

Philippe Dillmann

List of Publications by Year in descending order

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95
papers

3,145
citations

159585

30
h-index

168389

53
g-index

98
all docs

98
docs citations

98
times ranked

1684
citing authors

#	ARTICLE	IF	CITATIONS
1	The medieval bombards of Meaux: Manufacturing processes and supply of the metal. <i>Journal of Archaeological Science: Reports</i> , 2022, 41, 103307.	0.5	2
2	Fabrication of a suit of armour at the end of Middle Ages: An extensive archaeometallurgical characterization of the armour of Laval. <i>Journal of Cultural Heritage</i> , 2022, 53, 88-99.	3.3	10
3	Vice-versa: The iron trade in the western Roman Empire between Gaul and the Mediterranean. <i>PLoS ONE</i> , 2022, 17, e0268209.	2.5	12
4	Comparative study on quantitative carbon content mapping in archaeological ferrous metals with laser-induced plasma spectroscopy (LIBS) and nuclear reaction analysis (NRA) for 3D representation by LIBS. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2022, 194, 106454.	2.9	1
5	Investigation of steel corrosion in MX80 bentonite at 120°C. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2021, 72, 120-130.	1.5	3
6	The fate of Si and Fe while nuclear glass alters with steel and clay. <i>Npj Materials Degradation</i> , 2021, 5, .	5.8	5
7	A new understanding of the chronology, circulation and function of Iron Age (8th-1st c. BC) ferrous semi-products in north-eastern France. <i>Archaeological and Anthropological Sciences</i> , 2021, 13, 1.	1.8	3
8	Transformations of the chemical signature of slag inclusions throughout experimental refining and first shaping of bloomery iron: New methodological developments. <i>Journal of Archaeological Science: Reports</i> , 2020, 34, 102653.	0.5	6
9	Ancient armour provenance by LA-ICP-MS analysis of microscopic slag inclusions. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 2582-2593.	3.0	11
10	XANES at the Cl K-edge as a relevant technique to reveal the iron archaeological artefact dechlorination treatments. <i>Journal of Analytical Atomic Spectrometry</i> , 2020, 35, 2358-2368.	3.0	5
11	Deciphering the Iron Provenance on a Medieval Building Yard: The Case of Bourges Cathedral. <i>Minerals (Basel, Switzerland)</i> , 2020, 10, 1131.	2.0	9
12	Impact of laser-induced breakdown spectroscopy implementation for the quantification of carbon content distribution in archaeological ferrous metals. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2020, 172, 105964.	2.9	4
13	Use of nanoprobe to identify iron-silicates in a glass/iron/argillite system in deep geological disposal. <i>Corrosion Science</i> , 2019, 158, 108104.	6.6	7
14	New insights of Auger spectroscopy for the identification of Fe-Si compounds in iron/glass corrosion systems at nanoscale. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2019, 235, 51-59.	1.7	3
15	Microstructural Characterization and Mechanical Properties of Iron Reinforcements in Buildings from the Medieval and Modern Periods in France. <i>International Journal of Architectural Heritage</i> , 2019, 13, 507-519.	3.1	6
16	Stabilization treatment of cultural heritage artefacts: In situ monitoring of marine iron objects dechlorinated in alkali solution. <i>Corrosion Science</i> , 2018, 132, 21-34.	6.6	20
17	Electrical properties of iron corrosion layers formed in anoxic environments at the nanometer scale. <i>Corrosion Science</i> , 2018, 137, 98-110.	6.6	26
18	Guard the Good Deposit™: Technology, Provenance and Dating of Bipyramidal Iron Semi-Products of the Durrenentzen Deposit (Haut-Rhin, France). <i>Archaeometry</i> , 2018, 60, 290-307.	1.3	10

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19	Multitechnique investigation of sulfur phases in the corrosion product layers of iron corroded in long-term anoxic conditions: From micrometer to nanometer scale. <i>Surface and Interface Analysis</i> , 2018, 50, 1036-1041.	1.8	0
20	Interfacial layers at a nanometre scale on iron corroded in carbonated anoxic environments. <i>RSC Advances</i> , 2017, 7, 20101-20115.	3.6	16
21	Material degradation foreseen in the very long term: the case of glasses and ferrous metals. <i>Npj Materials Degradation</i> , 2017, 1, .	5.8	8
22	Circulation of iron products in the North-Alpine area during the end of the first Iron Age (6th-5th c.). <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5</i> 108-124.	2.4	30
23	New Insights in the Long-Term Atmospheric Corrosion Mechanisms of Low Alloy Steel Reinforcements of Cultural Heritage Buildings. <i>Materials</i> , 2017, 10, 670.	2.9	8
24	Analyse technologique, Étude de provenance et datation par le radiocarbone du dépôt de demi-produits ferreux de Durrenentzen (Haut-Rhin, France): une vision renouvelée de l'économie du fer au premier Âge du Fer. <i>ArcheoSciences</i> , 2017, , 45-67.	0.1	2
25	Corrosion product transformations in alkaline baths under pressure and high temperature: The subcritical stabilisation of marine iron artefacts stored under atmospheric conditions. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2016, 67, 190-199.	1.5	7
26	Effect of natural and synthetic iron corrosion products on silicate glass alteration processes. <i>Geochimica Et Cosmochimica Acta</i> , 2016, 172, 287-305.	3.9	40
27	Nanoscale Aspects of Corrosion on Cultural Heritage Metals. , 2016, , 233-252.		0
28	From Archaeological Sites to Nanoscale: The Quest of Tailored Analytical Strategy and Modelling. , 2016, , 205-230.		2
29	Characterization of Slag Inclusions in Iron Objects. <i>Natural Science in Archaeology</i> , 2016, , 213-228.	1.7	5
30	The bridge of Dieulouard (Meurthe-et-Moselle, France): a fresh perspective on metal supply strategies in Carolingian economy. <i>ArcheoSciences</i> , 2016, , 149-161.	0.1	9
31	Cargoes of Iron Semi-products Recovered from Shipwrecks off the <sc>C</sc>armel Coast, <sc>l</sc>rael. <i>Archaeometry</i> , 2015, 57, 505-535.	1.3	11
32	Iron corrosion in archaeological context: Structural refinement of the ferrous hydroxychloride $\text{Fe}_2(\text{OH})_3\text{Cl}$. <i>Corrosion Science</i> , 2015, 100, 589-598.	6.6	27
33	Consolidation or initial design? Radiocarbon dating of ancient iron alloys sheds light on the reinforcements of French Gothic Cathedrals. <i>Journal of Archaeological Science</i> , 2015, 53, 190-201.	2.4	36
34	First Direct Dating for the Construction and Modification of the Baphuon Temple Mountain in Angkor, Cambodia. <i>PLoS ONE</i> , 2015, 10, e0141052.	2.5	26
35	Dernières avancées des études sur la production, la circulation et la datation des métaux ferreux archéologiques. <i>Les Nouvelles De L'archéologie</i> , 2015, , 28-34.	0.0	5
36	Archaeological analogues and corrosion prediction: from past to future. A review. <i>Corrosion Engineering Science and Technology</i> , 2014, 49, 567-576.	1.4	22

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37	XAS and XRD in situ characterisation of reduction and reoxidation processes of iron corrosion products involved in atmospheric corrosion. <i>Corrosion Science</i> , 2014, 78, 293-303.	6.6	49
38	Interfacial layer on archaeological mild steel corroded in carbonated anoxic environments studied with coupled micro and nano probes. <i>Corrosion Science</i> , 2014, 88, 23-35.	6.6	28
39	Iron reinforcements in Beauvais and Metz Cathedrals: from bloomery or finery? The use of logistic regression for differentiating smelting processes. <i>Journal of Archaeological Science</i> , 2014, 42, 315-333.	2.4	55
40	Influence of an aerated/anoxic transient phase on the long-term corrosion of iron. <i>Corrosion Science</i> , 2014, 86, 71-80.	6.6	7
41	The complex corrosion system of a medieval iron rebar from the Bourges Cathedral. Characterization and reactivity studies. <i>Corrosion Science</i> , 2013, 76, 361-372.	6.6	16
42	Investigation at the nanometre scale on the corrosion mechanisms of archaeological ferrous artefacts by STXM. <i>Journal of Analytical Atomic Spectrometry</i> , 2013, 28, 59-66.	3.0	59
43	Effect of iron metal and siderite on the durability of simulated archeological glassy material. <i>Corrosion Science</i> , 2013, 76, 403-414.	6.6	42
44	Silicate Glass Alteration Enhanced by Iron: Origin and Long-Term Implications. <i>Environmental Science & Technology</i> , 2013, 47, 750-756.	10.0	56
45	Long-term anoxic corrosion of iron. , 2013, , 260-284.		5
46	Corrosion and conservation of cultural heritage metallic artefacts. , 2013, , .		36
47	11. Les métaux ferreux archéologiques. , 2013, , 153-167.		0
48	An Analytical Methodology for the Study of the Corrosion of Ferrous Archaeological Remains in Soils. <i>Conservation and Management of Archaeological Sites</i> , 2012, 14, 16-27.	0.5	2
49	The medieval iron market in Ariège (France). Multidisciplinary analytical approach and multivariate analyses. <i>Journal of Archaeological Science</i> , 2012, 39, 1080-1093.	2.4	73
50	Chapter 14. Corrosion of Ferrous Archaeological and Cultural Heritage Artefacts. , 2012, , 399-425.		1
51	Investigation of iron long-term corrosion mechanisms in anoxic media using deuterium tracing. <i>Journal of Nuclear Materials</i> , 2012, 423, 61-66.	2.7	18
52	X-ray absorption spectroscopy study of the various forms of phosphorus in ancient iron samples. <i>Journal of Analytical Atomic Spectrometry</i> , 2011, 26, 885.	3.0	19
53	Use of the gold markers method to predict the mechanisms of iron atmospheric corrosion. <i>Corrosion Science</i> , 2011, 53, 2122-2130.	6.6	21
54	Localisation of oxygen reduction sites in the case of iron long term atmospheric corrosion. <i>Corrosion Science</i> , 2011, 53, 2468-2473.	6.6	25

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55	The use of natural and archeological analogues for understanding the long-term behavior of nuclear glasses. <i>Comptes Rendus - Geoscience</i> , 2011, 343, 237-245.	1.2	56
56	A study of the Roman iron bars of Saintes-Maries-de-la-Mer (Bouches-du-Rhône, France). A proposal for a comprehensive metallographic approach. <i>Journal of Archaeological Science</i> , 2011, 38, 1234-1252.	2.4	53
57	A methodology for Raman structural quantification imaging and its application to iron indoor atmospheric corrosion products. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 773-781.	2.5	53
58	Raman study of a deuterated iron hydroxycarbonate to assess long-term corrosion mechanisms in anoxic soils. <i>Journal of Raman Spectroscopy</i> , 2011, 42, 1100-1108.	2.5	45
59	Modelling the corrosion-induced cracking of reinforced concrete structures exposed to the atmosphere. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2011, 62, 943-947.	1.5	7
60	The long-term corrosion of mild steel in depassivated concrete: Localizing the oxygen reduction sites in corrosion products by isotopic tracer method. <i>Journal of Materials Research</i> , 2011, 26, 3107-3115.	2.6	7
61	Fluctuation of redox conditions in radioactive waste disposal cell: characterisation of corrosion layers formed on archaeological analogues. <i>Corrosion Engineering Science and Technology</i> , 2011, 46, 199-204.	1.4	11
62	X-rays absorption study on medieval corrosion layers for the understanding of very long-term indoor atmospheric iron corrosion. <i>Applied Physics A: Materials Science and Processing</i> , 2010, 99, 399-406.	2.3	21
63	Microbiologically influenced corrosion of archaeological artefacts: characterisation of iron(II) sulfides by Raman spectroscopy. <i>Journal of Raman Spectroscopy</i> , 2010, 41, 1425-1433.	2.5	78
64	A review of the archaeological analogue approaches to predict the long-term corrosion behaviour of carbon steel overpack and reinforced concrete structures in the French disposal systems. <i>Journal of Nuclear Materials</i> , 2010, 402, 196-205.	2.7	41
65	Corrosion of iron from heritage buildings: proposal for degradation indexes based on rust layer composition and electrochemical reactivity. <i>Corrosion Engineering Science and Technology</i> , 2010, 45, 375-380.	1.4	17
66	Influence of corrosion products nature on dechlorination treatment: case of wrought iron archaeological ingots stored 2 years in air before NaOH treatment. <i>Corrosion Engineering Science and Technology</i> , 2010, 45, 407-413.	1.4	17
67	<i>In situ</i> structural characterisation of nonstable phases involved in atmospheric corrosion of ferrous heritage artefacts. <i>Corrosion Engineering Science and Technology</i> , 2010, 45, 395-399.	1.4	5
68	Characterisation of corrosion layers formed on ferrous archaeological artefacts buried in anoxic media. <i>Corrosion Engineering Science and Technology</i> , 2010, 45, 381-387.	1.4	29
69	A corrosion study of the ferrous medieval reinforcement of the Amiens cathedral. Phase characterisation and localisation by various microprobes techniques. <i>Corrosion Science</i> , 2010, 52, 695-710.	6.6	81
70	The evolution of the corrosion of iron in hydraulic binders analysed from 46- and 260-year-old buildings. <i>Corrosion Science</i> , 2010, 52, 3168-3179.	6.6	89
71	Iron corrosion in an anoxic soil: Comparison between thermodynamic modelling and ferrous archaeological artefacts characterised along with the local <i>in situ</i> geochemical conditions. <i>Applied Geochemistry</i> , 2010, 25, 1937-1948.	3.0	56
72	Multiseccular corrosion behaviour of low carbon steel in anoxic soils: Characterisation of corrosion system on archaeological artefacts. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2009, 60, 99-105.	1.5	39

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73	Characterization of long-term corrosion of rebars embedded in concretes sampled on French historical buildings aged from 50 to 80 years. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2009, 60, 93-98.	1.5	30
74	Structural evidence for the desalination of akaganeite in the preservation of iron archaeological objects, using synchrotron X-ray powder diffraction and absorption spectroscopy. <i>Corrosion Science</i> , 2009, 51, 2795-2802.	6.6	48
75	Does it come from the Pays de Bray? Examination of an origin hypothesis for the ferrous reinforcements used in French medieval churches using major and trace element analyses. <i>Journal of Archaeological Science</i> , 2009, 36, 2445-2462.	2.4	56
76	A provenance study of iron archaeological artefacts by Inductively Coupled Plasma-Mass Spectrometry multi-elemental analysis. <i>Spectrochimica Acta, Part B: Atomic Spectroscopy</i> , 2008, 63, 1253-1262.	2.9	31
77	Study of archaeological artefacts to refine the model of iron long-term indoor atmospheric corrosion. <i>Journal of Nuclear Materials</i> , 2008, 379, 105-111.	2.7	30
78	Long-term corrosion of rebars embedded in aerial and hydraulic binders – Mechanisms and crucial physico-chemical parameters. <i>Corrosion Science</i> , 2008, 50, 2117-2123.	6.6	21
79	Long-term corrosion of rebars embedded in aerial and hydraulic binders – Parametric study and first step of modelling. <i>Corrosion Science</i> , 2008, 50, 3047-3055.	6.6	18
80	Species transport in the corrosion products of ferrous archaeological analogues: a contribution to the modelling of long-term iron corrosion mechanisms. , 2007, , 92-108.		5
81	Contribution of iron archaeological artefacts to the estimation of average corrosion rates and the long-term corrosion mechanisms of low-carbon steel buried in soil. , 2007, , 41-76.		10
82	Buried iron archaeological artefacts: Corrosion mechanisms related to the presence of Cl-containing phases. <i>Corrosion Science</i> , 2007, 49, 2726-2744.	6.6	108
83	Slag inclusion analyses for studying ferrous alloys employed in French medieval buildings: supply of materials and diffusion of smelting processes. <i>Journal of Archaeological Science</i> , 2007, 34, 1810-1823.	2.4	137
84	Deterioration of iron archaeological artefacts: micro-Raman investigation on Cl-containing corrosion products. <i>Journal of Raman Spectroscopy</i> , 2007, 38, 389-397.	2.5	68
85	Electrochemical study of indoor atmospheric corrosion layers formed on ancient iron artefacts. <i>Electrochimica Acta</i> , 2007, 52, 7754-7759.	5.2	64
86	Corrosion of iron archaeological artefacts in soil: Estimation of the average corrosion rates involving analytical techniques and thermodynamic calculations. <i>Corrosion Science</i> , 2006, 48, 2947-2970.	6.6	55
87	Investigation of Cl corrosion products of iron archaeological artefacts using micro-focused synchrotron X-ray absorption spectroscopy. <i>Applied Physics A: Materials Science and Processing</i> , 2006, 83, 189-193.	2.3	27
88	Raman imaging of ancient rust scales on archaeological iron artefacts for long-term atmospheric corrosion mechanisms study. <i>Journal of Raman Spectroscopy</i> , 2006, 37, 1228-1237.	2.5	191
89	Contribution of archaeological analogues to the comprehension of long term corrosion of concrete reinforcements. <i>European Physical Journal Special Topics</i> , 2006, 136, 295-304.	0.2	4
90	Local and structural characterisation of chlorinated phases formed on ferrous archaeological artefacts by μ XRD and μ XANES. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005, 240, 500-504.	1.4	31

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91	A study of transport phenomena in the corrosion products of ferrous archaeological artefacts using ¹⁸ O tracing and nuclear microprobe analysis. Nuclear Instruments & Methods in Physics Research B, 2005, 240, 554-558.	1.4	19
92	Corrosion of iron archaeological artefacts in soil: characterisation of the corrosion system. Corrosion Science, 2005, 47, 515-535.	6.6	244
93	Long-term corrosion resistance of metallic reinforcements in concrete—a study of corrosion mechanisms based on archaeological artefacts. Corrosion Science, 2005, 47, 1555-1581.	6.6	109
94	Structural characterization of corrosion products on archaeological iron: an integrated analytical approach to establish corrosion forms. Journal of Raman Spectroscopy, 2004, 35, 739-745.	2.5	162
95	Characterisation of iron archaeological analogues using micro diffraction under synchrotron radiation. Application to the study of long term corrosion behaviour of low alloy steels. European Physical Journal Special Topics, 2002, 12, 393-408.	0.2	17