Corneliu Porosnicu

List of Publications by Year
in descending order

95 papers	1,312 citations	430874 18 h-index	414414 32 g-index
95 all docs	95 docs citations	95 times ranked	1614 citing authors

#	Article	IF	Citations
1	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
2	Plasmaâ€“wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. Nuclear Fusion, 2017, 57, 116041.	3.5	75
3	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. Nature Physics, 2017, 13, 973-978.	16.7	73
4	Efficiency of thermal outgassing for tritium retention measurement and removal in ITER. Nuclear Materials and Energy, 2017, 12, 267-272.	1.3	63
5	Enhanced properties of tungsten thin films deposited with a novel HiPIMS approach. Applied Surface Science, 2017, 424, 397-406.	6.1	52
6	Energy-enhanced deposition of copper thin films by bipolar high power impulse magnetron sputtering. Surface and Coatings Technology, 2019, 359, 97-107.	4.8	50
7	Beryllium melting and erosion on the upper dump plates in JET during three ITER-like wall campaigns. Nuclear Fusion, 2019, 59, 086009.	3.5	45
8	Ceramic materials Ba(1âˆ’x)SrxTiO3 for electronics â€” Synthesis and characterization. Thin Solid Films, 2008, 516, 8210-8214.	1.8	37
9	Plasmaâ€“wall interactions with nitrogen seeding in all-metal fusion devices: Formation of nitrides and ammonia. Fusion Engineering and Design, 2015, 98-99, 1371-1374.	1.9	33
10	Determination of deuterium depth profiles in fusion-relevant wall materials by nanosecond LIBS. Nuclear Materials and Energy, 2017, 12, 611-616.	1.3	33
11	Tungsten nitride coatings obtained by HiPIMS as plasma facing materials for fusion applications. Applied Surface Science, 2017, 416, 878-884.	6.1	31
12	Consequences of deuterium retention and release from Be-containing mixed materials for ITER Tritium Inventory Control. Journal of Nuclear Materials, 2011, 415, S731-S734.	2.7	29
13	Fuel inventory and deposition in castellated structures in JET-ILW. Nuclear Fusion, 2017, 57, 066027.	3.5	25
14	Structural and optical properties of optimized amorphous GeTe films for memory applications. Journal of Non-Crystalline Solids, 2018, 499, 1-7.	3.1	25
15	Development of laser-induced breakdown spectroscopy for analyzing deposited layers in ITER. Physica Scripta, 2014, T159, 014067.	2.5	21
16	Thermal and chemical stability of the Î²-W2N nitride phase. Nuclear Materials and Energy, 2017, 12, 462-467.	1.3	20
17	Identification of BeO and BeOxDy in melted zones of the JET Be limiter tiles: Raman study using comparison with laboratory samples. Nuclear Materials and Energy, 2018, 17, 295-301.	1.3	20
18	Simultaneous carbon and tungsten thin film deposition using two thermionic vacuum arcs. Thin Solid Films, 2011, 519, 4074-4077.	1.8	19

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19	Experience of handling beryllium, tritium and activated components from JET ITER like wall. Physica Scripta, 2016, T167, 014057.	2.5	18
20	Beryllium-tungsten study on mixed layers obtained by m-HiPIMS/DCMS techniques in a deuterium and nitrogen reactive gas mixture. Surface and Coatings Technology, 2017, 321, 397-402.	4.8	17
21	Investigation and plasma cleaning of first mirrors coated with relevant ITER contaminants: beryllium and tungsten. Nuclear Fusion, 2017, 57, 086019.	3.5	17
22	HiPIMS deposition of silicon nitride for solar cell application. Surface and Coatings Technology, 2018, 344, 197-203.	4.8	17
23	Adhesive force distributions for tungsten dust deposited on bulk tungsten and beryllium-coated tungsten surfaces. Nuclear Materials and Energy, 2018, 15, 55-63.	1.3	17
24	Influence of beryllium carbide formation on deuterium retention and release. Journal of Nuclear Materials, 2011, 415, S713-S716.	2.7	16
25	Study of deuterium retention in/release from ITER-relevant Be-containing mixed material layers implanted at elevated temperatures. Journal of Nuclear Materials, 2013, 438, S1113-S1116.	2.7	16
26	Temperature influence on deuterium retention for Beâ€“W mixed thin films prepared by Thermionic Vacuum Arc method exposed to PISCES B plasma. Journal of Nuclear Materials, 2015, 463, 983-988.	2.7	15
27	Investigation of deuterium retention in/desorption from beryllium-containing mixed layers. Nuclear Materials and Energy, 2016, 6, 1-9.	1.3	15
28	Laser-Induced Desorption of co-deposited Deuterium in Beryllium Layers on Tungsten. Nuclear Materials and Energy, 2019, 19, 503-509.	1.3	15
29	Quantification of H/D content in Be/W mixtures coatings by CF-LIBS. Physica Scripta, 2020, 2020, 014073.	2.5	15
30	Influence of the bias voltage on the formation of beryllium films by a thermionic vacuum arc method. Journal of Nuclear Materials, 2009, 385, 242-245.	2.7	14
31	The behavior of W, Be and C layers in interaction with plasma produced by terawatt laser beam pulses. Vacuum, 2014, 110, 207-212.	3.5	14
32	The 9Be(p,p0)9Be, 9Be(p,d0)8Be, and 9Be(p,Î±0)6Li cross-sections for analytical purposes. Nuclear Instruments & Methods in Physics Research B, 2015, 358, 72-81.	1.4	14
33	Raman microscopy investigation of beryllium materials. Physica Scripta, 2016, T167, 014027.	2.5	14
34	Influence of gaseous environments on berylliumâ€“tungsten and tungsten surfaces investigated by XPS. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	12
35	Effect of composition and surface characteristics on fuel retention in beryllium-containing co-deposited layers. Physica Scripta, 2020, T171, 014038.	2.5	12
36	Formation and delamination of beryllium carbide films. Journal of Nuclear Materials, 2013, 442, S320-S324.	2.7	11

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37	Combinatorial Feâ€“Co thin film magnetic structures obtained by thermionic vacuum arc method. Surface and Coatings Technology, 2014, 240, 344-352.	4.8	11
38	The Properties of Binary and Ternary Ti Based Coatings Produced by Thermionic Vacuum Arc (TVA) Technology. Coatings, 2018, 8, 114.	2.6	11
39	CF-LIBS quantification and depth profile analysis of Be coating mixed layers. Nuclear Materials and Energy, 2021, 27, 100990.	1.3	11
40	Efficiency of laser-induced desorption of D from Be/D layers and surface modifications due to LID. Physica Scripta, 2020, T171, 014075.	2.5	11
41	Interface characterization and atomic intermixing processes in Be/W bilayers deposited on Si(001) substrates with Fe buffer layers. Journal of Alloys and Compounds, 2012, 512, 199-206.	5.5	10
42	Preparing the future post-mortem analysis of beryllium-based JET and ITER samples by multi-wavelengths Raman spectroscopy on implanted Be, and co-deposited Be. Nuclear Fusion, 2017, 57, 076035.	3.5	10
43	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
44	Influence of thermal treatment on beryllium/carbon formation and fuel retention. Journal of Nuclear Materials, 2011, 416, 9-12.	2.7	9
45	Dependence of LIBS spectra on the surface composition and morphology of W/Al coatings. Fusion Engineering and Design, 2017, 121, 296-300.	1.9	9
46	Negative ion-induced deuterium retention in mixed W-Al layers co-deposited in dual-HiPIMS. Surface and Coatings Technology, 2019, 363, 273-281.	4.8	8
47	Characterization of tungsten films and their hydrogen permeability. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2014, 32, 061511.	2.1	7
48	Study of deuterium retention in Be-W coatings with distinct roughness profiles. Fusion Engineering and Design, 2017, 124, 464-467.	1.9	7
49	The influence of fusion-relevant D2-0.1He plasma on Be-W mixed-materials. Journal of Nuclear Materials, 2017, 484, 367-373.	2.7	7
50	Beryllium thin films deposited by thermionic vacuum arc for nuclear applications. Applied Surface Science, 2019, 481, 327-336.	6.1	7
51	Fuel retention and erosion-deposition on inner wall cladding tiles in JET-ILW. Physica Scripta, 2021, 96, 124071.	2.5	7
52	Surface morphology influence on deuterium retention in beryllium films prepared by thermionic vacuum arc method. Nuclear Instruments & Methods in Physics Research B, 2009, 267, 426-429.	1.4	6
53	Nanodiamond crystallites embedded in carbon films prepared by thermionic vacuum arc method. Diamond and Related Materials, 2011, 20, 1061-1064.	3.9	6
54	Silicon carbide multilayer protective coating on carbon obtained by thermionic vacuum arc method. Journal of Nanophotonics, 2014, 8, 083996.	1.0	6

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55	Hydrogen permeability through beryllium films and the impact of surface oxides. Journal of Nuclear Materials, 2013, 443, 185-194.	2.7	5
56	Periodic striations on beryllium and tungsten surfaces by indirect femtosecond laser irradiation. Applied Physics Letters, 2014, 104, 101604.	3.3	5
57	Interaction of nitrogen ions with beryllium surfaces. Nuclear Instruments & Methods in Physics Research B, 2014, 340, 34-38.	1.4	5
58	Structure, morphology and deuterium retention and release properties of pure and mixed Be and W layers. Journal Physics D: Applied Physics, 2020, 53, 325304.	2.8	5
59	Carbonâ€"Tungsten Thin-Film Deposition by a Dual Thermionic Vacuum Arc. IEEE Transactions on Plasma Science, 2012, 40, 3546-3551.	1.3	4
60	Laser irradiation of carbonâ€"tungsten materials. Journal Physics D: Applied Physics, 2014, 47, 355305.	2.8	4
61	The influence of nitrogen co-deposition in mixed layers on deuterium retention and thermal desorption. Journal of Nuclear Materials, 2015, 467, 472-479.	2.7	4
62	Stability of beryllium coatings deposited on carbon under annealing up to 1073 K. Fusion Engineering and Design, 2019, 146, 303-307.	1.9	4
63	Deuterium inventory determination in beryllium and mixed beryllium-carbon layers doped with oxygen. Fusion Engineering and Design, 2020, 150, 111365.	1.9	4
64	Hydrogen permeability of beryllium films prepared by the thermionic vacuum arc method. Fusion Engineering and Design, 2011, 86, 2421-2424.	1.9	3
65	Spatially resolved nanostructural transformation in graphite under femtosecond laser irradiation. Applied Surface Science, 2015, 355, 477-483.	6.1	3
66	Effects of annealing in Be/W and Be/C bilayers deposited on Si(0 0 1) substrates with Fe buffer layers. Journal of Nuclear Materials, 2015, 457, 220-226.	2.7	3
67	Carbonâ€"titanium nanostructures: synthesis and characterization. Physica Scripta, 2020, 95, 044012.	2.5	3
68	Deuterium Retention and Release Behavior from Beryllium Co-Deposited Layers at Distinct Ar/D Ratio. Coatings, 2021, 11, 1443.	2.6	3
69	Deuterium plasma sputtering of mixed Be-W layers. Journal of Nuclear Materials, 2022, 564, 153671.	2.7	3
70	Terawatt laser system irradiation of carbon/tungsten bilayers. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1732-1737.	1.8	2
71	The effect of the substrate temperature and the acceleration potential drop on the structural and physical properties of SiC thin films deposed by TVA method. , 2014, , .		2
72	Structural and electrical properties of N doped SiC nanostructures obtained by TVA method. , 2015, , .		2

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73	Be/W and W/Be bilayers deposited on Si substrates with hydrogenated Fe-Cr and Fe-Cr-Al interlayers for plasma facing components. Journal of Nuclear Materials, 2016, 481, 73-80.	2.7	2
74	Significant change of local atomic configurations at surface of reduced activation Eurofer steels induced by hydrogenation treatments. Applied Surface Science, 2017, 402, 114-119.	6.1	2
75	Influence of gaseous inclusions on aluminum-tungsten coatings investigated by XPS. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2017, 35, .	2.1	2
76	Analysis of retained deuterium on Be-based films: Ion implantation vs. in-situ loading. Nuclear Materials and Energy, 2018, 17, 242-247.	1.3	2
77	Structural, Compositional, and Mechanical Characterization of WxCryFe1â^'xâ^'y Layers Relevant to Nuclear Fusion, Obtained with TVA Technology. Materials, 2019, 12, 4072.	2.9	2
78	D retention and material defects probed using Raman microscopy in JET limiter samples and beryllium-based synthesized samples. Physica Scripta, 2021, 96, 124031.	2.5	2
79	Ion energy distribution analysis of the TVA plasma ignited in carbon vapours using RFA. Journal of Physics: Conference Series, 2010, 207, 012018.	0.4	1
80	Investigations of Buffer-Gases Role in Xenon and Halogen Excimer Mixtures. , 2010, , .		1
81	Electron microscopy characterization of some carbon based nanostructures with application in divertors coatings from fusion reactor. , 2011, , .		1
82	Application of carbon-aluminum nanostructures in divertor coatings from fusion reactor. , 2012, , .		1
83	SiC multi-layer protective coating on carbon obtained by thermionic vacuum arc method. Proceedings of SPIE, 2013, , .	0.8	1
84	Pulsed Electrical Discharges in Silicone Emulsion. Plasma Processes and Polymers, 2014, 11, 214-221.	3.0	1
85	DLC Thin Films and Carbon Nanocomposite Growth by Thermionic Vacuum Arc (TVA) Technology. , 2016, , .		1
86	Characterization of nitrogen doped silicon-carbon multi-layer nanostructures obtained by TVA method. Proceedings of SPIE, 2016, , .	0.8	1
87	Nitrogen doped silicon-carbon multilayer protective coatings on carbon obtained by thermionic vacuum arc (TVA) method. AIP Conference Proceedings, 2018, , .	0.4	1
88	Carbon-titanium multilayer films: Synthesis and characterization. AIP Conference Proceedings, 2018, , .	0.4	1
89	Nanostructured carbon-titanium multilayer films obtained by thermionic vacuum arc method. , 2018, , .		1
90	Deposition, Morphological, and Mechanical Evaluation of W and Be-Al2O3 and Er2O3 Co-Sputtered Films in Comparison with Pure Oxides. Coatings, 2021, 11, 1430.	2.6	1

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91	Deuterium Retention in Mixed Layers with Application in Fusion Technology. Coatings, 2022, 12, 951.	2.6	1
92	OH Production Enhancement in Bubbling Pulsed Discharges. , 2010, , .		0
93	Investigation of Composition-Propertiesâ€™ Relations on Silicon and Carbon Based Nanomaterials. Advanced Materials Research, 0, 816-817, 232-236.	0.3	0
94	Growth of mixed materials in the Be/W/O system in fusion devices. Microscopy and Microanalysis, 2015, 21, 94-95.	0.4	0
95	Nitrogen doped silicon-carbon multilayer protective coatings on carbon obtained by TVA method. , 2017, , .		0