

Francesco Gentile

List of Publications by Citations

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122
papers

3,732
citations

31
h-index

58
g-index

131
ext. papers

4,279
ext. citations

5
avg, IF

5.02
L-index

#	Paper	IF	Citations
122	Breaking the diffusion limit with super-hydrophobic delivery of molecules to plasmonic nanofocusing SERS structures. <i>Nature Photonics</i> , 2011 , 5, 682-687	33.9	540
121	The effect of shape on the margination dynamics of non-neutrally buoyant particles in two-dimensional shear flows. <i>Journal of Biomechanics</i> , 2008 , 41, 2312-8	2.9	245
120	Cells preferentially grow on rough substrates. <i>Biomaterials</i> , 2010 , 31, 7205-12	15.6	201
119	Nano-patterned SERS substrate: application for protein analysis vs. temperature. <i>Biosensors and Bioelectronics</i> , 2009 , 24, 1693-9	11.8	200
118	The transport of nanoparticles in blood vessels: the effect of vessel permeability and blood rheology. <i>Annals of Biomedical Engineering</i> , 2008 , 36, 254-61	4.7	125
117	Soft Discoidal Polymeric Nanoconstructs Resist Macrophage Uptake and Enhance Vascular Targeting in Tumors. <i>ACS Nano</i> , 2015 , 9, 11628-41	16.7	114
116	Silver-based surface enhanced Raman scattering (SERS) substrate fabrication using nanolithography and site selective electroless deposition. <i>Microelectronic Engineering</i> , 2009 , 86, 1085-1088	2.5	89
115	Superhydrophobic surfaces as smart platforms for the analysis of diluted biological solutions. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 3213-24	9.5	85
114	The margination propensity of spherical particles for vascular targeting in the microcirculation. <i>Journal of Nanobiotechnology</i> , 2008 , 6, 9	9.4	85
113	Microfluidic platforms for cell cultures and investigations. <i>Microelectronic Engineering</i> , 2019 , 208, 14-28	2.5	80
112	Nanostructured superhydrophobic substrates trigger the development of 3D neuronal networks. <i>Small</i> , 2013 , 9, 402-12	11	77
111	In situ X-ray scattering studies of protein solution droplets drying on micro- and nanopatterned superhydrophobic PMMA surfaces. <i>Langmuir</i> , 2010 , 26, 15057-64	4	73
110	Micro-Optics Fabrication on Top of Optical Fibers Using Two-Photon Lithography. <i>IEEE Photonics Technology Letters</i> , 2010 , 22, 474-476	2.2	70
109	FT-IR, Raman, RRS measurements and DFT calculation for doxorubicin. <i>Microscopy Research and Technique</i> , 2010 , 73, 991-5	2.8	62
108	Ultra low concentrated molecular detection using super hydrophobic surface based biophotonic devices. <i>Microelectronic Engineering</i> , 2010 , 87, 798-801	2.5	62
107	Direct imaging of DNA fibers: the visage of double helix. <i>Nano Letters</i> , 2012 , 12, 6453-8	11.5	59
106	Differential cell adhesion on mesoporous silicon substrates. <i>ACS Applied Materials & Interfaces</i> , 2012 , 4, 2903-11	9.5	59

105	SERS analysis on exosomes using super-hydrophobic surfaces. <i>Microelectronic Engineering</i> , 2012 , 97, 337-340	3.40	55
104	Detection of single amino acid mutation in human breast cancer by disordered plasmonic self-similar chain. <i>Science Advances</i> , 2015 , 1, e1500487	14.3	48
103	Fractal structure can explain the increased hydrophobicity of nanoporous silicon films. <i>Microelectronic Engineering</i> , 2011 , 88, 2537-2540	2.5	48
102	Optical micro-structures fabricated on top of optical fibers by means of two-photon photopolymerization. <i>Microelectronic Engineering</i> , 2010 , 87, 876-879	2.5	47
101	Selective on site separation and detection of molecules in diluted solutions with super-hydrophobic clusters of plasmonic nanoparticles. <i>Nanoscale</i> , 2014 , 6, 8208-25	7.7	44
100	Principal component analysis based methodology to distinguish protein SERS spectra. <i>Journal of Molecular Structure</i> , 2011 , 993, 500-505	3.4	44
99	Nanoparticle microinjection and Raman spectroscopy as tools for nanotoxicology studies. <i>Analyst, The</i> , 2011 , 136, 4402-8	5	41
98	Electroless deposition and nanolithography can control the formation of materials at the nano-scale for plasmonic applications. <i>Sensors</i> , 2014 , 14, 6056-83	3.8	39
97	Flow chamber analysis of size effects in the adhesion of spherical particles. <i>International Journal of Nanomedicine</i> , 2007 , 2, 689-96	7.3	36
96	Nano-topography Enhances Communication in Neural Cells Networks. <i>Scientific Reports</i> , 2017 , 7, 9841	4.9	35
95	An in vivo biosensing, biomimetic electrochemical transistor with applications in plant science and precision farming. <i>Scientific Reports</i> , 2017 , 7, 16195	4.9	35
94	Electroless deposition dynamics of silver nanoparticles clusters: A diffusion limited aggregation (DLA) approach. <i>Microelectronic Engineering</i> , 2012 , 98, 359-362	2.5	34
93	Engineering discoidal polymeric nanoconstructs with enhanced magneto-optical properties for tumor imaging. <i>Biomaterials</i> , 2013 , 34, 5402-10	15.6	33
92	Biosensor for Point-of-Care Analysis of Immunoglobulins in Urine by Metal Enhanced Fluorescence from Gold Nanoparticles. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 3753-3762	9.5	32
91	The structure of DNA by direct imaging. <i>Science Advances</i> , 2015 , 1, e1500734	14.3	31
90	Raman database of amino acids solutions: a critical study of extended multiplicative signal correction. <i>Analyst, The</i> , 2013 , 138, 7331-40	5	30
89	Enzymatic sensing with laccase-functionalized textile organic biosensors. <i>Organic Electronics</i> , 2017 , 40, 51-57	3.5	30
88	Selective modulation of cell response on engineered fractal silicon substrates. <i>Scientific Reports</i> , 2013 , 3, 1461	4.9	30

87	Artificial surface-modified SiN ₄ nanopenores for single surface-modified gold nanoparticle scanning. <i>Small</i> , 2011 , 7, 455-9	11	30
86	Ligand engagement on material surfaces is discriminated by cell mechanosensing. <i>Biomaterials</i> , 2015 , 45, 72-80	15.6	29
85	Ultrasensitive antibody-aptamer plasmonic biosensor for malaria biomarker detection in whole blood. <i>Nature Communications</i> , 2020 , 11, 6134	17.4	29
84	Diffusion driven selectivity in organic electrochemical transistors. <i>Scientific Reports</i> , 2014 , 4, 4297	4.9	28
83	Microfluidic devices modulate tumor cell line susceptibility to NK cell recognition. <i>Small</i> , 2012 , 8, 2886-941	4.1	28
82	Ultrahydrophobic PMMA micro- and nano-textured surfaces fabricated by optical lithography and plasma etching for X-ray diffraction studies. <i>Microelectronic Engineering</i> , 2011 , 88, 1660-1663	2.5	27
81	Time resolved and label free monitoring of extracellular metabolites by surface enhanced Raman spectroscopy. <i>PLoS ONE</i> , 2017 , 12, e0175581	3.7	25
80	Microfluidics & nanotechnology: towards fully integrated analytical devices for the detection of cancer biomarkers. <i>RSC Advances</i> , 2014 , 4, 55590-55598	3.7	25
79	Networks of neuroblastoma cells on porous silicon substrates reveal a small world topology. <i>Integrative Biology (United Kingdom)</i> , 2015 , 7, 184-97	3.7	24
78	A Fluidic Motherboard for Multiplexed Simultaneous and Modular Detection in Microfluidic Systems for Biological Application. <i>Micro and Nanosystems</i> , 2010 , 2, 227-238	0.6	24
77	A microfluidic dialysis device for complex biological mixture SERS analysis. <i>Microelectronic Engineering</i> , 2015 , 144, 37-41	2.5	22
76	Non periodic patterning of super-hydrophobic surfaces for the manipulation of few molecules. <i>Microelectronic Engineering</i> , 2013 , 111, 272-276	2.5	19
75	Cell rolling and adhesion on surfaces in shear flow. A model for an antibody-based microfluidic screening system. <i>Microelectronic Engineering</i> , 2012 , 98, 668-671	2.5	19
74	Tailored Ag nanoparticles/nanoporous superhydrophobic surfaces hybrid devices for the detection of single molecule. <i>Microelectronic Engineering</i> , 2012 , 97, 349-352	2.5	18
73	A theoretical model for the time varying current in organic electrochemical transistors in a dynamic regime. <i>Organic Electronics</i> , 2016 , 35, 59-64	3.5	18
72	Plasmonic 3D-structures based on silver decorated nanotips for biological sensing. <i>Optics and Lasers in Engineering</i> , 2016 , 76, 45-51	4.6	17
71	Monitoring human leukocyte antigen class I molecules by micro-Raman spectroscopy at single-cell level. <i>Journal of Biomedical Optics</i> , 2010 , 15, 027007	3.5	17
70	Nanoporous- micropatterned- superhydrophobic surfaces as harvesting agents for few low molecular weight molecules. <i>Microelectronic Engineering</i> , 2011 , 88, 1749-1752	2.5	16

69	Superhydrophobic lab-on-chip measures secretome protonation state and provides a personalized risk assessment of sporadic tumour. <i>Npj Precision Oncology</i> , 2018 , 2, 26	9.8	16
68	Silica diatom shells tailored with Au nanoparticles enable sensitive analysis of molecules for biological, safety and environment applications. <i>Nanoscale Research Letters</i> , 2018 , 13, 94	5	15
67	Geometrical Patterning of Super-Hydrophobic Biosensing Transistors Enables Space and Time Resolved Analysis of Biological Mixtures. <i>Scientific Reports</i> , 2016 , 6, 18992	4.9	15
66	From nucleotides to DNA analysis by a SERS substrate of a self similar chain of silver nanospheres. <i>Journal of Optics (United Kingdom)</i> , 2015 , 17, 114021	1.7	15
65	Microtexturing of the conductive PEDOT:PSS polymer for superhydrophobic organic electrochemical transistors. <i>BioMed Research International</i> , 2014 , 2014, 302694	3	15
64	Diffusion limited green synthesis of ultra-small gold nanoparticles at room temperature. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2018 , 558, 548-557	5.1	15
63	Development of an In Vivo Sensor to Monitor the Effects of Vapour Pressure Deficit (VPD) Changes to Improve Water Productivity in Agriculture. <i>Sensors</i> , 2019 , 19,	3.8	14
62	A doublet mechanics model for the ultrasound characterization of malignant tissues. <i>Journal of Biomedical Science and Engineering</i> , 2011 , 04, 362-374	0.7	14
61	Optimized fabrication protocols of microfluidic devices for X-ray analysis. <i>Microelectronic Engineering</i> , 2014 , 124, 13-16	2.5	13
60	Stress distribution retrieval in granular materials: A multi-scale model and digital image correlation measurements. <i>Optics and Lasers in Engineering</i> , 2016 , 76, 17-26	4.6	12
59	Metal enhanced fluorescence on super-hydrophobic clusters of gold nanoparticles. <i>Microelectronic Engineering</i> , 2017 , 175, 7-11	2.5	12
58	Plasmonic nanoholes as SERS devices for biosensing applications: An easy route for nanostructures fabrication on glass substrates. <i>Microelectronic Engineering</i> , 2017 , 175, 30-33	2.5	12
57	All-Polymeric Pressure Sensors Based on PEDOT:PSS-Modified Polyurethane Foam. <i>ACS Applied Polymer Materials</i> , 2021 , 3, 1563-1572	4.3	12
56	Emerging Designs of Electronic Devices in Biomedicine. <i>Micromachines</i> , 2020 , 11,	3.3	11
55	Inclusion of gold nanoparticles in meso-porous silicon for the SERS analysis of cell adhesion on nano-structured surfaces. <i>Microelectronic Engineering</i> , 2016 , 158, 102-106	2.5	10
54	Cortical-like mini-columns of neuronal cells on zinc oxide nanowire surfaces. <i>Scientific Reports</i> , 2019 , 9, 4021	4.9	9
53	Electroless deposition of metal nanoparticle clusters: Effect of pattern distance. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2014 , 32, 031804	1.3	9
52	Information in a Network of Neuronal Cells: Effect of Cell Density and Short-Term Depression. <i>BioMed Research International</i> , 2016 , 2016, 2769698	3	9

51	Liquid electrolyte positioning along the device channel influences the operation of Organic Electro-Chemical Transistors. <i>Organic Electronics</i> , 2014 , 15, 3016-3023	3.5	8
50	Raman spectroscopy for detection of stretched DNAs on superhydrophobic surfaces. <i>Microelectronic Engineering</i> , 2014 , 119, 151-154	2.5	8
49	Experimental and theoretical study of biodirected green synthesis of gold nanoflowers. <i>Materials Today Chemistry</i> , 2019 , 14, 100203	6.2	8
48	Few molecule SERS detection using nanolens based plasmonic nanostructure: application to point mutation detection. <i>RSC Advances</i> , 2016 , 6, 107916-107923	3.7	7
47	Combined effect of surface nano-topography and delivery of therapeutics on the adhesion of tumor cells on porous silicon substrates. <i>Microelectronic Engineering</i> , 2016 , 158, 6-10	2.5	7
46	Silver self aggregation in a nanodevice for enhanced Raman spectroscopy: experiments vs. simplified modeling via molecular dynamics. <i>Nanoscale</i> , 2012 , 4, 2362-71	7.7	7
45	Relating the rate of growth of metal nanoparticles to cluster size distribution in electroless deposition. <i>Nanoscale Advances</i> , 2019 , 1, 228-240	5.1	7
44	The effect of connectivity on information in neural networks. <i>Integrative Biology (United Kingdom)</i> , 2018 , 10, 121-127	3.7	6
43	Electroless formation of silver nanoaggregates: an experimental and molecular dynamics approach. <i>Molecular Physics</i> , 2014 , 112, 1375-1388	1.7	6
42	A droplet reactor on a super-hydrophobic surface allows control and characterization of amyloid fibril growth. <i>Communications Biology</i> , 2020 , 3, 457	6.7	6
41	A theoretical and experimental study on l-tyrosine and citrate mediated sustainable production of near infrared absorbing twisted gold nanorods. <i>Materials Science and Engineering C</i> , 2021 , 118, 111515	8.3	6
40	A mathematical model of OECTs with variable internal geometry. <i>Sensors and Actuators A: Physical</i> , 2020 , 304, 111894	3.9	5
39	Surface enhanced Raman spectroscopy measurements of MCF7 cells adhesion in confined micro-environments. <i>Optics and Lasers in Engineering</i> , 2016 , 76, 9-16	4.6	5
38	Mechanical stress downregulates MHC class I expression on human cancer cell membrane. <i>PLoS ONE</i> , 2014 , 9, e111758	3.7	5
37	Isolation of cancer cells by in situ microfluidic biofunctionalization protocols. <i>Microelectronic Engineering</i> , 2014 , 124, 76-80	2.5	5
36	Quantitative micro-Raman analysis of micro-particles in drug delivery. <i>Nanoscale Advances</i> , 2019 , 1, 154151-1552	5.1	4
35	Transforming diatomaceous earth into sensing devices by surface modification with gold nanoparticles. <i>Micro and Nano Engineering</i> , 2019 , 2, 29-34	3.4	4
34	Tailoring Chemometric Models on Blood-Derived Cultures Secretome to Assess Personalized Cancer Risk Score. <i>Cancers</i> , 2020 , 12,	6.6	4

33	Nano-Particles for Biomedical Applications. <i>Springer Handbooks</i> , 2017 , 643-691	1.3	4
32	The Five Ws (and one H) of Super-Hydrophobic Surfaces in Medicine. <i>Micromachines</i> , 2014 , 5, 239-262	3.3	4
31	Small-world networks of neuroblastoma cells cultured in three-dimensional polymeric scaffolds featuring multi-scale roughness. <i>Neural Regeneration Research</i> , 2020 , 15, 759-768	4.5	4
30	Optimized Identification of High-Grade Prostate Cancer by Combining Different PSA Molecular Forms and PSA Density in a Deep Learning Model. <i>Diagnostics</i> , 2021 , 11,	3.8	4
29	Kinetic Rate Constants of Gold Nanoparticle Deposition on Silicon. <i>Langmuir</i> , 2019 , 35, 14258-14265	4	3
28	. <i>IEEE Sensors Journal</i> , 2019 , 19, 11753-11758	4	3
27	Cell Theranostics on Mesoporous Silicon Substrates. <i>Pharmaceutics</i> , 2020 , 12,	6.4	3
26	A combined ElectroWetting On Dielectrics superhydrophobic platform based on silicon micro-structured pillars. <i>Microelectronic Engineering</i> , 2012 , 98, 651-654	2.5	3
25	Transient adhesion mediated by ligand-receptor interaction on surfaces of variable nanotopography. <i>International Journal of Nanotechnology</i> , 2013 , 10, 404	1.5	3
24	Tailoring super-hydrophobic properties of electrochemical biosensor for early cancer detection. <i>MRS Advances</i> , 2016 , 1, 3545-3552	0.7	3
23	Cell aggregation on nanorough surfaces. <i>Journal of Biomechanics</i> , 2021 , 115, 110134	2.9	3
22	Experimental and Theoretical Studies on Sustainable Synthesis of Gold Sol Displaying Dichroic Effect. <i>Nanomaterials</i> , 2021 , 11,	5.4	3
21	Size-Exclusion Particle Separation Driven by Micro-Flows in a Quasi-Spherical Droplet: Modelling and Experimental Results. <i>Micromachines</i> , 2021 , 12,	3.3	3
20	Relating the small world coefficient to the entropy of 2D networks and applications in neuromorphic engineering. <i>Journal of Physics Communications</i> , 2019 , 3, 095011	1.2	2
19	Preliminary results on an innovative plasmonic device for macromolecules analysis and sequencing. <i>Microelectronic Engineering</i> , 2013 , 111, 360-364	2.5	2
18	Surface enhanced thermo lithography. <i>Microelectronic Engineering</i> , 2017 , 174, 52-58	2.5	1
17	Nanotopographical Control of Cell Assembly into Supracellular Structures. <i>Advanced Structured Materials</i> , 2019 , 19-53	0.6	1
16	A quantitative approach for determining the role of geometrical constraints when shaping mesenchymal condensations. <i>Biomedical Microdevices</i> , 2019 , 21, 44	3.7	1

15	Novel Plasmonic Probes and Smart Superhydrophobic Devices, New Tools for Forthcoming Spectroscopies at the Nanoscale. <i>NATO Science for Peace and Security Series B: Physics and Biophysics</i> , 2015 , 209-235	0.2	1
14	Plasmonic microholes for SERS study of biomolecules in liquid. <i>Microelectronic Engineering</i> , 2016 , 158, 59-63	2.5	1
13	3D Cell Cultures: Nanostructured Superhydrophobic Substrates Trigger the Development of 3D Neuronal Networks (Small 3/2013). <i>Small</i> , 2013 , 9, 334-334	11	1
12	Time dependent adhesion of cells on nanorough surfaces. <i>Journal of Biomechanics</i> , 2021 , 129, 110814	2.9	1
11	Multiscale modification of the conductive PEDOT:PSS polymer for the analysis of biological mixtures in a super-hydrophobic drop. <i>Microelectronic Engineering</i> , 2016 , 158, 80-84	2.5	1
10	Multipoint connection by long-range density interaction and short-range distance rule. <i>Physica Scripta</i> , 2021 , 96, 045004	2.6	1
9	Methylglyoxal Adducts Levels in Blood Measured on by Portable Near-Infrared Spectroscopy. <i>Nanomaterials</i> , 2021 , 11,	5.4	1
8	Microfluidics for 3D Cell and Tissue Cultures: Microfabricative and Ethical Aspects Updates. <i>Cells</i> , 2022 , 11, 1699	7.9	1
7	A nanomechanical model enables comprehensive characterization of biological tissues in ultrasound imaging. <i>Biomedical Physics and Engineering Express</i> , 2020 , 6, 035026	1.5	0
6	The small world coefficient 4.8 ± 1 optimizes information processing in 2D neuronal networks.. <i>Npj Systems Biology and Applications</i> , 2022 , 8, 4	5	0
5	Nanoscaffolds for neural regenerative medicine 2020 , 47-88		0
4	Metal Structures as Advanced Materials in Nanotechnology 2014 , 615-669		0
3	Superhydrophobic Devices Molecular Detection. <i>Advances in Atom and Single Molecule Machines</i> , 2014 , 45-60	0	
2	Nanostructures for Photonics 2016 , 2827-2843		
1	Plasmonics and Super-Hydrophobicity: A New Class of Nano-Bio-Devices. <i>Challenges and Advances in Computational Chemistry and Physics</i> , 2013 , 501-524	0.7	