Sylvain Bohic

List of Publications by Year
in descending order

122 papers	3,499 citations	136740 32 h-index	155451 55 g-index
125 all docs	125 docs citations	125 times ranked	4470 citing authors

#	Article	IF	Citations
1	Copper pathology in vulnerable brain regions in Parkinson's disease. Neurobiology of Aging, 2014, 35, 858-866.	1.5	188
2	ID16B: a hard X-ray nanoprobe beamline at the ESRF for nano-analysis. Journal of Synchrotron Radiation, 2016, 23, 344-352.	1.0	176
3	Iron Storage within Dopamine Neurovesicles Revealed by Chemical Nano-Imaging. PLoS ONE, 2007, 2, e925.	1.1	159
4	Cure of Fisher Rats Bearing Radioresistant F98 Glioma Treated with cis-Platinum and Irradiated with Monochromatic Synchrotron X-Rays. Cancer Research, 2004, 64, 2317-2323.	0.4	153
5	Efficient concentration of high-energy x-rays for diffraction-limited imaging resolution. Optica, 2017, 4, 492.	4.8	145
6	Intracellular Chemical Imaging of the Developmental Phases of Human Neuromelanin Using Synchrotron X-ray Microspectroscopy. Analytical Chemistry, 2008, 80, 9557-9566.	3.2	100
7	Combined use of hard X-ray phase contrast imaging and X-ray fluorescence microscopy for sub-cellular metal quantification. Journal of Structural Biology, 2012, 177, 239-247.	1.3	95
8	Status of the hard X-ray microprobe beamline ID22 of the European Synchrotron Radiation Facility. Journal of Synchrotron Radiation, 2012, 19, 10-18.	1.0	95
9	Synchrotron hard x-ray microprobe: Fluorescence imaging of single cells. Applied Physics Letters, 2001, 78, 3544-3546.	1.5	85
10	Biomedical applications of the ESRF synchrotron-based microspectroscopy platform. Journal of Structural Biology, 2012, 177, 248-258.	1.3	80
11	Uremia-related vascular calcification: More than apatite deposition. Kidney International, 2007, 71, 298-303.	2.6	78
12	Manganese Accumulates within Golgi Apparatus in Dopaminergic Cells as Revealed by Synchrotron X-ray Fluorescence Nanoimaging. ACS Chemical Neuroscience, 2010, 1, 194-203.	1.7	78
13	Characterization of the trabecular rat bone mineral: effect of ovariectomy and bisphosphonate treatment. Bone, 2000, 26, 341-348.	1.4	74
14	Synchrotron-based X-ray fluorescence imaging of human cells labeled with CdSe quantum dots. Analytical Biochemistry, 2009, 388, 33-39.	1.1	73
15	Subcellular Speciation Analysis of Trace Element Oxidation States Using Synchrotron Radiation Micro-X-ray Absorption Near-Edge Structure. Analytical Chemistry, 2007, 79, 7353-7359.	3.2	72
16	Synchrotron Xâ€Ray Fluorescence Nanoprobe Reveals Target Sites for Organoâ€Osmium Complex in Human Ovarian Cancer Cells. Chemistry - A European Journal, 2017, 23, 2512-2516.	1.7	67
17	Nano-imaging of trace metals by synchrotron X-ray fluorescence into dopaminergic single cells and neurite-like processes. Journal of Analytical Atomic Spectrometry, 2008, 23, 1083.	1.6	64
18	Î±-Synuclein Over-Expression Induces Increased Iron Accumulation and Redistribution in Iron-Exposed Neurons. Molecular Neurobiology, 2016, 53, 1925-1934.	1.9	60

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19	Subcellular Chemical Imaging: New Avenues in Cell Biology. Trends in Cell Biology, 2020, 30, 173-188.	3.6	59
20	The over-expression of TRPC6 channels in HEK-293 cells favours the intracellular accumulation of zinc. Biochimica Et Biophysica Acta - Biomembranes, 2011, 1808, 2807-2818.	1.4	48
21	Microchemical Element Imaging of Yeast and Human Cells Using Synchrotron X-ray Microprobe with Kirkpatrickâ"Baez Optics. Analytical Chemistry, 2004, 76, 309-314.	3.2	46
22	Determination of elemental distribution in green micro-algae using synchrotron radiation nano X-ray fluorescence (SR-nXRF) and electron microscopy techniques â€" subcellular localization and quantitative imaging of silver and cobalt uptake by Coccomyxa actinabiotis. Metallomics, 2014, 6, 316.	1.0	46
23	Dissolution of strontianite at highP-Tconditions: An in-situ synchrotron X-ray fluorescence study. American Mineralogist, 2003, 88, 978-985.	0.9	45
24	ID22: a multitechnique hard X-ray microprobe beamline at the European Synchrotron Radiation Facility. Journal of Synchrotron Radiation, 2005, 12, 208-215.	1.0	44
25	Biological activities of sustained polymyxin B release from calcium phosphate biomaterial prepared by dynamic compaction: Anin vitro study. , 1999, 47, 18-27.		40
26	Focusing X-rays with simple arrays of prism-like structures. Journal of Synchrotron Radiation, 2004, 11, 248-253.	1.0	39
27	The in vivo degradation of a ruthenium labelled polysaccharide-based hydrogel for bone tissue engineering. Biomaterials, 2009, 30, 1568-1577.	5.7	39
28	In situ nanochemical imaging of label-free drugs: a case study of antimalarials in Plasmodium falciparum-infected erythrocytes. Chemical Communications, 2012, 48, 910-912.	2.2	39
29	Comparative Study of Metal Quantification in Neurological Tissue Using Laser Ablation-Inductively Coupled Plasma-Mass Spectrometry Imaging and X-ray Fluorescence Microscopy. Analytical Chemistry, 2015, 87, 6639-6645.	3.2	39
30	Effects of fibronectin on hydroxyapatite formation. Journal of Inorganic Biochemistry, 1999, 73, 129-136.	1.5	37
31	Radiation Doseâ€Enhancement Is a Potent Radiotherapeutic Effect of Rareâ€Earth Composite Nanoscintillators in Preclinical Models of Glioblastoma. Advanced Science, 2020, 7, 2001675.	5.6	36
32	Intracellular synchrotron nanoimaging and DNA damage/genotoxicity screening of novel lanthanide-coated nanovectors. Nanomedicine, 2010, 5, 1547-1557.	1.7	35
33	Identification of distinct pathological signatures induced by patient-derived Î±-synuclein structures in nonhuman primates. Science Advances, 2020, 6, eaaz9165.	4.7	34
34	Topographic and quantitative microanalysis of human central nervous system tissue using synchrotron radiation. X-Ray Spectrometry, 2004, 33, 3-11.	0.9	33
35	Neuronal transport defects of the MAP6 KO mouse â€" a model of schizophrenia â€" and alleviation by Epothilone D treatment, as observed using MEMRI. NeuroImage, 2014, 96, 133-142.	2.1	33
36	Zinc and Copper Effects on Stability of Tubulin and Actin Networks in Dendrites and Spines of Hippocampal Neurons. ACS Chemical Neuroscience, 2017, 8, 1490-1499.	1.7	33

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37	Nanoscale quantification of intracellular element concentration by X-ray fluorescence microscopy combined with X-ray phase contrast nanotomography. Applied Physics Letters, 2018, 112, .	1.5	32
38	Lack of Cell Death Enhancement after Irradiation with Monochromatic Synchrotron X Rays at the K-Shell Edge of Platinum Incorporated in Living SQ20B Human Cells ascis-Diamminedichloroplatinum (II). Radiation Research, 2002, 158, 763-770.	0.7	31
39	Implementation of X-ray Fluorescence Microscopy for Investigation of Elemental Abnormalities in Amyotrophic Lateral Sclerosis. Neurochemical Research, 2006, 31, 321-331.	1.6	31
40	Transport kinetics of four- and six-coordinate platinum compounds in the multicell layer tumour model. British Journal of Cancer, 2007, 97, 194-200.	2.9	31
41	Cellular Fractionation and Nanoscopic X-Ray Fluorescence Imaging Analyses Reveal Changes of Zinc Distribution in Leaf Cells of Iron-Deficient Plants. Frontiers in Plant Science, 2018, 9, 1112.	1.7	29
42	Application of FT-IR microspectroscopy to the study of an injectable composite for bone and dental surgery. , 1998, 41, 167-170.		28
43	Study of radiation effects on the cell structure and evaluation of the dose delivered by x-ray and Î±-particles microscopy. Applied Physics Letters, 2012, 101, 263102.	1.5	27
44	Crumpling of silver nanowires by endolysosomes strongly reduces toxicity. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14893-14898.	3.3	26
45	Intraneuronal investigations of organic components and trace elements with the use of synchrotron radiation. X-Ray Spectrometry, 2005, 34, 514-520.	0.9	25
46	Intracellular Localization of an Osmocenylâ€Tamoxifen Derivative in Breast Cancer Cells Revealed by Synchrotron Radiation Xâ€ray Fluorescence Nanoimaging. Angewandte Chemie - International Edition, 2019, 58, 3461-3465.	7.2	25
47	Ultrastructural Properties of Bone Mineral of Control and Tiludronate-Treated Osteoporotic Rat. Calcified Tissue International, 2000, 67, 330-336.	1.5	24
48	Deciphering the Resistance-Counteracting Functions of Ferroquine in Plasmodium falciparum-Infected Erythrocytes. ACS Medicinal Chemistry Letters, 2012, 3, 480-483.	1.3	24
49	Parabolic crossed planar polymeric x-ray lenses. Journal of Micromechanics and Microengineering, 2011, 21, 015020.	1.5	23
50	Nanopositioning for the ESRF ID16A Nano-Imaging Beamline. Synchrotron Radiation News, 2018, 31, 9-14.	0.2	23
51	Selenium nanoparticles trigger alterations in ovarian cancer cell biomechanics. Nanomedicine: Nanotechnology, Biology, and Medicine, 2020, 29, 102258.	1.7	22
52	Transmission FT-IR microspectroscopy of mineral phases in calcified tissues. Comptes Rendus De L'AcadÃ©mie Des Sciences SÃ©rie 3, Sciences De La Vie, 1998, 321, 865-876.	0.8	21
53	Nanofocusing at ESRF Using Graded Multilayer Mirrors. AIP Conference Proceedings, 2007, , .	0.3	21
54	Manganese enhanced MRI in rat hippocampus: A correlative study with synchrotron X-ray microprobe. NeuroImage, 2013, 64, 10-18.	2.1	21

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55	Study of Cu chemical state inside single neurons from Parkinson's disease and control substantia nigra using the micro-XANES technique. Journal of Trace Elements in Medicine and Biology, 2008, 22, 183-188.	1.5	20
56	Sub-ppm level high energy resolution fluorescence detected X-ray absorption spectroscopy of selenium in articular cartilage. Analyst, The, 2019, 144, 3488-3493.	1.7	20
57	Synchrotron-induced X-ray microfluorescence on single cells. Nuclear Instruments & Methods in Physics Research B, 2001, 181, 728-733.	0.6	19
58	Classification of Nerve Cells from Substantia Nigra of Patients with Parkinson's Disease and Amyotrophic Lateral Sclerosis with the Use of X-ray Fluorescence Microscopy and Multivariate Methods. Analytical Chemistry, 2005, 77, 2895-2900.	3.2	19
59	Thlaspi arvense binds Cu(ii) as a bis-(l-histidinato) complex on root cell walls in an urban ecosystem. Metallomics, 2013, 5, 1674.	1.0	17
60	Impact of manganese on primary hippocampal neurons from rodents. Hippocampus, 2014, 24, 598-610.	0.9	17
61	Nanoscopic X-ray fluorescence imaging and quantification of intracellular key-elements in cryofrozen Friedreichâ€™s ataxia fibroblasts. PLoS ONE, 2018, 13, e0190495.	1.1	17
62	Research in quantitative microscopic X-ray fluorescence analysis. Spectrochimica Acta, Part B: Atomic Spectroscopy, 2004, 59, 1517-1521.	1.5	16
63	Effect of sample preparation techniques upon single cell chemical imaging: A practical comparison between synchrotron radiation based X-ray fluorescence (SR-XRF) and Nanoscopic Secondary Ion Mass Spectrometry (nano-SIMS). Analytica Chimica Acta, 2020, 1106, 22-32.	2.6	15
64	Three-Dimensional Correlative Imaging of a Malaria-Infected Cell with a Hard X-ray Nanoprobe. Analytical Chemistry, 2019, 91, 6549-6554.	3.2	14
65	Iron distribution in cancer cells following doxorubicin exposure using proton and X-ray synchrotron radiation microprobes. Nuclear Instruments & Methods in Physics Research B, 2001, 181, 480-484.	0.6	13
66	Light scattering experiments on aqueous solutions of selected cellulose ethers: contribution to the study of polymer-mineral interactions in a new injectable biomaterial. Journal of Materials Science: Materials in Medicine, 2001, 12, 201-205.	1.7	12
67	X-ray fluorescence micro-tomography of an individual fluid inclusion using a third generation synchrotron light source. Nuclear Instruments & Methods in Physics Research B, 2001, 181, 749-754.	0.6	12
68	Leukemia Inhibitory Factor and Oncostatin M Influence the Mineral Phases Formed in a Murine Heterotopic Calcification Model: A Fourier Transform-Infrared Microspectroscopic Study. Journal of Bone and Mineral Research, 2009, 13, 1619-1632.	3.1	12
69	Cryo-nanoimaging of Single Human Macrophage Cells: 3D Structural and Chemical Quantification. Analytical Chemistry, 2020, 92, 4814-4819.	3.2	12
70	Effects of Leukemia Inhibitory Factor and Oncostatin M on Bone Mineral Formed inin VitroRat Bone-Marrow Stromal Cell Culture: Physicochemical Aspects. Biochemical and Biophysical Research Communications, 1998, 253, 506-513.	1.0	11
71	Intracellular Localization of an Osmocenylâ€Tamoxifen Derivative in Breast Cancer Cells Revealed by Synchrotron Radiation Xâ€ray Fluorescence Nanoimaging. Angewandte Chemie, 2019, 131, 3499-3503.	1.6	11
72	Determination of trace elements in Parkinson's diseased brain tissue using microbeam of synchrotron radiation. Journal of Neurochemistry, 2003, 85, 23-23.	2.1	10

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73	Nuclear microprobe determination of platinum quantitative distribution in rat brain tumors after cisplatin or carboplatin injection for PAT treatment of glioma. Nuclear Instruments & Methods in Physics Research B, 2005, 231, 321-325.	0.6	10
74	Elemental mapping in slices of human brain by SR-Î¼XRF. Powder Diffraction, 2005, 20, 158-160.	0.4	10
75	X-ray Phase Contrast osteo-articular imaging: a pilot study on cadaveric human hands. Scientific Reports, 2020, 10, 1911.	1.6	10
76	Overcoming the challenges of high-energy X-ray ptychography. Journal of Synchrotron Radiation, 2019, 26, 1751-1762.	1.0	9
77	Nano-imaging trace elements at organelle levels in substantia nigra overexpressing Î±-synuclein to model Parkinsonâ€™s disease. Communications Biology, 2020, 3, 364.	2.0	9
78	Molecular weight determination of macromolecules with a new simplified and coherent light scattering method. Journal of Molecular Structure, 1998, 443, 233-253.	1.8	8
79	Strontium incorporates at sites critical for bone mineralization in rats with renal failure. X-Ray Spectrometry, 2007, 36, 42-49.	0.9	8
80	Zinc Uptake and Storage During the Formation of the Cerebral Cortex in Mice. Molecular Neurobiology, 2019, 56, 6928-6940.	1.9	8
81	A liver-targeting Cu(<scp>i</scp>) chelator relocates Cu in hepatocytes and promotes Cu excretion in a murine model of Wilsonâ€™s disease. Metallomics, 2020, 12, 1000-1008.	1.0	8
82	Analysis of a Roman Centaurus from Canas deÂSenhorim (Portugal)-Comparative study using EDXRF and SXRF. European Physical Journal Special Topics, 2003, 104, 523-526.	0.2	7
83	State of the Art and Perspectives of Biomedical Imaging at the ESRF. Synchrotron Radiation News, 2008, 21, 30-41.	0.2	7
84	Imaging and quantification of trace metals in thin biological specimens using microprobe techniques: Synchrotron induced X-ray fluorescence microprobe and nuclear microprobe. European Physical Journal Special Topics, 2003, 104, 321-324.	0.2	7
85	Heterotopic Implantation of Mouse Bone-Marrow Cells: AnIn VivoModel Allowing Analysis of Mineral Phases During Mineralization Processes. Connective Tissue Research, 1998, 37, 219-231.	1.1	6
86	<title>Microbeam production using compound refractive lenses: beam characterization and applications</title>. , 2001, , .		6
87	The Xâ€ray Microscopy and Microâ€spectroscopy facility at the ESRF. Synchrotron Radiation News, 2003, 16, 35-43.	0.2	6
88	Absolute zinc quantification at the sub-cellular level by combined use of hard X-ray fluorescence and phase contrast imaging techniques. Journal of Physics: Conference Series, 2013, 463, 012021.	0.3	6
89	Impact of manganese on the hippocampus metabolism in the context of MEMRI: a proton HRMAS MRS study. Toxicology Research, 2015, 4, 376-384.	0.9	6
90	Application of synchrotron radiation for elemental microanalysis of human central nervous System tissue. European Physical Journal Special Topics, 2003, 104, 325-328.	0.2	5

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91	Cell Culture on Silicon Nitride Membranes and Cryopreparation for Synchrotron X-ray Fluorescence Nano-analysis. Journal of Visualized Experiments, 2019, , .	0.2	5
92	Nanoscopic X-ray imaging and quantification of the iron cellular architecture within single fibroblasts of Friedreich's ataxia patients. Journal of Synchrotron Radiation, 2020, 27, 185-198.	1.0	5
93	Comparison of X-ray speckle-based imaging deflection retrieval algorithms for the optimization of radiation dose. Physics in Medicine and Biology, 2021, 66, 065005.	1.6	5
94	High-energy cryo x-ray nano-imaging at the ID16A beamline of ESRF. , 2017, , .		5
95	Synchrotron X-Ray Microfluorescence and Microspectroscopy: Application and Perspectives in Materials Science. Oil and Gas Science and Technology, 2005, 60, 979-993.	1.4	4
96	Methodological Study Using XAS of an ArsenicBased Antileukemia Treatment. Physica Scripta, 2005, , 870.	1.2	3
97	Fluorescence X-ray micro-spectroscopy activities at ESRF. Journal of Physics: Conference Series, 2009, 186, 012014.	0.3	3
98	In vivo siRNA distribution and pharmacokinetics assessed by nuclear imaging are modulated according to radiolabelling site. Nuclear Medicine and Biology, 2015, 42, 958-966.	0.3	3
99	Synchrotron Radiation X-Ray Fluorescence Nanoimaging Reveal the Intracellular Localization of Potent Anticancer Drug Osmocenyl-Tamoxifen Derivative. Microscopy and Microanalysis, 2018, 24, 350-351.	0.2	3
100	Trace element content and distribution in a single fluid inclusion from Dunbar Oil Field, North Sea. European Physical Journal Special Topics, 2003, 104, 385-390.	0.2	3
101	Unsupervised solution for in-line holography phase retrieval using Bayesian inference. Optics Express, 2018, 26, 32847.	1.7	3
102	P3.052 Metallomics of neuromelanin in Parkinsonian syndromes. Parkinsonism and Related Disorders, 2009, 15, S161-S162.	1.1	2
103	Potential use of infrared microspectroscopy to study drug-related structural changes in bone. Drug Discovery Today, 1999, 4, 443-444.	3.2	1
104	Alteration of zinc accumulation in ageing and neurodegenerative disorders. Journal of Neurochemistry, 2003, 85, 27-27.	2.1	1
105	The X-Ray Microscopy And Micro-Spectroscopy Facility At The ESRF. AIP Conference Proceedings, 2004, , .	0.3	1
106	Combined use of X-ray fluorescence microscopy, phase contrast imaging for high resolution quantitative iron mapping in inflamed cells. Journal of Physics: Conference Series, 2017, 849, 012008.	0.3	1
107	Performance of X-Ray Speckle Tracking Phase Retrieval Algorithms Towards a Dose Improvement. Microscopy and Microanalysis, 2018, 24, 38-39.	0.2	1
108	Quantitative Nano-imaging of Cells with a High Energy X-ray Cryo Nano-probe. Microscopy and Microanalysis, 2018, 24, 402-403.	0.2	1

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109	Spatially resolved imaging methods to probe metals in the brain: from subcellular to organ level. , 2012, , 211-222.		1
110	3D histopathology speckle phase contrast imaging: from synchrotron to conventional sources. , 2019, , .		1
111	Focusing hard x-rays with large kinoform lenses of mm size. , 2004, , .		0
112	Kirkpatrick-Baez mirrors used in high resolution X-ray microscopy, tomography and fluorescence analysis. Acta Crystallographica Section A: Foundations and Advances, 2006, 62, s93-s93.	0.3	0
113	Hard X-ray Microscopy and Tomography. Microscopy and Microanalysis, 2007, 13, .	0.2	0
114	Frontispiece: Synchrotron Xâ€Ray Fluorescence Nanoprobe Reveals Target Sites for Organoâ€Osmium Complex in Human Ovarian Cancer Cells. Chemistry - A European Journal, 2017, 23, .	1.7	0
115	High Resolution X-Ray Phase Contrast Imaging of Maturating Cartilage.. Microscopy and Microanalysis, 2018, 24, 382-383.	0.2	0
116	F-39 A Top-Down Approach Using X-ray Imaging Techniques: Instrumental Developments and Applications in Life Science. Powder Diffraction, 2008, 23, 177-177.	0.4	0
117	C-10 Synchrotron Based Spectro-Microscopy for Cell Biology. Powder Diffraction, 2009, 24, 166-166.	0.4	0
118	F-59 X-ray Imaging on Biological Model Organisms Using Micro and Nano X-ray Fluorescence. Powder Diffraction, 2009, 24, 167-167.	0.4	0
119	Manganese Cytotoxicity Assay on Hippocampal Neuronal Cell Culture. Bio-protocol, 2015, 5, .	0.2	0
120	Role of the selenium in articular cartilage metabolism, growth, and maturation. , 2015, , 77-78.		0
121	Nanoscale three-dimensional imaging of biological tissue with x-ray holographic tomography. , 2018, , .		0
122	X-Ray Phase Contrast Osteo-Articular Imaging: A Pilot Study on Cadaveric Human Hands. SSRN Electronic Journal, 0, , .	0.4	0