Andrea M Rossi

List of Publications by Year
in descending order

100 papers	2,083 citations	236925 25 h-index	265206 42 g-index
100 all docs	100 docs citations	100 times ranked	2590 citing authors

#	Article	IF	Citations
1	Rapid and sensitive detection of melamine in milk with gold nanoparticles by Surface Enhanced Raman Scattering. Food Chemistry, 2014, 159, 250-256.	8.2	140
2	Porous silicon biosensor for detection of viruses. Biosensors and Bioelectronics, 2007, 23, 741-745.	10.1	135
3	A surface science approach to TiO2 P25 photocatalysis: An in situ FTIR study of phenol photodegradation at controlled water coverages from sub-monolayer to multilayer. Applied Catalysis B: Environmental, 2016, 196, 135-141.	20.2	99
4	Controlling protected designation of origin of wine by Raman spectroscopy. Food Chemistry, 2016, 211, 260-267.	8.2	75
5	Smart optical sensors for chemical substances based on porous silicon technology. Applied Optics, 2004, 43, 167.	2.1	70
6	Ultraviolet photoluminescence from 6H silicon carbide nanoparticles. Applied Physics Letters, 2008, 92, .	3.3	64
7	High-quality porous-silicon buried waveguides. Applied Physics Letters, 2001, 78, 3003-3005.	3.3	62
8	Optical Sensors for Vapors, Liquids, and Biological Molecules Based on Porous Silicon Technology. IEEE Nanotechnology Magazine, 2004, 3, 49-54.	2.0	60
9	Front-side micromachined porous silicon nitrogen dioxide gas sensor. Thin Solid Films, 2001, 391, 261-264.	1.8	59
10	Shape-engineered titanium dioxide nanoparticles (TiO2-NPs): cytotoxicity and genotoxicity in bronchial epithelial cells. Food and Chemical Toxicology, 2019, 127, 89-100.	3.6	59
11	Optical sensing of flammable substances using porous silicon microcavities. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2003, 100, 271-274.	3.5	58
12	Nondestructive Raman Spectroscopy as a Tool for Early Detection and Discrimination of the Infection of Tomato Plants by Two Economically Important Viruses. Analytical Chemistry, 2019, 91, 9025-9031.	6.5	57
13	Optical microsensors for pesticides identification based on porous silicon technology. Biosensors and Bioelectronics, 2005, 20, 2136-2139.	10.1	49
14	Porous silicon microcavities for optical hydrocarbons detection. Sensors and Actuators A: Physical, 2003, 104, 179-182.	4.1	46
15	Rapid and sensitive detection of pyrimethanil residues on pome fruits by Surface Enhanced Raman Scattering. Food Chemistry, 2018, 244, 16-24.	8.2	45
16	Time-resolved sensing of chemical species in porous silicon optical microcavity. Sensors and Actuators B: Chemical, 2004, 100, 168-172.	7.8	44
17	Direct quantification of sulfur dioxide in wine by Surface Enhanced Raman Spectroscopy. Food Chemistry, 2020, 326, 127009.	8.2	42
18	New Approach on Quantification of Porosity of Thin Films via Electron-Excited X-ray Spectra. Analytical Chemistry, 2016, 88, 7083-7090.	6.5	41

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19	Nonlinearities in porous silicon optical waveguides at 1550 nm. Optics Express, 2009, 17, 3396.	3.4	37
20	Extending the plasmonic lifetime of tip-enhanced Raman spectroscopy probes. Physical Chemistry Chemical Physics, 2016, 18, 13710-13716.	2.8	35
21	Fabrication of flexible silicon nanowires by self-assembled metal assisted chemical etching for surface enhanced Raman spectroscopy. RSC Advances, 2016, 6, 93649-93659.	3.6	34
22	In situ seed-growth synthesis of silver nanoplates on glass for the detection of food contaminants by surface enhanced Raman scattering. Talanta, 2020, 216, 120936.	5.5	34
23	Influence of the long-range ordering of gold-coated Si nanowires on SERS. Scientific Reports, 2018, 8, 11305.	3.3	33
24	Authentication of cocoa bean shells by near- and mid-infrared spectroscopy and inductively coupled plasma-optical emission spectroscopy. Food Chemistry, 2019, 292, 47-57.	8.2	31
25	Integrated silicon-glass opto-chemical sensors for lab-on-chip applications. Sensors and Actuators B: Chemical, 2006, 114, 625-630.	7.8	29
26	Writing 3D protein nanopatterns onto a silicon nanosponge. Lab on A Chip, 2005, 5, 1048.	6.0	26
27	Exploring the potential of Raman spectroscopy for the identification of silicone oil residue and wear scar characterization for the assessment of tribofilm functionality. Tribology International, 2015, 90, 481-490.	5.9	26
28	Joint FTIR and TPD study of hydrogen desorption from p-type porous silicon. Physica Status Solidi A, 2003, 197, 217-221.	1.7	25
29	Patterning of Porous Silicon by Electron-Beam Lithography. Journal of the Electrochemical Society, 2003, 150, G311.	2.9	25
30	Species-specific detection of processed animal proteins in feed by Raman spectroscopy. Food Chemistry, 2017, 229, 268-275.	8.2	24
31	Laser-written nanoporous silicon ridge waveguide for highly sensitive optical sensors. Optics Letters, 2012, 37, 256.	3.3	22
32	Submicrometer Functionalization of Porous Silicon by Electron Beam Lithography. Advanced Materials, 2003, 15, 1465-1469.	21.0	20
33	Determination of ethanol content in wine through a porous silicon oxide microcavity. Sensors and Actuators B: Chemical, 2007, 123, 89-93.	7.8	20
34	Photodetectors from Porous Silicon. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1644-1647.	1.8	19
35	Towards a traceable enhancement factor in surface-enhanced Raman spectroscopy. Journal of Materials Chemistry C, 2020, 8, 16513-16519.	5.5	19
36	New frontiers against antibiotic resistance: A Raman-based approach for rapid detection of bacterial susceptibility and biocide-induced antibiotic cross-tolerance. Sensors and Actuators B: Chemical, 2020, 309, 127774.	7.8	19

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37	Quantitative optical sensing in two-component mixtures using porous silicon microcavities. Physica Status Solidi A, 2004, 201, 1011-1016.	1.7	18
38	Pro- and anti-oxidant properties of near-infrared (NIR) light responsive carbon nanoparticles. Free Radical Biology and Medicine, 2019, 134, 165-176.	2.9	18
39	Nanostructured silicon-based biosensors for the selective identification of analytes of social interest. Journal of Physics Condensed Matter, 2006, 18, S2019-S2028.	1.8	16
40	P450-based porous silicon biosensor for arachidonic acid detection. Biosensors and Bioelectronics, 2011, 28, 320-325.	10.1	15
41	Towards a Deeper Comprehension of the Interaction Mechanisms between Mesoporous Silicon and NO2. Physica Status Solidi A, 2000, 182, 465-471.	1.7	14
42	Dispersion of thermo-optic coefficient in porous silicon layers of different porosities. Applied Physics Letters, 2005, 86, 061107.	3.3	14
43	Shape engineered TiO₂nanoparticles in Caenorhabditis elegans: a Raman imaging based approach to assist tissue-specific toxicological studies. RSC Advances, 2016, 6, 70501-70509.	3.6	14
44	Detection of insectâ€™s meal in compound feed by Near Infrared spectral imaging. Food Chemistry, 2018, 267, 240-245.	8.2	14
45	Hybrid Approach to Porous Silicon Integrated Waveguides. Physica Status Solidi A, 2000, 182, 425-430.	1.7	13
46	Lateral structuring of porous silicon: application to waveguides. Physica Status Solidi A, 2003, 197, 284-287.	1.7	13
47	Microstructure analysis on polycrystalline 3Câ€“SiC thin films. Diamond and Related Materials, 2005, 14, 1134-1137.	3.9	13
48	Development of a rapid micro-Raman spectroscopy approach for detection of NIAS in LDPE pellets and extruded films for food packaging applications. Polymer Testing, 2019, 80, 106098.	4.8	13
49	Electron-beam irradiation of porous silicon: Application to micromachining. Journal of Applied Physics, 2003, 93, 4439-4441.	2.5	12
50	Flexible and Transparent Substrates Based on Gold Nanoparticles and TiO2 for in Situ Bioanalysis by Surface-Enhanced Raman Spectroscopy. Biosensors, 2019, 9, 145.	4.7	11
51	Free carriers reactivation in mesoporous p-type silicon by ammonia condensation: an FTIR study. Physica Status Solidi A, 2003, 197, 458-461.	1.7	10
52	Si/SiO2nanocomposite by CVD infiltration of porous SiO2. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1529-1532.	1.8	10
53	Design and fabrication of metal bolometers on high porosity silicon layers. Microelectronics Journal, 1999, 30, 1149-1154.	2.0	9
54	Direct detection and quantification of molecular surface contaminants by infrared and Raman spectroscopy. Analytical Methods, 2015, 7, 2813-2821.	2.7	9

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55	An infrared spectroscopy method to detect ammonia in gastric juice. Analytical and Bioanalytical Chemistry, 2015, 407, 8423-8431.	3.7	9
56	A calibration procedure for a traceable contamination analysis on medical devices by combined X-ray spectrometry and ambient spectroscopic techniques. Journal of Pharmaceutical and Biomedical Analysis, 2018, 150, 308-317.	2.8	9
57	Migration study of organotin compounds from food packaging by surface-enhanced Raman scattering. Talanta, 2020, 220, 121408.	5.5	9
58	Surface Minimal Bactericidal Concentration: A comparative study of active glasses functionalized with different-sized silver nanoparticles. Colloids and Surfaces B: Biointerfaces, 2021, 204, 111800.	5.0	9
59	Molecular Aspects of the Interaction with Gram-Negative and Gram-Positive Bacteria of Hydrothermal Carbon Nanoparticles Associated with Bac8c^{2,5Leu} Antimicrobial Peptide. ACS Omega, 2022, 7, 16402-16413.	3.5	9
60	Influence of block copolymer feature size on reactive ion etching pattern transfer into silicon. Nanotechnology, 2017, 28, 404001.	2.6	8
61	Near-infrared spectroscopy as a new method for post-harvest monitoring of white truffles. Mycological Progress, 2020, 19, 329-337.	1.4	8
62	Biochips at work: porous silicon microbiosensor for proteomic diagnostic. Journal of Physics Condensed Matter, 2007, 19, 395007.	1.8	7
63	Terahertz transmission through p⁺ porous silicon membranes. Physica Status Solidi (A) Applications and Materials Science, 2009, 206, 1273-1277.	1.8	7
64	Development of a candidate reference sample for the characterization of tip-enhanced Raman spectroscopy spatial resolution. RSC Advances, 2018, 8, 27863-27869.	3.6	7
65	Novel Approaches in Tip-Enhanced Raman Spectroscopy: Accurate Measurement of Enhancement Factors and Pesticide Detection in Tip Dimer Configuration. Journal of Physical Chemistry C, 2019, 123, 24723-24730.	3.1	7
66	International interlaboratory comparison of Raman spectroscopic analysis of CVD-grown graphene. 2D Materials, 2022, 9, 035010.	4.4	7
67	Structural and morphological properties of evaporated SiOx films. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 523-529.	0.6	6
68	Different size biomolecules anchoring on porous silicon surface: fluorescence and reflectivity pores infiltration comparative studies. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1878-1882.	0.8	6
69	Advanced characterization of albumin adsorption on a chemically treated surface for osseointegration: An innovative experimental approach. Materials and Design, 2022, 218, 110712.	7.0	6
70	Infrared analysis of porous silicon carbide. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1548-1551.	1.8	5
71	A methodological inter-comparison study on the detection of surface contaminant sodium dodecyl sulfate applying ambient- and vacuum-based techniques. Analytical and Bioanalytical Chemistry, 2019, 411, 217-229.	3.7	5
72	Hyperspectral Chemical Imaging of Single Bacterial Cell Structure by Raman Spectroscopy and Machine Learning. Applied Sciences (Switzerland), 2021, 11, 3409.	2.5	5

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73	Laser local oxidation of porous silicon: a FTIR spectroscopy investigation. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1658-1661.	1.8	4
74	Submicron machining and biomolecule immobilization on porous silicon by electron beam. Nanoscale Research Letters, 2012, 7, 530.	5.7	4
75	Vibrational spectroscopy. , 2020, , 457-480.		4
76	Porous silicon optical sensors for vapors, liquids, and biological molecules. , 2003, 5118, 305.		3
77	Raman Spectroscopy Applications in Grapevine: Metabolic Analysis of Plants Infected by Two Different Viruses. Frontiers in Plant Science, 0, 13, .	3.6	3
78	<title>Fabrication and characterization of porous silicon integrated waveguides</title>. , 2000, 3953, 112.		2
79	CHECS (Closed Habitat Environmental Control Sensors). , 2004, , .		2
80	Cloning and Expression Analysis of Human Amelogenin in Nicotiana benthamiana Plants by Means of a Transient Expression System. Molecular Biotechnology, 2017, 59, 425-434.	2.4	2
81	Graphene edge method for threeâ€dimensional probing of Raman microscopes focal volumes. Journal of Raman Spectroscopy, 2021, 52, 1671.	2.5	2
82	Structural and morphological properties of evaporated SiO x films. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 523-529.	0.6	1
83	Direct laser writing on porous silicon. , 2003, , .		1
84	Electron beam irradiation of porous silicon for application in micromachining and sensing. Physica Status Solidi (A) Applications and Materials Science, 2005, 202, 1648-1652.	1.8	1
85	Enhancement of<tex>$rm T_rm c$</tex>in<tex>$rm MgB_2$</tex>Thin Films by Laser Local Annealing. IEEE Transactions on Applied Superconductivity, 2005, 15, 3242-3244.	1.7	1
86	Etching Silicon Through an Effective Nanomask: An Electrochemical Way to Nanomachining. Materials Research Society Symposia Proceedings, 2005, 872, 1.	0.1	1
87	Electrical and optical properties of MgB2 grown by co-evaporation method. Journal of Physics and Chemistry of Solids, 2006, 67, 305-307.	4.0	1
88	Laser-written nanoporous silicon diffraction gratings for biosensors. Applied Optics, 2013, 52, 8802.	1.8	1
89	Traceable measurement of specific organic species at industrially relevant surface by infrared spectroscopy. Surface and Interface Analysis, 2014, 46, 915-919.	1.8	1
90	BaCO₃ and NH₃SO₃ as precursors for the hydrothermal synthesis of BaSO₄. CrystEngComm, 2018, 20, 7001-7009.	2.6	1

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91	Quantum confinement and disorder in porous silicon: Effects on the optical and transport properties. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1996, 18, 1111-1119.	0.4	0
92	On the role of germanium in porous silicon-germanium luminescence. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1997, 76, 395-403.	0.6	0
93	Observation of quantum-confined luminescence in partially oxidized porous silicon. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 2000, 80, 679-689.	0.6	0
94	Porous silicon microcavities for sensing purposes: modeling and experimental results. , 2003, , .		0
95	Raman emission in porous silicon at 1.54 micron. , 2004, , .		0
96	Raman sensing of vapors and liquids in porous silicon. , 2005, , .		0
97	New Emergent Nanotechnologies in Medical and Biochemical Applications:Advanced Fluorescence Protein-Based Nanosensors. Current Chemical Biology, 2007, 1, 3-9.	0.5	0
98	Direct writing of a protein micro-array: lab-on-a-chip for multipurpose sensing. , 2007, , .		0
99	Measurement of two-photon absorption in porous silicon waveguides at 1550 nm. , 2008, , .		0
100	Characterization of Free-Carrier Nonlinearities in Porous Silicon Waveguides. , 2009, , .		0