Paolo Bettotti

List of Publications by Year in descending order

109 papers	1,905 citations	279487 23 h-index	288905 40 g-index
110 all docs	110 docs citations	110 times ranked	2835 citing authors

#	Article	IF	Citations
1	Forward emission of positronium from nanochanneled silicon membranes. Physical Review B, 2022, 105, .	1.1	4
2	A photonic complex perceptron for ultrafast data processing. Scientific Reports, 2022, 12, 4216.	1.6	7
3	Nanocellulose and Its Interface: On the Road to the Design of Emerging Materials. Advanced Materials Interfaces, 2022, 9, .	1.9	7
4	PRECISE Photonic Hybrid Electromagnetic Solver. IEEE Photonics Journal, 2022, 14, 1-10.	1.0	0
5	Effect of Process Conditions and Colloidal Properties of Cellulose Nanocrystals Suspensions on the Production of Hydrogel Beads. Molecules, 2021, 26, 2552.	1.7	3
6	An analog electronic emulator of non-linear dynamics in optical microring resonators. Chaos, Solitons and Fractals, 2021, 153, 111410.	2.5	7
7	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
8	Surface Heterogeneous Nucleation-Mediated Release of Beta-Carotene from Porous Silicon. Nanomaterials, 2020, 10, 1659.	1.9	1
9	Flash sintering of yttria-stabilized zirconia/graphene nano-platelets composite. Ceramics International, 2020, 46, 23266-23270.	2.3	16
10	A Technology Platform For the Sustainable Recovery and Advanced Use of Nanostructured Cellulose from Agri-Food Residues (PANACEA Project). , 2020, 69, .		0
11	A self-assembling peptide hydrogel for ultrarapid 3D bioassays. Nanoscale Advances, 2019, 1, 490-497.	2.2	19
12	A new silanizing agent tailored to surface bio-functionalization. Colloids and Surfaces B: Biointerfaces, 2019, 181, 166-173.	2.5	10
13	First synthesis of silicon nanocrystals in amorphous silicon nitride from a preceramic polymer. Nanotechnology, 2019, 30, 255601.	1.3	8
14	Surfactant mediated clofazimine release from nanocellulose-hydrogels. Cellulose, 2019, 26, 4579-4587.	2.4	7
15	Integrated Optical Amplifierâ€“Photodetector on a Wearable Nanocellulose Substrate. Advanced Optical Materials, 2018, 6, 1800201.	3.6	24
16	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
17	Study on molecularly imprinted nanoparticle modified microplates for pseudo-ELISA assays. Talanta, 2018, 178, 772-779.	2.9	28
18	Polymer Halide Perovskites-Waveguides Integrated in Nanocellulose as a Wearable Amplifier-Photodetector System. , 2018, , .		2

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19	Photophysics of Pentacene-Doped Picene Thin Films. Journal of Physical Chemistry C, 2018, 122, 16879-16886.	1.5	10
20	Structure and Properties of DNA Molecules Over The Full Range of Biologically Relevant Supercoiling States. Scientific Reports, 2018, 8, 6163.	1.6	25
21	Anomalous molecular infiltration in graphene laminates. Physical Chemistry Chemical Physics, 2018, 20, 24671-24680.	1.3	7
22	Functional nanocellulose films as fluorescent media. , 2018, , .		0
23	Angle resolved XPS for selective characterization of internal and external surface of porous silicon. Applied Surface Science, 2017, 406, 144-149.	3.1	9
24	Porous Silicon: From Optical Sensor to Drug Delivery System. , 2017, , 217-252.		1
25	Fluorinated surfaces: smart substrates for matrixâ€free laser desorption ionization. Rapid Communications in Mass Spectrometry, 2017, 31, 1228-1230.	0.7	4
26	A new aptamer immobilization strategy for protein recognition. Sensors and Actuators B: Chemical, 2017, 252, 222-231.	4.0	9
27	Fabrication of complex-shaped hydrogels by diffusion controlled gelation of nanocellulose crystallites. Journal of Materials Chemistry B, 2017, 5, 8096-8104.	2.9	10
28	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
29	Cellulose Nanofibrils Films: Molecular Diffusion through Elongated Sub-Nano Cavities. Journal of Physical Chemistry C, 2017, 121, 15437-15447.	1.5	20
30	Fluorinated bulk surfaces as matrix-free mass spectrometry transducers. , 2017, , .		0
31	Optical Study of Diamine Coupling on Carboxyl-Functionalized Mesoporous Silicon. Journal of Nanoscience and Nanotechnology, 2017, 17, 1240-1246.	0.9	5
32	Dynamics of Hydration of Nanocellulose Films. Advanced Materials Interfaces, 2016, 3, 1500415.	1.9	28
33	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
34	(Invited) Silicon Nanostructures: A Versatile Material for Photonics. ECS Transactions, 2016, 72, 1-6.	0.3	0
35	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
36	Digital Detection of Exosomes by Interferometric Imaging. Scientific Reports, 2016, 6, 37246.	1.6	200

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37	Silicon nanocrystals for nonlinear optics and secure communications. Physica Status Solidi (A) Applications and Materials Science, 2015, 212, 2659-2671.	0.8	20
38	Mechanical stress relief in porous silicon free standing membranes. Optical Materials Express, 2015, 5, 2128.	1.6	4
39	Optical Sensors Based on Nanoporous Materials. Lecture Notes in Electrical Engineering, 2015, , 103-107.	0.3	1
40	Quantum random number generator based on silicon nanocrystals LED. , 2015, , .		2
41	Hybrid Materials for Integrated Photonics. Advances in Optics, 2014, 2014, 1-24.	0.3	17
42	Role of nonspecific binding: a comparison among flow through and flow over assays in nanoporous material. Proceedings of SPIE, 2014, , .	0.8	0
43	Nonlinear self-polarization flipping in silicon sub-wavelength waveguides: distortion, loss, dispersion, and noise effects. Optics Express, 2014, 22, 27643.	1.7	2
44	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
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	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
47	Investigation of non-specific signals in nanoporous flow-through and flow-over based sensors. Analyst, The, 2014, 139, 1345.	1.7	18
48	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
49	Interferometric switching in coupled resonator optical waveguides-based reconfigurable optical device. Optics Letters, 2013, 38, 217.	1.7	7
50	An All Optical Method for Fabrication Error Measurements in Integrated Photonic Circuits. Journal of Lightwave Technology, 2013, 31, 2340-2346.	2.7	5
51	Interferometric switching in CROW based reconfigurable optical device for routing application. , 2013, , .		0
52	Porous Silicon. , 2013, , 883-902.		0
53	Nonlinear self polarization-flipping in silicon waveguides. , 2013, , .		0
54	Reconfigurable optical routers based on â€˜Coupled Resonator Induced Transparency resonances. Optics Express, 2012, 20, 23856.	1.7	20

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55	A polarimetric sensor based on nanoporous free standing membranes. , 2012, , .		1
56	Phase-Sensitive Detection for Optical Sensing With Porous Silicon. IEEE Photonics Journal, 2012, 4, 986-995.	1.0	16
57	Optimizing Picene Molecular Assembling by Supersonic Molecular Beam Deposition. Journal of Physical Chemistry C, 2012, 116, 24503-24511.	1.5	22
58	Dry transfer bonding of porous silicon membranes to OSTE(+) polymer microfluidic devices. , 2012, , .		6
59	Highly-sensitive anisotropic porous silicon based optical sensors. Proceedings of SPIE, 2012, , .	0.8	7
60	Light Combining for Interferometric Switching. International Journal of Optics, 2012, 2012, 1-17.	0.6	0
61	Nanosilicon photonics as a platform to widen the scope of silicon photonics. , 2011, , .		0
62	Second-order susceptibility Ï‡⁽²⁾ in Si waveguides. , 2011, , .		0
63	Optical characterization of silicon-on-insulatorâ€“based single and coupled racetrack resonators. Journal of Nanophotonics, 2011, 5, 051705.	0.4	7
64	A Silicon Photonic Interferometric Router Device Based on SCISSOR Concept. Journal of Lightwave Technology, 2011, 29, 2747-2753.	2.7	3
65	Coupled-resonator-induced-transparency concept for wavelength routing applications. Optics Express, 2011, 19, 12227.	1.7	31
66	Optical characterization of a SCISSOR device. Optics Express, 2011, 19, 13664.	1.7	23
67	Birefringent porous silicon membranes for optical sensing. Optics Express, 2011, 19, 26106.	1.7	39
68	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
69	Nanosilicon: a new platform for photonics. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 2880-2884.	0.8	4
70	Role of kinetic energy of impinging molecules in the Î±-sexithiophene growth. Thin Solid Films, 2011, 519, 4110-4113.	0.8	6
71	Nanocrystalline silicon as a new platform to widen the scope of silicon photonics. , 2011, , .		0
72	Modeling of Slot Waveguide Sensors Based on Polymeric Materials. Sensors, 2011, 11, 7327-7340.	2.1	17

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73	High positronium yield and emission into the vacuum from oxidized tunable nanochannels in silicon. Physical Review B, 2010, 81, .	1.1	64
74	Positronium Cooling and Emission in Vacuum from Nanochannels at Cryogenic Temperature. Physical Review Letters, 2010, 104, 243401.	2.9	93
75	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
76	Purcell factor and superradiance in Si-patterned waveguides. Optics Letters, 2010, 35, 3384.	1.7	2
77	Coupled-resonator-induced-transparency concept for wavelength router applications. , 2010, , .		0
78	Complex Scissor Device Characterization and All-Optical Tuning of Single Resonant Cavity. , 2010, , .		0
79	Hybrid nanostructured supports for surface enhanced Raman scattering. Applied Surface Science, 2009, 255, 7652-7656.	3.1	8
80	Polymeric waveguides using oxidized porous silicon cladding for optical amplification. Optical Materials, 2009, 31, 1488-1491.	1.7	10
81	Supersonic molecular beams deposition of Î±-quaterthiophene: Enhanced growth control and devices performances. Organic Electronics, 2009, 10, 521-526.	1.4	11
82	Si-nanocrystals/SiO2 thin films obtained by pyrolysis of solâ€“gel precursors. Thin Solid Films, 2008, 516, 6804-6807.	0.8	27
83	Low dimensional silicon structures for photonic and sensor applications. Applied Surface Science, 2008, 255, 624-627.	3.1	8
84	Couapled cavities in one-dimensional photonic crystal based on horizontal slot waveguide structure with Si-nc. , 2008, , .		2
85	Interference lithography by a soft x-ray laser beam: Nanopatterning on photoresists. Journal of Applied Physics, 2007, 102, 034313.	1.1	35
86	Optical gain in dye-doped polymer waveguides using oxidized porous silicon cladding. , 2007, , .		2
87	Silicon Photonics at University of Trento. , 2007, , .		0
88	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
89	Study of the pyrolysis process of an hybrid CH3SiO1.5 gel into a SiCO glass. Vibrational Spectroscopy, 2007, 45, 61-68.	1.2	54
90	Rewritable photonic circuits. Applied Physics Letters, 2006, 89, 211117.	1.5	118

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91	Luminescent properties of Er and Si co-implanted silicates. Optical Materials, 2005, 27, 910-914.	1.7	6
92	Applicability conditions and experimental analysis of the variable stripe length method for gain measurements. Optics Communications, 2004, 229, 337-348.	1.0	137
93	Role of microstructure in porous silicon gas sensors for NO2. Applied Physics Letters, 2004, 85, 555-557.	1.5	29
94	Si nanocrystals obtained through polymer pyrolysis. Applied Physics Letters, 2003, 83, 749-751.	1.5	43
95	Nanostructured silicon as a photonic material. Optics and Lasers in Engineering, 2003, 39, 345-368.	2.0	25
96	Porous silicon free-standing coupled microcavities. Applied Physics Letters, 2003, 82, 1550-1552.	1.5	59
97	Interferometric Method for Monitoring Electrochemical Etching of Thin Films. Journal of the Electrochemical Society, 2003, 150, C381.	1.3	11
98	Scattering rings as a tool for birefringence measurements in porous silicon. Journal of Applied Physics, 2003, 94, 6334-6340.	1.1	14
99	Scattering Rings in Birefringent Porous Silicon. Materials Research Society Symposia Proceedings, 2003, 762, 17171.	0.1	0
100	P-type macroporous silicon for two-dimensional photonic crystals. Journal of Applied Physics, 2002, 92, 6966-6972.	1.1	57
101	New progress on p-type macroporous silicon electrodissolution. Materials Research Society Symposia Proceedings, 2002, 722, 671.	0.1	5
102	Optical gain and stimulated emission in silicon nanocrystals. Materials Research Society Symposia Proceedings, 2002, 738, 881.	0.1	0
103	Scattering rings in optically anisotropic porous silicon. Applied Physics Letters, 2002, 81, 4919-4921.	1.5	27
104	Spectroscopy of photonic bands in macroporous silicon photonic crystals. Physical Review B, 2002, 65, .	1.1	39
105	Silicon nanostructures for photonics. Journal of Physics Condensed Matter, 2002, 14, 8253-8281.	0.7	58
106	Optical properties and photonic bands of Si-based photonic crystals. , 0, , .		0
107	Light transport through porous silicon coupled microcavities. , 0, , .		0
108	Enhanced emission cross section and VSL analysis of erbium coupled silicon nanocrystals. , 0, , .		0

#	Article	IF	Citations
109	Silicon nanostructures for photonics. , 0, , .		1