

Laurent Marot

List of Publications by Year in descending order

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123
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186265

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123
all docs

123
docs citations

123
times ranked

3069
citing authors

#	ARTICLE	IF	CITATIONS
1	Suppression of electronic friction on Nb films in the superconducting state. <i>Nature Materials</i> , 2011, 10, 119-122.	27.5	137
2	Nanostructuring of molybdenum and tungsten surfaces by low-energy helium ions. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2012, 30, .	2.1	119
3	Quantum Hall Effect in Graphene with Superconducting Electrodes. <i>Nano Letters</i> , 2012, 12, 1942-1945.	9.1	99
4	Temperature-induced metal-semiconductor transition in W-doped VO ₂ films studied by photoelectron spectroscopy. <i>Solar Energy Materials and Solar Cells</i> , 2007, 91, 1831-1835.	6.2	94
5	Helium effects on tungsten under fusion-relevant plasma loading conditions. <i>Journal of Nuclear Materials</i> , 2013, 438, S78-S83.	2.7	89
6	ELM simulation experiments on Pilot-PSI using simultaneous high flux plasma and transient heat/particle source. <i>Nuclear Fusion</i> , 2011, 51, 073008.	3.5	82
7	Plasma-wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. <i>Nuclear Fusion</i> , 2017, 57, 116041.	3.5	75
8	Surface chemistry of rare-earth oxide surfaces at ambient conditions: reactions with water and hydrocarbons. <i>Scientific Reports</i> , 2017, 7, 43369.	3.3	66
9	An overview of the comprehensive First Mirror Test in JET with ITER-like wall. <i>Physica Scripta</i> , 2014, T159, 014011.	2.5	59
10	Rhodium coated mirrors deposited by magnetron sputtering for fusion applications. <i>Review of Scientific Instruments</i> , 2007, 78, 103507.	1.3	53
11	Valence band behaviour of zirconium oxide, Photoelectron and Auger spectroscopy study. <i>Scientific Reports</i> , 2018, 8, 16251.	3.3	53
12	Can aluminium or magnesium be a surrogate for beryllium: A critical investigation of their chemistry. <i>Fusion Engineering and Design</i> , 2013, 88, 1718-1721.	1.9	51
13	Characterization of magnetron sputtered rhodium films for reflective coatings. <i>Surface and Coatings Technology</i> , 2008, 202, 2837-2843.	4.8	50
14	Overview of the JET results. <i>Nuclear Fusion</i> , 2015, 55, 104001.	3.5	50
15	Towards plasma cleaning of ITER first mirrors. <i>Nuclear Fusion</i> , 2015, 55, 063020.	3.5	41
16	Diagnostic mirrors for ITER: research in the frame of International Tokamak Physics Activity. <i>Nuclear Fusion</i> , 2019, 59, 066029.	3.5	41
17	Nanostructuring of Iron Surfaces by Low-Energy Helium Ions. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 3462-3468.	8.0	40
18	Surface Modifications Induced by High Fluxes of Low Energy Helium Ions. <i>Scientific Reports</i> , 2015, 5, 9779.	3.3	39

#	ARTICLE	IF	CITATIONS
19	Morphological Changes of Tungsten Surfaces by Low-Flux Helium Plasma Treatment and Helium Incorporation via Magnetron Sputtering. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 11609-11616.	8.0	37
20	Plasma cleaning of ITER First Mirrors in magnetic field. <i>Journal of Nuclear Materials</i> , 2015, 463, 940-943.	2.7	36
21	The effect of low temperature deuterium plasma on molybdenum reflectivity. <i>Nuclear Fusion</i> , 2011, 51, 103025.	3.5	35
22	Nitrogen and neon retention in plasma-facing materials. <i>Journal of Nuclear Materials</i> , 2011, 415, S223-S226.	2.7	34
23	Cleaning of first mirrors in ITER by means of radio frequency discharges. <i>Review of Scientific Instruments</i> , 2016, 87, 11D439.	1.3	32
24	First mirror tests for ITER: Influence of material choice on the erosion/deposition mechanisms affecting optical reflectivity. <i>Journal of Nuclear Materials</i> , 2007, 363-365, 259-263.	2.7	31
25	Plasma-assisted catalytic formation of ammonia in N ₂ â€“H ₂ plasma on a tungsten surface. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 16623-16633.	2.8	31
26	Beryllium deposition on International Thermonuclear Experimental Reactor first mirrors: Layer morphology and influence on mirror reflectivity. <i>Journal of Applied Physics</i> , 2007, 102, 083302.	2.5	30
27	Pure hydrogen low-temperature plasma exposure of HOPG and graphene: Graphane formation?. <i>Beilstein Journal of Nanotechnology</i> , 2012, 3, 852-859.	2.8	30
28	Characterization of sub-stoichiometric rhodium oxide deposited by magnetron sputtering. <i>Surface Science</i> , 2008, 602, 3375-3380.	1.9	29
29	Plasma cleaning of ITER first mirrors. <i>Physica Scripta</i> , 2017, T170, 014047.	2.5	29
30	Development of in situ cleaning techniques for diagnostic mirrors in ITER. <i>Fusion Engineering and Design</i> , 2011, 86, 1780-1783.	1.9	28
31	Restoring the Electrical Properties of CVD Graphene via Physisorption of Molecular Adsorbates. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 25014-25022.	8.0	27
32	Friction properties of ta-C and a-C:H coatings under high vacuum. <i>Surface and Coatings Technology</i> , 2005, 200, 1976-1981.	4.8	26
33	Plasma impact on diagnostic mirrors in JET. <i>Nuclear Materials and Energy</i> , 2017, 12, 506-512.	1.3	25
34	Nanocrystalline Lowâ€“Refractive Magnesium Fluoride Films Deposited by Reactive Magnetron Sputtering: Optical and Structural Properties. <i>Advanced Engineering Materials</i> , 2015, 17, 1652-1659.	3.5	24
35	Plasma cleaning of beryllium coated mirrors. <i>Physica Scripta</i> , 2016, T167, 014069.	2.5	24
36	Spectroscopic reflectometry of mirror surfaces during plasma exposure. <i>Review of Scientific Instruments</i> , 2012, 83, 013509.	1.3	23

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37	Laser-assisted cleaning of beryllium-containing mirror samples from JET and PISCES-B. Fusion Engineering and Design, 2014, 89, 122-130.	1.9	23
38	Interactions of diamond surfaces with fusion relevant plasmas. Physica Scripta, 2009, T138, 014013.	2.5	22
39	Reflective metallic coatings for first mirrors on ITER. Fusion Engineering and Design, 2011, 86, 2593-2596.	1.9	22
40	Laser damage thresholds of ITER mirror materials and first results on in situ laser cleaning of stainless steel mirrors. Fusion Engineering and Design, 2013, 88, 388-399.	1.9	22
41	High temperature plasma based ionic implantation of titanium alloys and silicon. Surface and Coatings Technology, 2002, 156, 155-158.	4.8	21
42	Adhesion of rhodium films on metallic substrates. Thin Solid Films, 2008, 516, 7604-7608.	1.8	21
43	Overview of the recent DiMES and MiMES experiments in DIII-D. Physica Scripta, 2009, T138, 014007.	2.5	20
44	Overview of the second stage in the comprehensive mirrors test in JET. Physica Scripta, 2011, T145, 014070.	2.5	20
45	Spontaneous synthesis of carbon nanowalls, nanotubes and nanotips using high flux density plasmas. Carbon, 2014, 68, 695-707.	10.3	20
46	Decorating Nanostructured Surfaces with Antimicrobial Peptides to Efficiently Fight Bacteria. ACS Applied Bio Materials, 2020, 3, 1533-1543.	4.6	20
47	In situ evaluation of the reflectivity of molybdenum and rhodium coatings in an ITER-like mixed environment. Journal of Nuclear Materials, 2013, 438, S852-S855.	2.7	19
48	In situ cleaning of diagnostic first mirrors: an experimental comparison between plasma and laser cleaning in ITER-relevant conditions. Nuclear Fusion, 2017, 57, 046014.	3.5	19
49	Plasma cleaning of ITER edge Thomson scattering mock-up mirror in the EAST tokamak. Nuclear Fusion, 2018, 58, 026008.	3.5	19
50	Improved nitridation efficiency and mechanical property of stainless steel surface after N ₂ +H ₂ plasma nitridation at low temperature. Materials Letters, 2002, 56, 76-79.	2.6	18
51	Modeling the effect of reflection from metallic walls on spectroscopic measurements. Review of Scientific Instruments, 2008, 79, 10F527.	1.3	18
52	A new thermally assisted, plasma based, ionic implantation system of treatment and deposition.. Surface and Coatings Technology, 2001, 142-144, 384-387.	4.8	17
53	Achievements on Engineering and Manufacturing of ITER First-Mirror Mock-ups. IEEE Transactions on Plasma Science, 2012, 40, 692-696.	1.3	17
54	Investigation and plasma cleaning of first mirrors coated with relevant ITER contaminants: beryllium and tungsten. Nuclear Fusion, 2017, 57, 086019.	3.5	17

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55	Improved nitrogen transport in Fe-C alloys during NH ₃ plasma nitridation. Materials Letters, 2000, 44, 35-38.	2.6	16
56	Hydrogen-induced buckling of gold films. Journal Physics D: Applied Physics, 2014, 47, 025302.	2.8	16
57	Anisotropic etching of graphite and graphene in a remote hydrogen plasma. Npj 2D Materials and Applications, 2017, 1, .	7.9	16
58	RF discharge mirror cleaning system development for ITER diagnostics. Fusion Engineering and Design, 2021, 164, 112162.	1.9	16
59	Optical Coatings as Mirrors for Optical Diagnostics. Journal of Coating Science and Technology, 2016, 2, 72-78.	0.3	16
60	Deuterium as a cleaning gas for ITER first mirrors: experimental study on beryllium deposits from laboratory and JET-ILW. Nuclear Fusion, 2019, 59, 096027.	3.5	15
61	Rhodium and silicon system: II. Rhodium silicide formation. Nanotechnology, 2010, 21, 365707.	2.6	14
62	Performances of Rh and Mo mirrors under JET exposure. Journal of Nuclear Materials, 2013, 438, S1187-S1191.	2.7	14
63	Graphene Synthesis via Thermal Polymerization of Aromatic Quinone Molecules. ACS Nano, 2014, 8, 5932-5938.	14.6	14
64	Erosion yields of carbon under various plasma conditions in Pilot-PSI. Journal of Nuclear Materials, 2011, 415, S149-S152.	2.7	13
65	Plasma cleaning of steam ingressed ITER first mirrors. Nuclear Materials and Energy, 2019, 21, 100702.	1.3	13
66	Plasma-activated catalytic formation of ammonia from N ₂ -H ₂ : influence of temperature and noble gas addition. Nuclear Fusion, 2020, 60, 016026.	3.5	13
67	Infrared thermography in metallic environments of WEST and ASDEX Upgrade. Nuclear Materials and Energy, 2021, 26, 100879.	1.3	13
68	Reduced damage threshold for tungsten using combined steady state and transient sources. Journal of Nuclear Materials, 2013, 438, S784-S787.	2.7	12
69	Reorganization of graphite surfaces into carbon micro- and nanoparticles under high flux hydrogen plasma bombardment. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2013, 31, .	2.1	12
70	Morphological and stoichiometric optimization of Cu ₂ O thin films by deposition conditions and post-growth annealing. Thin Solid Films, 2021, 732, 138763.	1.8	12
71	Effect of a Nanostructured Titanium Surface on Gingival Cell Adhesion, Viability and Properties against P. gingivalis. Materials, 2021, 14, 7686.	2.9	12
72	Nitrogen-assisted removal of deuterated carbon layers. Journal of Nuclear Materials, 2009, 390-391, 647-650.	2.7	11

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73	Engineering and manufacturing of ITER first mirror mock-ups. Review of Scientific Instruments, 2010, 81, 10E108.	1.3	11
74	Roughening and reflection performance of molybdenum coatings exposed to a high-flux deuterium plasma. Nuclear Fusion, 2013, 53, 113013.	3.5	11
75	RF discharge mirror cleaning for ITER optical diagnostics using 60 MHz very high frequency. Fusion Engineering and Design, 2021, 163, 112140.	1.9	11
76	Chain-like structure elements in Ni40Ta60 metallic glasses observed by scanning tunneling microscopy. Scientific Reports, 2015, 5, 13143.	3.3	10
77	Quartz micro-balance and in situ XPS study of the adsorption and decomposition of ammonia on gold, tungsten, boron, beryllium and stainless steel surfaces. Nuclear Fusion, 2018, 58, 106012.	3.5	10
78	Plasma-Assisted Catalysis of Ammonia Using Tungsten at Low Pressures: A Parametric Study. ACS Applied Energy Materials, 2021, 4, 4385-4394.	5.1	10
79	Reactivity of rhodium during co-deposition of rhodium and carbon. Journal of Nuclear Materials, 2009, 390-391, 1135-1137.	2.7	9
80	The ITER Thomson scattering core LIDAR diagnostic. Journal of Instrumentation, 2012, 7, C03043-C03043.	1.2	9
81	Spectroscopic ellipsometry on Si/SiO ₂ /graphene tri-layer system exposed to downstream hydrogen plasma: Effects of hydrogenation and chemical sputtering. Applied Physics Letters, 2015, 106, .	3.3	9
82	Ion-Imprinted Nanofilms Based on Tannic Acid and Silver Nanoparticles for Sensing of Al(III). ACS Applied Nano Materials, 2021, 4, 5372-5382.	5.0	9
83	Decomposition studies of NH ₃ and ND ₃ in presence of H ₂ and D ₂ with Pt/Al ₂ O ₃ and Ru/Al ₂ O ₃ catalysts. International Journal of Hydrogen Energy, 2022, 47, 14130-14140.	7.1	9
84	Direct writing of microtunnels using proton beam micromachining. Applied Surface Science, 2006, 252, 7343-7346.	6.1	8
85	Rhodium and silicon system: I. Glassy metallic alloy formation. Nanotechnology, 2010, 21, 365706.	2.6	8
86	Understanding the formation of aligned, linear arrays of Ag nanoparticles. RSC Advances, 2016, 6, 28388-28392.	3.6	8
87	Bidirectional reflectance measurement of tungsten samples to assess reflection model in WEST tokamak. Review of Scientific Instruments, 2021, 92, 093501.	1.3	8
88	nc-VO ₂ /Al ₂ O ₃ nanocomposite films prepared by dual target magnetron sputtering. Thin Solid Films, 2008, 516, 8513-8516.	1.8	7
89	Co-deposition of rhodium and tungsten films for the first-mirror on ITER. Journal of Nuclear Materials, 2011, 415, S1203-S1205.	2.7	7
90	Deuterium plasma exposure on rhodium: Reflectivity monitoring and evidence of subsurface deuteride formation. Applied Surface Science, 2013, 273, 94-100.	6.1	7

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91	Hydrogen plasma microlithography of graphene supported on a Si/SiO ₂ substrate. Applied Physics Letters, 2013, 102, .	3.3	7
92	Work function of few layer graphene covered nickel thin films measured with Kelvin probe force microscopy. Applied Physics Letters, 2016, 108, .	3.3	7
93	Experimental and numerical characterization of a radio-frequency plasma source with a DC-grounded electrode configuration using a quarter-wavelength filter. Plasma Physics and Controlled Fusion, 2021, 63, 045005.	2.1	7
94	Characterization of hydrocarbon and mixed layers in TEXTOR by laser induced ablation spectroscopy. Physica Scripta, 2011, T145, 014026.	2.5	6
95	Assessment of cleaning methods for first mirrors tested in JET for ITER. Journal of Nuclear Materials, 2013, 438, S1241-S1244.	2.7	6
96	Imaging Challenges for ITER Plasma-Facing Component Protection. Fusion Science and Technology, 2013, 64, 735-740.	1.1	6
97	ITER perspective on fusion reactor diagnosticsâ€”A spectroscopic view. Journal of Instrumentation, 2016, 11, P08010-P08010.	1.2	6
98	The ITER VIS/IR wide angle viewing system: Challenges and on-going R&D. , 2011, , .		5
99	Active control over carbon deposition on diagnostic components and in remote areas of ITER. Journal of Nuclear Materials, 2011, 417, 830-833.	2.7	5
100	Nanocomposites of carbon nanotubes embedded in a (Ti,Al)N coated film. Surface and Coatings Technology, 2012, 212, 223-228.	4.8	5
101	Carbon nanotube growth on AlN support: Comparison between Ni and Fe chemical states and morphology. Chemical Physics Letters, 2014, 609, 82-87.	2.6	5
102	Deuterium plasma exposure of rhodium films: Role of morphology and crystal structure. Journal of Nuclear Materials, 2014, 446, 106-112.	2.7	5
103	PEG Brushes on Porous, PDMS-Coated Surfaces and Their Interaction with Carbon Dioxide. Macromolecular Chemistry and Physics, 2016, 217, 966-973.	2.2	5
104	Temperature effect on hydrocarbon deposition on molybdenum mirrors under ITER-relevant long-term plasma operation. Physica Scripta, 2009, 2009, 014067.	2.5	4
105	Picosecond and Nanosecond Laser Ablation of Mixed Tungsten/Aluminum Films. Fusion Science and Technology, 2014, 66, 308-314.	1.1	4
106	ITER first mirror mock-ups exposed in Magnum-PSI. Nuclear Fusion, 2016, 56, 066015.	3.5	4
107	Electrodeposition and Characterization of SiO _x Films Photoactive in Organic Solution. Journal of the Electrochemical Society, 2016, 163, D100-D106.	2.9	4
108	Novel Titanium Nanospire Structure Using Low-Energy Helium Ion Bombardment for the Transgingival Part of a Dental Implant. Nanomaterials, 2022, 12, 1065.	4.1	4

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109	Thermo-mechanical analysis of ITER first mirrors and its use for the ITER equatorial visible/infrared wide angle viewing system optical design. Review of Scientific Instruments, 2012, 83, 10E506.	1.3	3
110	Study of wall re-deposition on DC-grounded ITER-relevant mirrors with RF plasma in a first mirror unit. Nuclear Fusion, 0, , .	3.5	3
111	The role of tungsten chemical state and boron on ammonia formation using N2-H2 radiofrequency discharges. Nuclear Fusion, 0, , .	3.5	3
112	Deuterium plasma sputtering of mixed Be-W layers. Journal of Nuclear Materials, 2022, 564, 153671.	2.7	3
113	Synergistic effects of hydrogen plasma exposure, pulsed laser heating and temperature on rhodium surfaces. Journal of Nuclear Materials, 2013, 432, 388-394.	2.7	2
114	TCV mirrors cleaned by plasma. Nuclear Materials and Energy, 2017, 12, 605-610.	1.3	2
115	Spectroscopic characterization and photoactivity of SiO _x -based films electrochemically grown on Cu surfaces. Journal of Applied Electrochemistry, 2017, 47, 917-930.	2.9	2
116	Antibacterial effects of bio-inspired nanostructured materials. Journal of Oral Microbiology, 2017, 9, 1325241.	2.7	2
117	Nanostructuring of an alkali halide surface by low temperature plasma exposure. Physical Chemistry Chemical Physics, 2017, 19, 16251-16256.	2.8	2
118	Sputtering effects on mirrors made of different tungsten grades. Journal of Nuclear Materials, 2018, 500, 56-63.	2.7	2
119	Chemical and morphological characterization of photoactive SiO _x films electrodeposited on Pt substrate. Journal of Electroanalytical Chemistry, 2019, 832, 311-320.	3.8	1
120	Étude par diffraction des rayons X de la nitruration plasma d'un acier 304L à 1000°C. Influence sur l'oxydation à 1000°C. European Physical Journal Special Topics, 2002, 12, 215-222.	0.2	1
121	Reimann Brake Ramp for planar flow casting processes and analysis of ribbon gluing. Journal of Materials Research and Technology, 2022, 16, 734-742.	5.8	1
122	Achievements on engineering and manufacturing of ITER first mirrors mock-ups. , 2011, , .		0
123	Reducing the hydrogen content in liquid helium. Cryogenics, 2021, 114, 103239.	1.7	0