1.7	20
30	Silicon nanocrystals for nonlinear optics and secure communications. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2659-2671.	0.8	20
31	Cellulose Nanofibrils Films: Molecular Diffusion through Elongated Sub-Nano Cavities. Journal of Physical Chemistry C, 2017, 121, 15437-15447.	1.5	20
32	A self-assembling peptide hydrogel for ultrarapid 3D bioassays. Nanoscale Advances, 2019, 1, 490-497.	2.2	19
33	Investigation of non-specific signals in nanoporous flow-through and flow-over based sensors. Analyst, The, 2014, 139, 1345.	1.7	18
34	In vitro toxicity assessment of hydrogel patches obtained by cationâ€induced crossâ€linking of rodâ€like cellulose nanocrystals. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 687-697.	1.6	18
35	Modeling of Slot Waveguide Sensors Based on Polymeric Materials. Sensors, 2011, 11, 7327-7340.	2.1	17
36	Hybrid Materials for Integrated Photonics. Advances in Optics, 2014, 2014, 1-24.	0.3	17

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37	Phase-Sensitive Detection for Optical Sensing With Porous Silicon. IEEE Photonics Journal, 2012, 4, 986-995.	1.0	16
38	Flash sintering of yttria-stabilized zirconia/graphene nano-platelets composite. Ceramics International, 2020, 46, 23266-23270.	2.3	16
39	Electrical Conductivity of <scp><scp>SiOCN</scp></scp> Ceramics by the Powderâ€Solutionâ€Composite Technique. Journal of the American Ceramic Society, 2014, 97, 2525-2530.	1.9	15
40	Scattering rings as a tool for birefringence measurements in porous silicon. Journal of Applied Physics, 2003, 94, 6334-6340.	1.1	14
41	Orange and blue luminescence emission to track functionalized porous silicon microparticles inside the cells of the human immune system. Journal of Materials Chemistry B, 2014, 2, 6345.	2.9	12
42	Interferometric Method for Monitoring Electrochemical Etching of Thin Films. Journal of the Electrochemical Society, 2003, 150, C381.	1.3	11
43	Supersonic molecular beams deposition of Î±-quaterthiophene: Enhanced growth control and devices performances. Organic Electronics, 2009, 10, 521-526.	1.4	11
44	Polymeric waveguides using oxidized porous silicon cladding for optical amplification. Optical Materials, 2009, 31, 1488-1491.	1.7	10
45	Self detachment of free-standing porous silicon membranes in moderately doped n-type silicon. Applied Physics A: Materials Science and Processing, 2014, 116, 251-257.	1.1	10
46	Fabrication of complex-shaped hydrogels by diffusion controlled gelation of nanocellulose crystallites. Journal of Materials Chemistry B, 2017, 5, 8096-8104.	2.9	10
47	Photophysics of Pentacene-Doped Picene Thin Films. Journal of Physical Chemistry C, 2018, 122, 16879-16886.	1.5	10
48	A new silanizing agent tailored to surface bio-functionalization. Colloids and Surfaces B: Biointerfaces, 2019, 181, 166-173.	2.5	10
49	Angle resolved XPS for selective characterization of internal and external surface of porous silicon. Applied Surface Science, 2017, 406, 144-149.	3.1	9
50	A new aptamer immobilization strategy for protein recognition. Sensors and Actuators B: Chemical, 2017, 252, 222-231.	4.0	9
51	Low dimensional silicon structures for photonic and sensor applications. Applied Surface Science, 2008, 255, 624-627.	3.1	8
52	Hybrid nanostructured supports for surface enhanced Raman scattering. Applied Surface Science, 2009, 255, 7652-7656.	3.1	8
53	First synthesis of silicon nanocrystals in amorphous silicon nitride from a preceramic polymer. Nanotechnology, 2019, 30, 255601.	1.3	8
54	Optical characterization of silicon-on-insulatorâ€“based single and coupled racetrack resonators. Journal of Nanophotonics, 2011, 5, 051705.	0.4	7

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55	Highly-sensitive anisotropic porous silicon based optical sensors. Proceedings of SPIE, 2012, , .	0.8	7
56	Interferometric switching in coupled resonator optical waveguides-based reconfigurable optical device. Optics Letters, 2013, 38, 217.	1.7	7
57	Anomalous molecular infiltration in graphene laminates. Physical Chemistry Chemical Physics, 2018, 20, 24671-24680.	1.3	7
58	Surfactant mediated clofazimine release from nanocellulose-hydrogels. Cellulose, 2019, 26, 4579-4587.	2.4	7
59	An analog electronic emulator of non-linear dynamics in optical microring resonators. Chaos, Solitons and Fractals, 2021, 153, 111410.	2.5	7
60	A photonic complex perceptron for ultrafast data processing. Scientific Reports, 2022, 12, 4216.	1.6	7
61	Nanocellulose and Its Interface: On the Road to the Design of Emerging Materials. Advanced Materials Interfaces, 2022, 9, .	1.9	7
62	Luminescent properties of Er and Si co-implanted silicates. Optical Materials, 2005, 27, 910-914.	1.7	6
63	Ferroelectric and ferroelastic domain wall motion in unconstrained Pb(Zr,Ti)O3 microtubes and thin films. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2010, 57, 792-800.	1.7	6
64	Role of kinetic energy of impinging molecules in the Î±-sexithiophene growth. Thin Solid Films, 2011, 519, 4110-4113.	0.8	6
65	Dry transfer bonding of porous silicon membranes to OSTE(+) polymer microfluidic devices. , 2012, , .		6
66	New progress on p-type macroporous silicon electrodissolution. Materials Research Society Symposia Proceedings, 2002, 722, 671.	0.1	5
67	An All Optical Method for Fabrication Error Measurements in Integrated Photonic Circuits. Journal of Lightwave Technology, 2013, 31, 2340-2346.	2.7	5
68	Generation of high quality random numbers via an all-silicon-based approach. Physica Status Solidi (A) Applications and Materials Science, 2016, 213, 3186-3193.	0.8	5
69	Optical Study of Diamine Coupling on Carboxyl-Functionalized Mesoporous Silicon. Journal of Nanoscience and Nanotechnology, 2017, 17, 1240-1246.	0.9	5
70	Nanosilicon: a new platform for photonics. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2880-2884.	0.8	4
71	Mechanical stress relief in porous silicon free standing membranes. Optical Materials Express, 2015, 5, 2128.	1.6	4
72	Roughness-induced enhancement of optical absorption in random media. Journal of the Optical Society of America B: Optical Physics, 2016, 33, 915.	0.9	4

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73	Fluorinated surfaces: smart substrates for matrixâ€free laser desorption ionization. Rapid Communications in Mass Spectrometry, 2017, 31, 1228-1230.	0.7	4
74	Forward emission of positronium from nanochanneled silicon membranes. Physical Review B, 2022, 105, .	1.1	4
75	A Silicon Photonic Interferometric Router Device Based on SCISSOR Concept. Journal of Lightwave Technology, 2011, 29, 2747-2753.	2.7	3
76	Robust design of an optical router based on a tapered side-coupled integrated spaced sequence of optical resonators. Optics Letters, 2011, 36, 1473.	1.7	3
77	Effect of Process Conditions and Colloidal Properties of Cellulose Nanocrystals Suspensions on the Production of Hydrogel Beads. Molecules, 2021, 26, 2552.	1.7	3
78	Optical gain in dye-doped polymer waveguides using oxidized porous silicon cladding. , 2007, , .		2
79	Couapled cavities in one-dimensional photonic crystal based on horizontal slot waveguide structure with Si-nc. , 2008, , .		2
80	Purcell factor and superradiance in Si-patterned waveguides. Optics Letters, 2010, 35, 3384.	1.7	2
81	Nonlinear self-polarization flipping in silicon sub-wavelength waveguides: distortion, loss, dispersion, and noise effects. Optics Express, 2014, 22, 27643.	1.7	2
82	Quantum random number generator based on silicon nanocrystals LED. , 2015, , .		2
83	Polymer Halide Perovskites-Waveguides Integrated in Nanocellulose as a Wearable Amplifier-Photodetector System. , 2018, , .		2
84	A polarimetric sensor based on nanoporous free standing membranes. , 2012, , .		1
85	Optical Sensors Based on Nanoporous Materials. Lecture Notes in Electrical Engineering, 2015, , 103-107.	0.3	1
86	Porous Silicon: From Optical Sensor to Drug Delivery System. , 2017, , 217-252.		1
87	Surface Heterogeneous Nucleation-Mediated Release of Beta-Carotene from Porous Silicon. Nanomaterials, 2020, 10, 1659.	1.9	1
88	Silicon nanostructures for photonics. , 0, , .		1
89	Optical gain and stimulated emission in silicon nanocrystals. Materials Research Society Symposia Proceedings, 2002, 738, 881.	0.1	0
90	Optical properties and photonic bands of Si-based photonic crystals. , 0, , .		0

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91	Light transport through porous silicon coupled microcavities. , 0, , .		0
92	Enhanced emission cross section and VSL analysis of erbium coupled silicon nanocrystals. , 0, , .		0
93	Silicon Photonics at University of Trento. , 2007, , .		0
94	Coupled-resonator-induced-transparency concept for wavelength router applications. , 2010, , .		0
95	Nanosilicon photonics as a platform to widen the scope of silicon photonics. , 2011, , .		0
96	Second-order susceptibility Ï‡⁽²⁾ in Si waveguides. , 2011, , .		0
97	Nanocrystalline silicon as a new platform to widen the scope of silicon photonics. , 2011, , .		0
98	Light Combining for Interferometric Switching. International Journal of Optics, 2012, 2012, 1-17.	0.6	0
99	Interferometric switching in CROW based reconfigurable optical device for routing application. , 2013, , .		0
100	Role of nonspecific binding: a comparison among flow through and flow over assays in nanoporous material. Proceedings of SPIE, 2014, , .	0.8	0
101	(Invited) Silicon Nanostructures: A Versatile Material for Photonics. ECS Transactions, 2016, 72, 1-6.	0.3	0
102	Fluorinated bulk surfaces as matrix-free mass spectrometry transducers. , 2017, , .		0
103	Scattering Rings in Birefringent Porous Silicon. Materials Research Society Symposia Proceedings, 2003, 762, 17171.	0.1	0
104	Complex Scissor Device Characterization and All-Optical Tuning of Single Resonant Cavity. , 2010, , .		0
105	Porous Silicon. , 2013, , 883-902.		0
106	Nonlinear self polarization-flipping in silicon waveguides. , 2013, , .		0
107	Functional nanocellulose films as fluorescent media. , 2018, , .		0
108	A Technology Platform For the Sustainable Recovery and Advanced Use of Nanostructured Cellulose from Agri-Food Residues (PANACEA Project). , 2020, 69, .		0

#	Article	IF	Citations
109	PRECISE Photonic Hybrid Electromagnetic Solver. IEEE Photonics Journal, 2022, 14, 1-10.	1.0	0