

Kepa Castro

List of Publications by Year in descending order

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109
papers

3,291
citations

117625

34
h-index

175258

52
g-index

111
all docs

111
docs citations

111
times ranked

2670
citing authors

#	ARTICLE	IF	CITATIONS
1	On-line FT-Raman and dispersive Raman spectra database of artists's materials (e-VISART database). <i>Analytical and Bioanalytical Chemistry</i> , 2005, 382, 248-258.	3.7	185
2	Comparative study of mobile Raman instrumentation for art analysis. <i>Analytica Chimica Acta</i> , 2007, 588, 108-116.	5.4	138
3	Study of environmental pollution and mineralogical characterization of sediment rivers from Brazilian coal mining acid drainage. <i>Science of the Total Environment</i> , 2013, 447, 169-178.	8.0	123
4	Formation and characterization of zein-caseinate-pectin complex nanoparticles for encapsulation of eugenol. <i>LWT - Food Science and Technology</i> , 2018, 89, 596-603.	5.2	104
5	Investigation of degradation mechanisms by portable Raman spectroscopy and thermodynamic speciation: The wall painting of Santa MarÁa de Lemoniz (Basque Country, North of Spain). <i>Analytica Chimica Acta</i> , 2006, 571, 121-128.	5.4	94
6	FTIR spectroscopic semi-quantification of iron phases: A new method to evaluate the protection ability index (PAI) of archaeological artefacts corrosion systems. <i>Corrosion Science</i> , 2018, 133, 68-77.	6.6	86
7	Green Copper Pigments Biodegradation in Cultural Heritage: From Malachite to Moolooite, Thermodynamic Modeling, X-ray Fluorescence, and Raman Evidence. <i>Analytical Chemistry</i> , 2008, 80, 4103-4110.	6.5	83
8	Analysis of bulk and inorganic degradation products of stones, mortars and wall paintings by portable Raman microprobe spectroscopy. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 379, 42-50.	3.7	81
9	Raman spectroscopy as a tool to diagnose the impact and conservation state of Pompeian second and fourth style wall paintings exposed to diverse environments (House of Marcus Lucretius). <i>Journal of Raman Spectroscopy</i> , 2010, 41, 1400-1409.	2.5	80
10	Hyperspectral imaging applied to the analysis of Goya paintings in the Museum of Zaragoza (Spain). <i>Microchemical Journal</i> , 2016, 126, 113-120.	4.5	75
11	Non-invasive portable instrumentation to study Palaeolithic rock paintings: the case of La PeÃ±a Cave in San Roman de Candamo (Asturias, Spain). <i>Journal of Archaeological Science</i> , 2013, 40, 1354-1360.	2.4	69
12	Field Raman analysis to diagnose the conservation state of excavated walls and wall paintings in the archaeological site of Pompeii (Italy). <i>Journal of Raman Spectroscopy</i> , 2012, 43, 1747-1753.	2.5	68
13	Analytical diagnosis methodology to evaluate nitrate impact on historical building materials. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 1361-1370.	3.7	62
14	Classification and identification of organic binding media in artworks by means of Fourier transform infrared spectroscopy and principal component analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 3601-3611.	3.7	62
15	Noninvasive and nondestructive NMR, Raman and XRF analysis of a Blaeu coloured map from the seventeenth century. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 433-441.	3.7	60
16	Raman spectroscopy as a tool to diagnose the impacts of combustion and greenhouse acid gases on properties of Built Heritage. <i>Journal of Raman Spectroscopy</i> , 2008, 39, 1042-1049.	2.5	57
17	<i>In situ</i> Raman spectroscopy analysis combined with Raman and SEM-EDS imaging to assess the conservation state of 16th century wall paintings. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 1676-1684.	2.5	56
18	Scientific analysis versus restorer's expertise for diagnosis prior to a restoration process: the case of Santa Maria Church (Hermo, Asturias, North of Spain). <i>Analytica Chimica Acta</i> , 2004, 524, 379-389.	5.4	55

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19	Non-invasive and non-destructive micro-XRF and micro-Raman analysis of a decorative wallpaper from the beginning of the 19th century. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 387, 847-860.	3.7	55
20	Protective ability index measurement through Raman quantification imaging to diagnose the conservation state of weathering steel structures. <i>Journal of Raman Spectroscopy</i> , 2014, 45, 1076-1084.	2.5	55
21	In situ analysis with portable Raman and EDXRF spectrometers for the diagnosis of the formation of efflorescence on walls and wall paintings of the Insula IX 3 (Pompeii, Italy). <i>Journal of Raman Spectroscopy</i> , 2014, 45, 1059-1067.	2.5	55
22	Use of in situ and confocal Raman spectroscopy to study the nature and distribution of carotenoids in brown patinas from a deteriorated wall painting in Marcus Lucretius House (Pompeii). <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 1529-1539.	3.7	53
23	On The MicroPhase Separation in Waterborne Polyurethanes. <i>Macromolecular Chemistry and Physics</i> , 2009, 210, 879-889.	2.2	48
24	Analysis of a coloured Dutch map from the eighteenth century: The need for a multi-analytical spectroscopic approach using portable instrumentation. <i>Analytica Chimica Acta</i> , 2008, 623, 187-194.	5.4	47
25	Peer Reviewed: FTIR Spectra Database of Inorganic Art Materials. <i>Analytical Chemistry</i> , 2003, 75, 214 A-221 A.	6.5	46
26	Portable Raman study on the conservation state of four CorTen steel based sculptures by Eduardo Chillida impacted by urban atmospheres. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 1111-1117.	2.5	45
27	Multianalytical approach to study the dissolution process of weathering steel: The role of urban pollution. <i>Corrosion Science</i> , 2013, 76, 154-162.	6.6	43
28	Vibrational Spectroscopic Techniques for the Analysis of Artefacts with Historical, Artistic and Archaeological Value. <i>Current Analytical Chemistry</i> , 2006, 2, 89-100.	1.2	42
29	Fourier transform Raman spectroscopic study of pigments present in decorative wallpapers of the middle nineteenth century from the Santa Isabel factory (Vitoria, Basque Country, Spain). <i>Journal of Raman Spectroscopy</i> , 2002, 33, 17-25.	2.5	40
30	Vibrational spectroscopy at the service of industrial archaeology: Nineteenth-century wallpaper. <i>TrAC - Trends in Analytical Chemistry</i> , 2007, 26, 347-359.	11.4	40
31	Assessment of the weathering effects on cellulose based materials through a multianalytical approach. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2011, 269, 1401-1410.	1.4	40
32	Portable Raman, DRIFTS, and XRF Analysis to Diagnose the Conservation State of Two Wall Painting Panels from Pompeii Deposited in the Naples National Archaeological Museum (Italy). <i>Applied Spectroscopy</i> , 2016, 70, 137-146.	2.2	39
33	GC-MS and HPLC-ESI-QToF characterization of organic lipid residues from ceramic vessels used by Basque whalers from 16th to 17th centuries. <i>Microchemical Journal</i> , 2018, 137, 190-203.	4.5	38
34	Multianalytical approach to the analysis of English polychromed alabaster sculptures: $^{1/4}$ Raman, $^{1/4}$ EDXRF, and FTIR spectroscopies. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 392, 755-763.	3.7	36
35	Evaluating the exploitability of several essential oils constituents as a novel biological treatment against cultural heritage biocolonization. <i>Microchemical Journal</i> , 2018, 138, 1-6.	4.5	35
36	Micro-Raman analysis of coloured lithographs. <i>Analytical and Bioanalytical Chemistry</i> , 2004, 379, 674-83.	3.7	31

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37	Thermodynamic and Spectroscopic Speciation to Explain the Blackening Process of Hematite Formed by Atmospheric SO ₂ Impact: The Case of Marcus Lucretius House (Pompeii). <i>Analytical Chemistry</i> , 2011, 83, 3319-3326.	6.5	31
38	Raman fibre optic approach to artwork dating. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2004, 60, 2919-2924.	3.9	30
39	Non-destructive spectrometry methods to study the distribution of archaeological and geological chert samples. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2009, 73, 492-497.	3.9	30
40	Multianalytical approach to explain the darkening process of hematite pigment in paintings from ancient Pompeii after accelerated weathering experiments. <i>Analytical Methods</i> , 2014, 6, 372-378.	2.7	29
41	In situ X-ray fluorescence-based method to differentiate among red ochre pigments and yellow ochre pigments thermally transformed to red pigments of wall paintings from Pompeii. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 3853-3860.	3.7	29
42	Raman spectroscopy speciation of natural and anthropogenic solid phases in river and estuarine sediments with appreciable amount of clay and organic matter. <i>Journal of Raman Spectroscopy</i> , 2008, 39, 1195-1203.	2.5	28
43	Improvements in the wallpaper industry during the second half of the 19th century: Micro-Raman spectroscopy analysis of pigmented wallpapers. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2005, 61, 2357-2363.	3.9	27
44	Study of the soluble salts formation in a recently restored house of Pompeii by in-situ Raman spectroscopy. <i>Scientific Reports</i> , 2018, 8, 1613.	3.3	27
45	Spectroscopic speciation and thermodynamic modeling to explain the degradation of weathering steel surfaces in SO ₂ rich urban atmospheres. <i>Microchemical Journal</i> , 2014, 115, 138-145.	4.5	26
46	Biodeterioration of Pompeian mural paintings: fungal colonization favoured by the presence of volcanic material residues. <i>Environmental Science and Pollution Research</i> , 2017, 24, 19599-19608.	5.3	25
47	Raman spectroscopy after accelerated ageing tests to assess the origin of some decayed products found in real historical bricks affected by urban polluted atmospheres. <i>Analytical and Bioanalytical Chemistry</i> , 2009, 395, 2119-2129.	3.7	24
48	<i>In situ</i> and laboratory Raman analysis in the field of cultural heritage: the case of a mural painting. <i>Journal of Raman Spectroscopy</i> , 2014, 45, 228-237.	2.5	24
49	The Raman spectra of the Na ₂ SO ₄ •K ₂ SO ₄ system: Applicability to soluble salts studies in built heritage. <i>Journal of Raman Spectroscopy</i> , 2019, 50, 175-183.	2.5	24
50	Raman spectroscopic study of the degradation of a middle age mural painting: the role of agricultural activities. <i>Journal of Raman Spectroscopy</i> , 2014, 45, 1110-1118.	2.5	23
51	Multispectroscopic and Isotopic Ratio Analysis To Characterize the Inorganic Binder Used on Pompeian Pink and Purple Lake Pigments. <i>Analytical Chemistry</i> , 2016, 88, 6395-6402.	6.5	23
52	Scientific examination of classic Spanish stamps with colour error, a non-invasive micro-Raman and micro-XRF approach: The King Alfonso XIII (1889-1901) 15 cents definitive issue. <i>Journal of Cultural Heritage</i> , 2008, 9, 189-195.	3.3	22
53	From Portable to SCA Raman devices to characterize harmful compounds contained in used black slag produced in Electric Arc Furnace of steel industry. <i>Journal of Raman Spectroscopy</i> , 2013, 44, 1163-1171.	2.5	22
54	Portable Raman monitoring of modern cleaning and consolidation operations of artworks on mineral supports. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 397, 2717-2725.	3.7	21

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55	Darkening of lead- and iron-based pigments on late Gothic Italian wall paintings: Energy dispersive X-ray fluorescence, Raman, and powder X-ray diffraction analyses for diagnosis: Presence of PbO_2 (plattnerite) and PbO (scrutinyite). <i>Journal of Raman Spectroscopy</i> , 2020, 51, 680-692.	2.5	21
56	In-situ multianalytical approach to analyze and compare the degradation pathways jeopardizing two murals exposed to different environments (Ariadne House, Pompeii, Italy). <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 203, 201-209.	3.9	20
57	Portable and laboratory analytical instruments for the study of materials, techniques and environmental impacts in mediaeval mural paintings. <i>Analytical Methods</i> , 2018, 10, 4854-4870.	2.7	19
58	Overview of the techniques used for the study of non-terrestrial bodies: Proposition of novel non-destructive methodology. <i>TrAC - Trends in Analytical Chemistry</i> , 2018, 98, 36-46.	11.4	18
59	Bioimpact on weathering steel surfaces: Oxalates formation and the elucidation of their origin. <i>International Biodeterioration and Biodegradation</i> , 2015, 104, 59-66.	3.9	17
60	ExoMars Raman Laser Spectrometer: A Tool for the Potential Recognition of Wet-Target Craters on Mars. <i>Astrobiology</i> , 2020, 20, 349-363.	3.0	17
61	Multielement μ -ED-XRF analysis of vertebrate fossil bones. <i>X-Ray Spectrometry</i> , 2008, 37, 293-297.	1.4	16
62	Analysis of confiscated fireworks using Raman spectroscopy assisted with SEM-EDS and FTIR. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 2000-2005.	2.5	16
63	Raman and SEM-EDX analyses of the "Royal Portal" of Bordeaux Cathedral for the virtual restitution of the statuary polychromy. <i>Journal of Raman Spectroscopy</i> , 2016, 47, 162-167.	2.5	16
64	Structural and chemical analyzer system for the analysis of deposited airborne particles and degradation compounds present on the surface of outdoor weathering steel objects. <i>Microchemical Journal</i> , 2015, 123, 267-275.	4.5	15
65	Multispectroscopic methodology to study Libyan desert glass and its formation conditions. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 3597-3610.	3.7	15
66	Darwin impact glass study by Raman spectroscopy in combination with other spectroscopic techniques. <i>Journal of Raman Spectroscopy</i> , 2015, 46, 913-919.	2.5	14
67	Geochemical study of the Northwest African 6148 Martian meteorite and its terrestrial weathering processes. <i>Journal of Raman Spectroscopy</i> , 2017, 48, 1536-1543.	2.5	14
68	In-situ multi-analytical characterization of original and decay materials from unique wall mirrors in the House of Gilded Cupids, Pompeii. <i>Heritage Science</i> , 2018, 6, .	2.3	14
69	Spectroscopic study of olivine-bearing rocks and its relevance to the ExoMars rover mission. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2019, 223, 117360.	3.9	14
70	Characterization of archaeometallurgical artefacts by means of portable Raman systems: corrosion mechanisms influenced by marine aerosol. <i>Journal of Raman Spectroscopy</i> , 2017, 48, 258-266.	2.5	13
71	Focused ultrasound solid-liquid extraction for the determination of organic biomarkers in beachrocks. <i>Ultrasonics Sonochemistry</i> , 2015, 27, 430-439.	8.2	12
72	Raman analysis assessed by Fourier-transformed infrared and X-ray fluorescence spectroscopies: a multi-analytical approach of ancient chromolithographs from the 19th century. <i>Journal of Raman Spectroscopy</i> , 2012, 43, 411-418.	2.5	11

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73	Comparison between non-invasive methods used on paintings by Goya and his contemporaries: hyperspectral imaging vs. point-by-point spectroscopic analysis. <i>Analytical and Bioanalytical Chemistry</i> , 2017, 409, 4047-4056.	3.7	11
74	The combination of Raman imaging and LIBS for quantification of original and degradation materials in Cultural Heritage. <i>Journal of Raman Spectroscopy</i> , 2019, 50, 193-201.	2.5	11
75	Finnish wallpaper pigments in the 18th-19th century: Presence of $KFe_3(CrO_4)_2(OH)_6$ and odd pigment mixtures. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2013, 106, 104-109.	3.9	10
76	Wine markers in archeological potteries: detection by GC-MS at ultratrace levels. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 6711-6722.	3.7	10
77	Multispectroscopic Characterization of Oil on Copper Painting. <i>Spectroscopy Letters</i> , 2014, 47, 38-51.	1.0	9
78	Use of Temperature Controlled Stage Confocal Raman Microscopy to Study Phase Transition of Lead Dioxide (Plattnerite). <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 468.	2.0	9
79	Understanding the degradation of the blue colour in the wall paintings of Ariadne's house (Pompeii). <i>Tj ETQq1 1 0.784314 rgBT /Overbo</i>	2.5	9
80	Efficacy of waterborne polyurethane to prevent the enzymatic attack on paper-based materials. <i>Journal of Applied Polymer Science</i> , 2009, 113, 2030-2040.	2.6	8
81	Are these liquids explosive? Forensic analysis of confiscated indoor fireworks. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 400, 3065-3071.	3.7	8
82	Comparison of semiquantification experimental methodologies using micro-Raman spectroscopy: <i>palme</i> software as an alternative tool for the study of salt efflorescence. <i>Journal of Raman Spectroscopy</i> , 2016, 47, 1415-1421.	2.5	8
83	The green grass was never green: How spectroscopic techniques should have assisted restoration works. <i>Microchemical Journal</i> , 2018, 138, 154-161.	4.5	8
84	Mixed-mode SPE followed by GC-MS analysis to determine water soluble organic compounds in aerosol and historical mortars affected by marine atmosphere: The case of Punta Bego's Galleries (Getxo, North of Spain). <i>Talanta</i> , 2018, 189, 31-38.	5.5	8
85	Interrelationships in the Gypsum-Syngenite-Görgöyite System and Their Possible Formation on Mars. <i>Astrobiology</i> , 2021, 21, 332-344.	3.0	8
86	New Findings by Raman Microspectroscopy in the Bulk and Inclusions Trapped in Libyan Desert Glass. <i>Spectroscopy Letters</i> , 2011, 44, 521-525.	1.0	7
87	Sourcing sedimentary cherts with archaeological use through the combination of chromatographic and spectroscopic techniques. <i>Applied Geochemistry</i> , 2013, 33, 252-259.	3.0	7
88	Non-destructive characterisation of the Elephant Moraine 83227 meteorite using confocal Raman, micro-energy-dispersive X-ray fluorescence and Raman-scanning electron microscope-energy-dispersive X-ray microscopies. <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 7477-7488.	3.7	7
89	New Raman-visible near-infrared database of inorganic and mineralogical planetary and terrestrial compounds and its implications for Mars: Phyllosilicates. <i>Journal of Raman Spectroscopy</i> , 2020, 51, 1750-1760.	2.5	7
90	Hit and sunk: provenance and alterations of ceramics from seventeenth century Angra D shipwreck. <i>Archaeological and Anthropological Sciences</i> , 2020, 12, 1.	1.8	7

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91	Detection of unexpected copper sulfate decay compounds on late Gothic mural paintings: Assessing the threat of environmental impact. <i>Microchemical Journal</i> , 2021, 169, 106542.	4.5	7
92	Study of corrosion in archaeological gilded irons by Raman imaging and a coupled scanning electron microscope-Raman system. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016, 374, 20160046.	3.4	6
93	Spectroscopic characterization of xx century mural paintings of punta bego's galleries under conservation works. <i>Microchemical Journal</i> , 2021, 168, 106423.	4.5	6
94	An alternative analytical method based on ultrasound micro bath hydrolysis and GC-MS analysis for the characterization of organic biomarkers in archaeological ceramics. <i>Analytical and Bioanalytical Chemistry</i> , 2016, 408, 8001-8012.	3.7	5
95	Spectroscopic analysis used to uncover the original paint colour of the Helsinki Government Palace tower clock faces. <i>Heritage Science</i> , 2016, 4, .	2.3	5
96	Study of a terrestrial Martian analogue: Geochemical characterization of the Meakoz outcrops (Biscay, Spain). <i>Journal of Raman Spectroscopy</i> , 2020, 51, 1603-1612.	2.5	5
97	Development of a novel method for the in-situ dechlorination of immovable iron elements: optimization of Cl ⁻ extraction yield through experimental design. <i>Scientific Reports</i> , 2021, 11, 10789.	3.3	5
98	Mineralogy of the RBT 04262 Martian meteorite as determined by micro-Raman and micro-X-ray fluorescence spectroscopies. <i>Journal of Raman Spectroscopy</i> , 2022, 53, 450-462.	2.5	5
99	Identification and characterization of basic copper sulfates as mineral green pigments in Andean colonial mural paintings: Use of temperature-controlled stage for the study of thermal induced antlerite degradation. <i>Journal of Raman Spectroscopy</i> , 2021, 52, 2204-2217.	2.5	4
100	Original and alteration mineral phases in the NWA 10628 Martian shergottite determined by micro-Raman spectroscopy assisted with micro-energy dispersive X-ray fluorescence imaging. <i>Journal of Raman Spectroscopy</i> , 0, , .	2.5	4
101	The potential of in situ Raman spectroscopy in the study of the health of cement-based materials of modern buildings during restoration works. <i>Journal of Raman Spectroscopy</i> , 2021, 52, 1868-1877.	2.5	3
102	Detection of organic compounds in impact glasses formed by the collision of an extraterrestrial material with the Libyan Desert (Africa) and Tasmania (Australia). <i>Analytical and Bioanalytical Chemistry</i> , 2018, 410, 6609-6617.	3.7	2
103	Spectroscopic-assisted archaeometric studies to determine the production technology of the VI BC Zeus Enthroned statue (Paestum, Italy) and Pre-Roman technology transfer. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 249, 119294.	3.9	2
104	Non-destructive study of the degradation processes in underwater metallic materials. , 2018, , 319-321.		2
105	Analytical Techniques Applied to the Study of Industrial Archaeology Heritage: The Case of Plaiko Zubixe Footbridge. <i>Molecules</i> , 2022, 27, 3609.	3.8	2
106	Non-Destructive Analytical Investigation of Decorative Wallpapers Samples of the Nineteenth Century before Their Restoration. <i>Sensors</i> , 2021, 21, 4416.	3.8	1
107	GeoRaman. <i>Journal of Raman Spectroscopy</i> , 2022, 53, 333-339.	2.5	1
108	Raman study of the ageing test of natural hydraulic lime under the influence of industrial port activities. <i>Journal of Raman Spectroscopy</i> , 2022, 53, 608-616.	2.5	1

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109	Analytical methodology to evaluate the Terrestrial Weathering of Libyan Desert Glasses and Darwin Glasses after their formation. Analytical and Bioanalytical Chemistry, 2019, 411, 7869-7877.	3.7	0