

# Corneliu Porosnicu

## List of Publications by Year in descending order

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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	Deuterium plasma sputtering of mixed Be-W layers. <i>Journal of Nuclear Materials</i> , 2022, 564, 153671.	2.7	3
2	Deuterium Retention in Mixed Layers with Application in Fusion Technology. <i>Coatings</i> , 2022, 12, 951.	2.6	1
3	CF-LIBS quantification and depth profile analysis of Be coating mixed layers. <i>Nuclear Materials and Energy</i> , 2021, 27, 100990.	1.3	11
4	D retention and material defects probed using Raman microscopy in JET limiter samples and beryllium-based synthesized samples. <i>Physica Scripta</i> , 2021, 96, 124031.	2.5	2
5	Fuel retention and erosion-deposition on inner wall cladding tiles in JET-ILW. <i>Physica Scripta</i> , 2021, 96, 124071.	2.5	7
6	Deuterium Retention and Release Behavior from Beryllium Co-Deposited Layers at Distinct Ar/D Ratio. <i>Coatings</i> , 2021, 11, 1443.	2.6	3
7	Deposition, Morphological, and Mechanical Evaluation of W and Be-Al <sub>2</sub> O <sub>3</sub> and Er <sub>2</sub> O <sub>3</sub> Co-Sputtered Films in Comparison with Pure Oxides. <i>Coatings</i> , 2021, 11, 1430.	2.6	1
8	Deuterium inventory determination in beryllium and mixed beryllium-carbon layers doped with oxygen. <i>Fusion Engineering and Design</i> , 2020, 150, 111365.	1.9	4
9	Structure, morphology and deuterium retention and release properties of pure and mixed Be and W layers. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 325304.	2.8	5
10	Quantification of H/D content in Be/W mixtures coatings by CF-LIBS. <i>Physica Scripta</i> , 2020, 2020, 014073.	2.5	15
11	Effect of composition and surface characteristics on fuel retention in beryllium-containing co-deposited layers. <i>Physica Scripta</i> , 2020, T171, 014038.	2.5	12
12	Carbon-titanium nanostructures: synthesis and characterization. <i>Physica Scripta</i> , 2020, 95, 044012.	2.5	3
13	Efficiency of laser-induced desorption of D from Be/D layers and surface modifications due to LID. <i>Physica Scripta</i> , 2020, T171, 014075.	2.5	11
14	Beryllium melting and erosion on the upper dump plates in JET during three ITER-like wall campaigns. <i>Nuclear Fusion</i> , 2019, 59, 086009.	3.5	45
15	Laser-Induced Desorption of co-deposited Deuterium in Beryllium Layers on Tungsten. <i>Nuclear Materials and Energy</i> , 2019, 19, 503-509.	1.3	15
16	Beryllium thin films deposited by thermionic vacuum arc for nuclear applications. <i>Applied Surface Science</i> , 2019, 481, 327-336.	6.1	7
17	Stability of beryllium coatings deposited on carbon under annealing up to 1073 K. <i>Fusion Engineering and Design</i> , 2019, 146, 303-307.	1.9	4
18	Negative ion-induced deuterium retention in mixed W-Al layers co-deposited in dual-HiPIMS. <i>Surface and Coatings Technology</i> , 2019, 363, 273-281.	4.8	8

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19	Structural, Compositional, and Mechanical Characterization of W <sub>x</sub> CryFe <sub>1-x</sub> Layers Relevant to Nuclear Fusion, Obtained with TVA Technology. <i>Materials</i> , 2019, 12, 4072.	2.9	2
20	Energy-enhanced deposition of copper thin films by bipolar high power impulse magnetron sputtering. <i>Surface and Coatings Technology</i> , 2019, 359, 97-107.	4.8	50
21	Nitrogen doped silicon-carbon multilayer protective coatings on carbon obtained by thermionic vacuum arc (TVA) method. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	1
22	HiPIMS deposition of silicon nitride for solar cell application. <i>Surface and Coatings Technology</i> , 2018, 344, 197-203.	4.8	17
23	Identification of BeO and BeOxDy in melted zones of the JET Be limiter tiles: Raman study using comparison with laboratory samples. <i>Nuclear Materials and Energy</i> , 2018, 17, 295-301.	1.3	20
24	Analysis of retained deuterium on Be-based films: Ion implantation vs. in-situ loading. <i>Nuclear Materials and Energy</i> , 2018, 17, 242-247.	1.3	2
25	Carbon-titanium multilayer films: Synthesis and characterization. <i>AIP Conference Proceedings</i> , 2018, , .	0.4	1
26	Adhesive force distributions for tungsten dust deposited on bulk tungsten and beryllium-coated tungsten surfaces. <i>Nuclear Materials and Energy</i> , 2018, 15, 55-63.	1.3	17
27	Quartz micro-balance and in situ XPS study of the adsorption and decomposition of ammonia on gold, tungsten, boron, beryllium and stainless steel surfaces. <i>Nuclear Fusion</i> , 2018, 58, 106012.	3.5	10
28	Structural and optical properties of optimized amorphous GeTe films for memory applications. <i>Journal of Non-Crystalline Solids</i> , 2018, 499, 1-7.	3.1	25
29	The Properties of Binary and Ternary Ti Based Coatings Produced by Thermionic Vacuum Arc (TVA) Technology. <i>Coatings</i> , 2018, 8, 114.	2.6	11
30	Nanostructured carbon-titanium multilayer films obtained by thermionic vacuum arc method. , 2018, , .		1
31	Significant change of local atomic configurations at surface of reduced activation Eurofer steels induced by hydrogenation treatments. <i>Applied Surface Science</i> , 2017, 402, 114-119.	6.1	2
32	Influence of gaseous environments on beryllium-tungsten and tungsten surfaces investigated by XPS. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2017, 35, , .	2.1	12
33	Enhanced properties of tungsten thin films deposited with a novel HiPIMS approach. <i>Applied Surface Science</i> , 2017, 424, 397-406.	6.1	52
34	Thermal and chemical stability of the $\beta$ -W <sub>2</sub> N nitride phase. <i>Nuclear Materials and Energy</i> , 2017, 12, 462-467.	1.3	20
35	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. <i>Nuclear Fusion</i> , 2017, 57, 076035.	3.5	10
36	Tungsten nitride coatings obtained by HiPIMS as plasma facing materials for fusion applications. <i>Applied Surface Science</i> , 2017, 416, 878-884.	6.1	31

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37	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
38	Efficient generation of energetic ions in multi-ion plasmas by radio-frequency heating. Nature Physics, 2017, 13, 973-978.	16.7	73
39	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
40	Study of deuterium retention in Be-W coatings with distinct roughness profiles. Fusion Engineering and Design, 2017, 124, 464-467.	1.9	7
41	Efficiency of thermal outgassing for tritium retention measurement and removal in ITER. Nuclear Materials and Energy, 2017, 12, 267-272.	1.3	63
42	Fuel inventory and deposition in castellated structures in JET-ILW. Nuclear Fusion, 2017, 57, 066027.	3.5	25
43	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
44	Investigation and plasma cleaning of first mirrors coated with relevant ITER contaminants: beryllium and tungsten. Nuclear Fusion, 2017, 57, 086019.	3.5	17
45	Overview of the JET results in support to ITER. Nuclear Fusion, 2017, 57, 102001.	3.5	150
46	Determination of deuterium depth profiles in fusion-relevant wall materials by nanosecond LIBS. Nuclear Materials and Energy, 2017, 12, 611-616.	1.3	33
47	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
48	Plasma-wall interaction studies within the EUROfusion consortium: progress on plasma-facing components development and qualification. Nuclear Fusion, 2017, 57, 116041.	3.5	75
49	Nitrogen doped silicon-carbon multilayer protective coatings on carbon obtained by TVA method. , 2017, , .		0
50	DLC Thin Films and Carbon Nanocomposite Growth by Thermionic Vacuum Arc (TVA) Technology. , 2016, , .		1
51	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
52	Characterization of nitrogen doped silicon-carbon multi-layer nanostructures obtained by TVA method. Proceedings of SPIE, 2016, , .	0.8	1
53	Experience of handling beryllium, tritium and activated components from JET ITER like wall. Physica Scripta, 2016, T167, 014057.	2.5	18
54	Investigation of deuterium retention in/desorption from beryllium-containing mixed layers. Nuclear Materials and Energy, 2016, 6, 1-9.	1.3	15

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55	Raman microscopy investigation of beryllium materials. Physica Scripta, 2016, T167, 014027.	2.5	14
56	Growth of mixed materials in the Be/W/O system in fusion devices. Microscopy and Microanalysis, 2015, 21, 94-95.	0.4	0
57	Temperature influence on deuterium retention for Be-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
58	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
59	Spatially resolved nanostructural transformation in graphite under femtosecond laser irradiation. Applied Surface Science, 2015, 355, 477-483.	6.1	3
60	The $^9\text{Be}(p,p^0)^9\text{Be}$ , $^9\text{Be}(p,d^0)^8\text{Be}$ , and $^9\text{Be}(p,\hat{1}\pm 0)^6\text{Li}$ cross-sections for analytical purposes. Nuclear Instruments & Methods in Physics Research B, 2015, 358, 72-81.	1.4	14
61	Plasma-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
62	Structural and electrical properties of N doped SiC nanostructures obtained by TVA method. , 2015, , .		2
63	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
64	Development of laser-induced breakdown spectroscopy for analyzing deposited layers in ITER. Physica Scripta, 2014, T159, 014067.	2.5	21
65	The effect of the substrate temperature and the acceleration potential drop on the structural and physical properties of SiC thin films deposited by TVA method. , 2014, , .		2
66	Periodic striations on beryllium and tungsten surfaces by indirect femtosecond laser irradiation. Applied Physics Letters, 2014, 104, 101604.	3.3	5
67	Interaction of nitrogen ions with beryllium surfaces. Nuclear Instruments & Methods in Physics Research B, 2014, 340, 34-38.	1.4	5
68	Laser irradiation of carbon-tungsten materials. Journal Physics D: Applied Physics, 2014, 47, 355305.	2.8	4
69	Silicon carbide multilayer protective coating on carbon obtained by thermionic vacuum arc method. Journal of Nanophotonics, 2014, 8, 083996.	1.0	6
70	Combinatorial Fe-Co thin film magnetic structures obtained by thermionic vacuum arc method. Surface and Coatings Technology, 2014, 240, 344-352.	4.8	11
71	Pulsed Electrical Discharges in Silicone Emulsion. Plasma Processes and Polymers, 2014, 11, 214-221.	3.0	1
72	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

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73	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
74	Hydrogen permeability through beryllium films and the impact of surface oxides. Journal of Nuclear Materials, 2013, 443, 185-194.	2.7	5
75	Formation and delamination of beryllium carbide films. Journal of Nuclear Materials, 2013, 442, S320-S324.	2.7	11
76	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
77	SiC multi-layer protective coating on carbon obtained by thermionic vacuum arc method. Proceedings of SPIE, 2013, , .	0.8	1
78	Application of carbon-aluminum nanostructures in divertor coatings from fusion reactor. , 2012, , .		1
79	Carbonâ€“Tungsten Thin-Film Deposition by a Dual Thermionic Vacuum Arc. IEEE Transactions on Plasma Science, 2012, 40, 3546-3551.	1.3	4
80	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
81	Terawatt laser system irradiation of carbon/tungsten bilayers. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 1732-1737.	1.8	2
82	Nanodiamond crystallites embedded in carbon films prepared by thermionic vacuum arc method. Diamond and Related Materials, 2011, 20, 1061-1064.	3.9	6
83	Hydrogen permeability of beryllium films prepared by the thermionic vacuum arc method. Fusion Engineering and Design, 2011, 86, 2421-2424.	1.9	3
84	Electron microscopy characterization of some carbon based nanostructures with application in divertors coatings from fusion reactor. , 2011, , .		1
85	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
86	Influence of beryllium carbide formation on deuterium retention and release. Journal of Nuclear Materials, 2011, 415, S713-S716.	2.7	16
87	Influence of thermal treatment on beryllium/carbon formation and fuel retention. Journal of Nuclear Materials, 2011, 416, 9-12.	2.7	9
88	Simultaneous carbon and tungsten thin film deposition using two thermionic vacuum arcs. Thin Solid Films, 2011, 519, 4074-4077.	1.8	19
89	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
90	OH Production Enhancement in Bubbling Pulsed Discharges. , 2010, , .		0

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91	Investigations of Buffer-Gases Role in Xenon and Halogen Excimer Mixtures. , 2010, , .		1
92	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
93	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
94	Ceramic materials $Ba(1-x)Sr_xTiO_3$ for electronics " Synthesis and characterization. Thin Solid Films, 2008, 516, 8210-8214.	1.8	37
95	Investigation of Composition-Properties™ Relations on Silicon and Carbon Based Nanomaterials. Advanced Materials Research, 0, 816-817, 232-236.	0.3	0