

Pietro Alessandro Di Maio

List of Publications by Year in descending order

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papers

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docs citations

113
times ranked

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citing authors

#	ARTICLE	IF	CITATIONS
1	Recent progress in developing a feasible and integrated conceptual design of the WCLL BB in EUROfusion project. Fusion Engineering and Design, 2019, 146, 1805-1809.	1.9	126
2	WCLL breeding blanket design and integration for DEMO 2015: status and perspectives. Fusion Engineering and Design, 2017, 124, 682-686.	1.9	91
3	Advancements in DEMO WCLL breeding blanket design and integration. International Journal of Energy Research, 2018, 42, 27-52.	4.5	77
4	Status of ceramic breeder pebble bed thermo-mechanics R&D and impact on breeder material mechanical strength. Fusion Engineering and Design, 2012, 87, 1130-1137.	1.9	58
5	The DEMO Water-Cooled Lead-Lithium Breeding Blanket: Design Status at the End of the Pre-Conceptual Design Phase. Applied Sciences (Switzerland), 2021, 11, 11592.	2.5	54
6	Progress in EU Breeding Blanket design and integration. Fusion Engineering and Design, 2018, 136, 782-792.	1.9	50
7	Progress in the initial design activities for the European DEMO divertor: Subproject "Cassette". Fusion Engineering and Design, 2017, 124, 364-370.	1.9	49
8	Recent Progress in the WCLL Breeding Blanket Design for the DEMO Fusion Reactor. IEEE Transactions on Plasma Science, 2018, 46, 1446-1457.	1.3	49
9	Divertor of the European DEMO: Engineering and technologies for power exhaust. Fusion Engineering and Design, 2022, 175, 113010.	1.9	47
10	Progress of the conceptual design of the European DEMO breeding blanket, tritium extraction and coolant purification systems. Fusion Engineering and Design, 2020, 157, 111640.	1.9	46
11	Eurofusion-DEMO Divertor - Cassette Design and Integration. Fusion Engineering and Design, 2020, 157, 111656.	1.9	28
12	Tokamak cooling systems and power conversion system options. Fusion Engineering and Design, 2022, 178, 113093.	1.9	26
13	Optimization of the first wall for the DEMO water cooled lithium lead blanket. Fusion Engineering and Design, 2015, 98-99, 1206-1210.	1.9	25
14	On the thermo-mechanical behaviour of DEMO water-cooled lithium lead equatorial outboard blanket module. Fusion Engineering and Design, 2017, 124, 725-729.	1.9	24
15	Integrated design of breeding blanket and ancillary systems related to the use of helium or water as a coolant and impact on the overall plant design. Fusion Engineering and Design, 2021, 173, 112933.	1.9	23
16	Multi-Module vs. Single-Module concept: Comparison of thermomechanical performances for the DEMO Water-Cooled Lithium Lead breeding blanket. Fusion Engineering and Design, 2018, 136, 1472-1478.	1.9	21
17	Status of ITER TBM port plug conceptual design and analyses. Fusion Engineering and Design, 2014, 89, 1969-1974.	1.9	19
18	On the optimization of the first wall of the DEMO water-cooled lithium lead outboard breeding blanket equatorial module. Fusion Engineering and Design, 2016, 109-111, 335-341.	1.9	19

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19	Preliminary design of EU DEMO helium-cooled breeding blanket primary heat transfer system. Fusion Engineering and Design, 2018, 136, 1567-1571.	1.9	18
20	On the effect of stiffening plates configuration on the DEMO Water Cooled Lithium Lead Breeding Blanket module thermo-mechanical behaviour. Fusion Engineering and Design, 2019, 146, 2247-2250.	1.9	18
21	Structural analysis of the back supporting structure of the DEMO WCLL outboard blanket. Fusion Engineering and Design, 2017, 124, 944-947.	1.9	17
22	Assessment of the Thermo-mechanical Performances of a DEMO Water-Cooled Liquid Metal Blanket Module. Journal of Fusion Energy, 2015, 34, 277-292.	1.2	16
23	Numerical simulation of the transient thermal-hydraulic behaviour of the ITER blanket cooling system under the draining operational procedure. Fusion Engineering and Design, 2015, 98-99, 1664-1667.	1.9	16
24	Optimization of the breeder zone cooling tubes of the DEMO Water-Cooled Lithium Lead breeding blanket. Fusion Engineering and Design, 2016, 109-111, 227-231.	1.9	16
25	Progress in the benchmark exercise for analyzing the lithiate breeder pebble bed thermo-mechanical behaviour. Fusion Engineering and Design, 2006, 81, 169-174.	1.9	15
26	Thermal-mechanical and thermal-hydraulic integrated study of the Helium-Cooled Lithium Lead Test Blanket Module. Fusion Engineering and Design, 2010, 85, 1147-1153.	1.9	15
27	Analysis of the thermo-mechanical behaviour of the DEMO Water-Cooled Lithium Lead breeding blanket module under normal operation steady state conditions. Fusion Engineering and Design, 2015, 98-99, 1737-1740.	1.9	15
28	A constitutive model for the thermo-mechanical behaviour of fusion-relevant pebble beds and its application to the simulation of HELICA mock-up experimental results. Fusion Engineering and Design, 2007, 82, 2366-2374.	1.9	14
29	Analysis of the steady state hydraulic behaviour of the ITER blanket cooling system. Fusion Engineering and Design, 2015, 98-99, 1470-1473.	1.9	14
30	A multi-physics integrated approach to breeding blanket modelling and design. Fusion Engineering and Design, 2019, 143, 35-40.	1.9	13
31	Progress in the design development of EU DEMO helium-cooled pebble bed primary heat transfer system. Fusion Engineering and Design, 2019, 146, 2416-2420.	1.9	13
32	Investigation of the DEMO WCLL Breeding Blanket Cooling Water Activation. Fusion Engineering and Design, 2020, 157, 111697.	1.9	13
33	On the nuclear response of the helium-cooled lithium lead test blanket module in ITER. Fusion Engineering and Design, 2005, 75-79, 725-730.	1.9	12
34	On the influence of the supporting frame on the nuclear response of the Helium-Cooled Lithium Lead Test Blanket Module for ITER. Fusion Engineering and Design, 2006, 81, 677-686.	1.9	12
35	Analysis of steady state thermal-hydraulic behaviour of the DEMO divertor cassette body cooling circuit. Fusion Engineering and Design, 2017, 124, 437-441.	1.9	12
36	On the numerical assessment of the thermal-hydraulic operating map of the DEMO Divertor Plasma Facing Components cooling circuit. Fusion Engineering and Design, 2020, 161, 111919.	1.9	12

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37	Analysis of the Thermo-Mechanical Behaviour of the EU DEMO Water-Cooled Lithium Lead Central Outboard Blanket Segment under an Optimized Thermal Field. Applied Sciences (Switzerland), 2022, 12, 1356.	2.5	12
38	Steady state and transient thermal-hydraulic characterization of full-scale ITER divertor plasma facing components. Fusion Engineering and Design, 2008, 83, 1034-1037.	1.9	11
39	On the numerical assessment of the thermo-mechanical performances of the DEMO Helium-Cooled Pebble Bed breeding blanket module. Fusion Engineering and Design, 2014, 89, 1411-1416.	1.9	11
40	Conceptual design of the main Ancillary Systems of the ITER Water Cooled Lithium Lead Test Blanket System. Fusion Engineering and Design, 2021, 167, 112345.	1.9	11
41	On the hydraulic behaviour of ITER Shield Blocks #14 and #08. Computational analysis and comparison with experimental tests. Fusion Engineering and Design, 2016, 109-111, 30-36.	1.9	10
42	Thermal-hydraulic behaviour of the DEMO divertor plasma facing components cooling circuit. Fusion Engineering and Design, 2017, 124, 415-419.	1.9	10
43	On the thermal-hydraulic optimization of DEMO divertor plasma facing components cooling circuit. Fusion Engineering and Design, 2018, 136, 1438-1443.	1.9	10
44	The design of the DONES lithium target system. Fusion Engineering and Design, 2019, 146, 1135-1139.	1.9	10
45	Structural assessment of the EU-DEMO WCLL Central Outboard Blanket segment under normal and off-normal operating conditions. Fusion Engineering and Design, 2021, 167, 112350.	1.9	10
46	Experimental tests and thermo-mechanical analyses on the HEXCALIBER mock-up. Fusion Engineering and Design, 2008, 83, 1287-1293.	1.9	9
47	On the theoreticalâ€“numerical study of the ITER Upper Port Plug structure hydraulic behaviour under steady state and draining and drying transient conditions. Fusion Engineering and Design, 2011, 86, 2983-2998.	1.9	9
48	Thermal-hydraulic and thermo-mechanical simulations of Water-Heavy Liquid Metal interactions towards the DEMO WCLL breeding blanket design. Fusion Engineering and Design, 2019, 146, 2712-2716.	1.9	9
49	A study of the potential influence of frame coolant on HCLL-TBM nuclear response. Fusion Engineering and Design, 2007, 82, 2359-2365.	1.9	8
50	Study of the thermo-mechanical performances of the IFMIF-EVEDA Lithium Test Loop target assembly. Fusion Engineering and Design, 2012, 87, 822-827.	1.9	8
51	On the thermomechanical behavior of the European target assembly design of IFMIF-EVEDA lithium test loop under start-up transient scenarios. Fusion Engineering and Design, 2013, 88, 774-777.	1.9	8
52	Thermal optimization of the Helium-Cooled Lithium Lead breeding zone layout design regarding TBR enhancement. Fusion Engineering and Design, 2017, 124, 827-831.	1.9	8
53	Numerical assessment of the thermomechanical behaviour of the DEMO Water-Cooled Lithium Lead inboard blanket equatorial module. Fusion Engineering and Design, 2018, 136, 1178-1185.	1.9	8
54	Hydraulic analysis of EU-DEMO divertor plasma facing components cooling circuit under nominal operating scenarios. Fusion Engineering and Design, 2019, 146, 1764-1768.	1.9	8

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55	Assessment of DEMO WCLL breeding blanket primary heat transfer system isolation valve absorbed doses due to activated water. Fusion Engineering and Design, 2020, 160, 111999.	1.9	8
56	Thermal-hydraulic study of the DEMO divertor cassette body cooling circuit equipped with a liner and two reflector plates. Fusion Engineering and Design, 2021, 167, 112227.	1.9	8
57	Experimental tests on Li-ceramic breeders for the helium cooled pebble bed (HCPB) blanket design. Fusion Engineering and Design, 2003, 69, 233-240.	1.9	7
58	Computational thermofluid-dynamic analysis of DEMO divertor cassette body cooling circuit. Fusion Engineering and Design, 2018, 136, 1588-1592.	1.9	7
59	Thermal-hydraulic optimisation of the DEMO divertor cassette body cooling circuit equipped with a liner. Fusion Engineering and Design, 2019, 146, 220-223.	1.9	7
60	Conceptual design of the enhanced coolant purification systems for the European HCLL and HCPB test blanket modules. Fusion Engineering and Design, 2019, 146, 365-368.	1.9	7
61	Hydraulic assessment of an upgraded pipework arrangement for the DEMO divertor plasma facing components cooling circuit. Fusion Engineering and Design, 2021, 168, 112368.	1.9	7
62	Pre-conceptual design of EU-DEMO divertor primary heat transfer systems. Fusion Engineering and Design, 2021, 169, 112463.	1.9	7
63	On the effects of the supporting frame on the radiation-induced damage of HCLL-TBM structural material. Journal of Nuclear Materials, 2007, 367-370, 1344-1349.	2.7	6
64	Study of the helium-cooled lithium lead test blanket module nuclear behaviour under irradiation in ITER. Fusion Engineering and Design, 2009, 84, 2178-2186.	1.9	6
65	Hydraulic characterization of the full scale divertor cassette prototype. Fusion Engineering and Design, 2011, 86, 1673-1676.	1.9	6
66	Start-up and shutdown thermomechanical transient analyses of the IFMIF European lithium target system. Fusion Engineering and Design, 2014, 89, 1913-1922.	1.9	6
67	Analysis of the thermomechanical behavior of the IFMIF bayonet target assembly under design loading scenarios. Fusion Engineering and Design, 2015, 96-97, 217-221.	1.9	6
68	Draining and drying process development of the Tokamak Cooling Water System of ITER. Fusion Engineering and Design, 2016, 109-111, 272-277.	1.9	6
69	Design and manufacturing feasibility of ITER TBM Frame and Dummy TBMs. Fusion Engineering and Design, 2016, 109-111, 996-1000.	1.9	6
70	Parametric study of the influence of double-walled tubes layout on the DEMO WCLL breeding blanket thermal performances. Fusion Engineering and Design, 2020, 161, 111893.	1.9	6
71	Preliminary thermal-hydraulic analysis of the EU-DEMO Helium-Cooled Pebble Bed fusion reactor by using the RELAP5-3D system code. Fusion Engineering and Design, 2021, 162, 112111.	1.9	6
72	Development and application of an alternative modelling approach for the thermo-mechanical analysis of a DEMO water-cooled lithium lead breeding blanket segment. Fusion Engineering and Design, 2022, 180, 113195.	1.9	6

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73	Modelling of the thermal-mechanical behaviour of a single size beryllium pebble bed. Fusion Engineering and Design, 2001, 58-59, 635-640.	1.9	5
74	Neutronic and photonic analysis of the water-cooled Pb ²¹⁷ Li test blanket module for ITER-FEAT. Fusion Engineering and Design, 2002, 61-62, 439-447.	1.9	5
75	On the hyperporous non-linear elasticity model for fusion-relevant pebble beds. Fusion Engineering and Design, 2010, 85, 1234-1244.	1.9	5
76	Parametric study of the influence of First Wall cooling water on the Water Cooled Lithium Lead Breeding Blanket nuclear response. Fusion Engineering and Design, 2019, 146, 2070-2073.	1.9	5
77	Preliminary design of the top cap of DEMO Water-Cooled Lithium Lead breeding blanket segments. Fusion Engineering and Design, 2020, 161, 111884.	1.9	5
78	On the thermal-hydraulic performances of the DEMO divertor cassette body cooling circuit equipped with a liner. Fusion Engineering and Design, 2020, 156, 111613.	1.9	5
79	On the nuclear response of the water-cooled Pb ²¹⁷ Li test blanket module for ITER-FEAT. Fusion Engineering and Design, 2003, 69, 469-477.	1.9	4
80	On the theoretical and numerical study of the HEXCALIBER mock-up thermo-mechanical behaviour. Fusion Engineering and Design, 2010, 85, 694-706.	1.9	4
81	On thermo-mechanical issues induced by irradiation swelling inside the back-plate of the IFMIF target assembly. Fusion Engineering and Design, 2011, 86, 2597-2601.	1.9	4
82	Nuclear Analysis of an ITER Blanket Module. Journal of Fusion Energy, 2013, 32, 600-606.	1.2	4
83	Thermo-mechanical analysis of irradiation swelling and design optimization of the IFMIF target assembly with bayonet backplate. Fusion Engineering and Design, 2017, 123, 201-205.	1.9	4
84	Thermomechanical analysis supporting the preliminary engineering design of DONES target assembly. Fusion Engineering and Design, 2018, 136, 1332-1336.	1.9	4
85	Updated design and integration of the ancillary circuits for the European Test Blanket Systems. Fusion Engineering and Design, 2019, 146, 27-30.	1.9	4
86	Parametric thermal analysis for the optimization of Double Walled Tubes layout in the Water Cooled Lithium Lead inboard blanket of DEMO fusion reactor. Journal of Physics: Conference Series, 2019, 1224, 012031.	0.4	4
87	Structural verification and manufacturing procedures of the cooling system, for DEMO divertor target (OVT). Fusion Engineering and Design, 2019, 146, 1610-1614.	1.9	4
88	Further improvements in the structural analysis of DEMO Divertor Cassette body and design assessment according to RCC-MRx. Fusion Engineering and Design, 2019, 138, 119-124.	1.9	4
89	Validation of Multi-Physics Integrated Procedure for the HCPB Breeding Blanket. International Journal of Computational Methods, 2020, 17, 1950009.	1.3	4
90	Mixed MHD convection and Tritium transport in fusion-relevant configurations. Fusion Engineering and Design, 2005, 75-79, 697-702.	1.9	3

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91	A study of the potential influence of frame coolant distribution on the radiation-induced damage of HCLL-TBM structural material. <i>Fusion Engineering and Design</i> , 2008, 83, 1273-1276.	1.9	3
92	Design, manufacturing and testing of a fast disconnecting system for the European target assembly concept of IFMIF. , 2013, , .		3
93	Engineering design and steady state thermomechanical analysis of the IFMIF European lithium target system. , 2013, , .		3
94	On the effects of the Double-Walled Tubes lay-out on the DEMO WCLL breeding blanket module thermal behavior. <i>Fusion Engineering and Design</i> , 2019, 146, 883-886.	1.9	3
95	On the impact of the heat transfer modelling approach on the prediction of EU-DEMO WCLL breeding blanket thermal performances. <i>Fusion Engineering and Design</i> , 2020, 161, 112051.	1.9	3
96	Analytical and Numerical Assessment of Thermally Induced Pressure Waves in the IFMIF-DONES Liquid-Lithium Target. <i>IEEE Transactions on Plasma Science</i> , 2020, 48, 1485-1488.	1.3	3
97	Thermo-Mechanical Analysis and Design Update of the Top Cap Region of the DEMO Water-Cooled Lithium Lead Central Outboard Blanket Segment. <i>Applied Sciences (Switzerland)</i> , 2022, 12, 1564.	2.5	3
98	A Semi-Theoretical Approach to a Correlation for the Thermal Conductivity of a Beryllium Pebble Bed. <i>Heat Transfer Engineering</i> , 2003, 24, 38-46.	1.9	2
99	Assessment of the Possible Lay-Out Influence on the HCLL-TBM Nuclear Response. <i>Journal of Fusion Energy</i> , 2009, 28, 335-341.	1.2	2
100	On the Improved Current Pulse method for the thermal diffusive characterization of lithiated ceramic pebble beds. <i>Applied Thermal Engineering</i> , 2012, 49, 48-54.	6.0	2
101	On the adoption of the Monte Carlo method to solve one-dimensional steady state thermal diffusion problems for non-uniform solids. <i>Applied Mathematical Modelling</i> , 2013, 37, 9707-9721.	4.2	2
102	Safety analysis of the DONES primary heat removal system. <i>Fusion Engineering and Design</i> , 2020, 161, 112002.	1.9	2
103	Hydraulic Characterization of the Full Scale Mock-Up of the DEMO Divertor Outer Vertical Target. <i>Energies</i> , 2021, 14, 8086.	3.1	2
104	A computational procedure for the investigation of whipping effect on ITER High Energy Piping and its application to the ITER divertor primary heat transfer system. <i>Fusion Engineering and Design</i> , 2015, 98-99, 1625-1628.	1.9	1
105	First Flight Escape Probability and Uncollided Flux of Nuclear Particles in Convex Bodies with Spherical Symmetry. <i>Nuclear Science and Engineering</i> , 2016, 183, 52-64.	1.1	1
106	Structural assessment of a whole toroidal sector of the HELIAS 5-B breeding blanket. <i>Fusion Engineering and Design</i> , 2021, 169, 112618.	1.9	1
107	Multiphysics Optimization for First Wall Design Enhancement in Water-Cooled Breeding Blankets. <i>Nuclear Materials and Energy</i> , 2021, 29, 101058.	1.3	1
108	Production and transport modelling of Po-210 in DEMO reactor. <i>Nuclear Fusion</i> , 2022, 62, 056022.	3.5	1

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109	Electrical aging tests on enameled wire exposed to gamma irradiation. , 2011, , .		0
110	A neutron point kinetic model for fusion relevant calculations. Fusion Engineering and Design, 2012, 87, 503-508.	1.9	0
111	Development of a Two-Dimensional Simplified Tool for the Analysis of the Cooling of the ITER TF Winding Pack. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-4.	1.7	0
112	Assessment of Fatigue Effects Induced by Fast Beam Transients in the IFMIF-DONES Li Target. IEEE Transactions on Plasma Science, 2020, 48, 1496-1500.	1.3	0
113	Determination of a pre-heating sequence for the DONES Target Assembly. Fusion Engineering and Design, 2021, 168, 112394.	1.9	0