

Matteo Zuin

List of Publications by Year in descending order

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116
papers

2,590
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186265

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46
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all docs

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docs citations

117
times ranked

2056
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Self-organized helical equilibria as a new paradigm for ohmically heated fusion plasmas. <i>Nature Physics</i> , 2009, 5, 570-574. | 16.7 | 240 |
| 2 | Major results from the first plasma campaign of the Wendelstein 7-X stellarator. <i>Nuclear Fusion</i> , 2017, 57, 102020. | 3.5 | 128 |
| 3 | Disinfection of Ocular Cells and Tissues by Atmospheric-Pressure Cold Plasma. <i>PLoS ONE</i> , 2012, 7, e33245. | 2.5 | 97 |
| 4 | Active-Feedback Control of the Magnetic Boundary for Magnetohydrodynamic Stabilization of a Fusion Plasma. <i>Physical Review Letters</i> , 2006, 97, 075001. | 7.8 | 96 |
| 5 | Technical challenges in the construction of the steady-state stellarator Wendelstein 7-X. <i>Nuclear Fusion</i> , 2013, 53, 126001. | 3.5 | 77 |
| 6 | Antibacterial efficacy and mechanisms of action of low power atmospheric pressure cold plasma: membrane permeability, biofilm penetration and antimicrobial sensitization. <i>Journal of Applied Microbiology</i> , 2018, 125, 398-408. | 3.1 | 75 |
| 7 | Magnetic order and confinement improvement in high-current regimes of RFX-mod with MHD feedback control. <i>Nuclear Fusion</i> , 2009, 49, 085036. | 3.5 | 69 |
| 8 | Helium Generated Cold Plasma Finely Regulates Activation of Human Fibroblast-Like Primary Cells. <i>PLoS ONE</i> , 2014, 9, e104397. | 2.5 | 69 |
| 9 | Magnetic self organization, MHD active control and confinement in RFX-mod. <i>Plasma Physics and Controlled Fusion</i> , 2007, 49, B359-B369. | 2.1 | 60 |
| 10 | Latest investigations on fluctuations, ELM filaments and turbulent transport in the SOL of ASDEX Upgrade. <i>Nuclear Fusion</i> , 2011, 51, 073023. | 3.5 | 59 |
| 11 | A novel plasma source for sterilization of living tissues. <i>New Journal of Physics</i> , 2009, 11, 115014. | 2.9 | 53 |
| 12 | Overview of the TCV tokamak program: scientific progress and facility upgrades. <i>Nuclear Fusion</i> , 2017, 57, 102011. | 3.5 | 52 |
| 13 | First operations with caesium of the negative ion source SPIDER. <i>Nuclear Fusion</i> , 2022, 62, 086022. | 3.5 | 46 |
| 14 | High current regimes in RFX-mod. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124031. | 2.1 | 44 |
| 15 | On the road to ITER NBIs: SPIDER improvement after first operation and MITICA construction progress. <i>Fusion Engineering and Design</i> , 2021, 168, 112622. | 1.9 | 44 |
| 16 | Kink Instability in Applied-Field Magneto-Plasma-Dynamic Thrusters. <i>Physical Review Letters</i> , 2004, 92, 225003. | 7.8 | 43 |
| 17 | Helical equilibria and magnetic structures in the reversed field pinch and analogies to the tokamak and stellarator. <i>Plasma Physics and Controlled Fusion</i> , 2009, 51, 124031. | 2.1 | 43 |
| 18 | Overview of RFX-mod results. <i>Nuclear Fusion</i> , 2009, 49, 104019. | 3.5 | 43 |

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| 19 | Active MHD control at high currents in RFX-mod. Nuclear Fusion, 2007, 47, 783-791. | 3.5 | 39 |
| 20 | Topology and transport in the edge region of RFX-mod helical regimes. Nuclear Fusion, 2011, 51, 073002. | 3.5 | 38 |
| 21 | Electrostatic fluctuations in a direct current magnetron sputtering plasma. Physics of Plasmas, 2001, 8, 3042-3050. | 1.9 | 37 |
| 22 | Direct Measurement of Current Filament Structures in a Magnetic-Confinement Fusion Device. Physical Review Letters, 2009, 102, 165001. | 7.8 | 37 |
| 23 | A 3D approach to equilibrium, stability and transport studies in RFX-mod improved regimes. Plasma Physics and Controlled Fusion, 2010, 52, 124023. | 2.1 | 35 |
| 24 | Upgrades of the RFX-mod reversed field pinch and expected scenario improvements. Nuclear Fusion, 2019, 59, 076027. | 3.5 | 34 |
| 25 | Direct Observation of Current in Type-I Edge-Localized-Mode Filaments on the ASDEX Upgrade Tokamak. Physical Review Letters, 2011, 106, 125002. | 7.8 | 33 |
| 26 | RFX-mod: A multi-configuration fusion facility for three-dimensional physics studies. Physics of Plasmas, 2013, 20, . | 1.9 | 32 |
| 27 | Current sheets during spontaneous reconnection in a current-carrying fusion plasma. Plasma Physics and Controlled Fusion, 2009, 51, 035012. | 2.1 | 29 |
| 28 | Overview of the RFX fusion science program. Nuclear Fusion, 2011, 51, 094023. | 3.5 | 29 |
| 29 | Towards a plasma treatment of corneal infections. Clinical Plasma Medicine, 2013, 1, 17-24. | 3.2 | 27 |
| 30 | Overview of the RFX-mod fusion science activity. Nuclear Fusion, 2017, 57, 102012. | 3.5 | 27 |
| 31 | Internal and external electron transport barriers in the RFX-mod reversed field pinch. Nuclear Fusion, 2011, 51, 073038. | 3.5 | 26 |
| 32 | Analysis and modelling of the magnetic and plasma profiles during PPCD experiments in RFX. Nuclear Fusion, 2003, 43, 1057-1065. | 3.5 | 25 |
| 33 | Coherent structures and transport properties in magnetized plasmas. Plasma Physics and Controlled Fusion, 2007, 49, B267-B280. | 2.1 | 23 |
| 34 | Overview of progress in European medium sized tokamaks towards an integrated plasma-edge/wall solution ^a. Nuclear Fusion, 2017, 57, 102014. | 3.5 | 23 |
| 35 | Technological challenges for the design of the RFX-mod2 experiment. Fusion Engineering and Design, 2019, 146, 692-696. | 1.9 | 23 |
| 36 | Critical regimes and magnetohydrodynamic instabilities in a magneto-plasma-dynamic thruster. Physics of Plasmas, 2004, 11, 4761-4770. | 1.9 | 22 |

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| 37 | Experimental investigation of low-frequency waves propagating in a direct current planar magnetron plasma. <i>Physics of Plasmas</i> , 2004, 11, 1938-1946. | 1.9 | 22 |
| 38 | Improved confinement with internal electron transport barriers in RFX-mod. <i>Nuclear Fusion</i> , 2009, 49, 055009. | 3.5 | 22 |
| 39 | 3D effects on the RFX-mod boundary. <i>Nuclear Fusion</i> , 2013, 53, 073025. | 3.5 | 22 |
| 40 | Development of a set of movable electrostatic probes to characterize the plasma in the ITER neutral beam negative-ion source prototype. <i>Fusion Engineering and Design</i> , 2021, 169, 112424. | 1.9 | 22 |
| 41 | Experimental Observation of Microtearing Modes in a Toroidal Fusion Plasma. <i>Physical Review Letters</i> , 2013, 110, 055002. | 7.8 | 21 |
| 42 | Characterization of particle confinement properties in RFX-mod at a high plasma current. <i>Nuclear Fusion</i> , 2015, 55, 043010. | 3.5 | 21 |
| 43 | Atmospheric-Pressure Cold Plasma Induces Transcriptional Changes in Ex Vivo Human Corneas. <i>PLoS ONE</i> , 2015, 10, e0133173. | 2.5 | 21 |
| 44 | Drift-Alfvén vortex structures in the edge region of a fusion relevant plasma. <i>Nuclear Fusion</i> , 2010, 50, 042002. | 3.5 | 20 |
| 45 | Magnetic and electrostatic structures measured in the edge region of the RFX-mod experiment. <i>Journal of Nuclear Materials</i> , 2009, 390-391, 448-451. | 2.7 | 19 |
| 46 | Magnetic perturbations as a viable tool for edge turbulence modification. <i>Plasma Physics and Controlled Fusion</i> , 2015, 57, 014027. | 2.1 | 19 |
| 47 | Overview of the RFX-mod contribution to the international Fusion Science Program. <i>Nuclear Fusion</i> , 2015, 55, 104012. | 3.5 | 18 |
| 48 | Toroidally asymmetric particle transport caused by phase-locking of MHD modes in RFX-mod. <i>Nuclear Fusion</i> , 2007, 47, 1468-1475. | 3.5 | 17 |
| 49 | Transport mechanisms in the outer region of RFX-mod. <i>Nuclear Fusion</i> , 2009, 49, 045008. | 3.5 | 17 |
| 50 | 3D magnetic fields and plasma rotation in RFX-mod tokamak plasmas. <i>Nuclear Fusion</i> , 2013, 53, 113022. | 3.5 | 17 |
| 51 | Overview of the RFX-mod fusion science programme. <i>Nuclear Fusion</i> , 2013, 53, 104018. | 3.5 | 17 |
| 52 | Advances in understanding RFX-mod helical plasmas. <i>Nuclear Fusion</i> , 2013, 53, 073048. | 3.5 | 17 |
| 53 | Density limit studies in the tokamak and the reversed-field pinch. <i>Nuclear Fusion</i> , 2015, 55, 043007. | 3.5 | 17 |
| 54 | Wound healing improvement in large animals using an indirect helium plasma treatment. <i>Clinical Plasma Medicine</i> , 2020, 17-18, 100095. | 3.2 | 17 |

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| 55 | Electromagnetic turbulent structures: A ubiquitous feature of the edge region of toroidal plasma configurations. <i>Physics of Plasmas</i> , 2015, 22, 012310. | 1.9 | 16 |
| 56 | Observation of rotating magnetohydrodynamic modes in the plume of a high-current hollow cathode. <i>Journal of Applied Physics</i> , 2021, 129, . | 2.5 | 16 |
| 57 | Improvement of the magnetic configuration in the reversed field pinch through successive bifurcations. <i>Physics of Plasmas</i> , 2009, 16, . | 1.9 | 15 |
| 58 | The isotope effect in the RFX-mod experiment. <i>Nuclear Fusion</i> , 2015, 55, 043012. | 3.5 | 15 |
| 59 | Tearing modes transition from slow to fast rotation branch in the presence of magnetic feedback. <i>Nuclear Fusion</i> , 2014, 54, 122001. | 3.5 | 14 |
| 60 | Current filaments in turbulent magnetized plasmas. <i>Plasma Physics and Controlled Fusion</i> , 2009, 51, 124053. | 2.1 | 13 |
| 61 | Characterization of a plasma source for biomedical applications by electrical, optical, and chemical measurements. <i>Plasma Processes and Polymers</i> , 2018, 15, 1800105. | 3.0 | 13 |
| 62 | Design constraints on new vacuum components of RFX-mod2 upgrade using electrical modeling of reversed field pinch plasma. <i>Fusion Engineering and Design</i> , 2018, 136, 1209-1213. | 1.9 | 13 |
| 63 | Could cold plasma act synergistically with allogeneic mesenchymal stem cells to improve wound skin regeneration in a large size animal model?. <i>Research in Veterinary Science</i> , 2021, 136, 97-110. | 1.9 | 12 |
| 64 | Alfvén eigenmodes in the RFX-mod reversed-field pinch plasma. <i>Nuclear Fusion</i> , 2011, 51, 083038. | 3.5 | 11 |
| 65 | Transition from order to chaos, and density limit, in magnetized plasmas. <i>Chaos</i> , 2012, 22, 033124. | 2.5 | 11 |
| 66 | Runaway electron mitigation by applied magnetic perturbations in RFX-mod tokamak plasmas. <i>Nuclear Fusion</i> , 2017, 57, 016014. | 3.5 | 11 |
| 67 | Interaction between magnetic boundary and first wall recycling in the reversed field pinch. <i>Plasma Physics and Controlled Fusion</i> , 2013, 55, 124013. | 2.1 | 10 |
| 68 | H-mode achievement and edge features in RFX-mod tokamak operation. <i>Nuclear Fusion</i> , 2017, 57, 116039. | 3.5 | 10 |
| 69 | Turbulent filament properties in L and H-mode regime in the RFX-mod operating as a tokamak. <i>Nuclear Fusion</i> , 2020, 60, 126006. | 3.5 | 10 |
| 70 | MHD instabilities in magneto-plasma-dynamic thrusters. <i>Plasma Physics and Controlled Fusion</i> , 2008, 50, 124010. | 2.1 | 9 |
| 71 | Resistive g-modes in a reversed-field pinch plasma. <i>Nuclear Fusion</i> , 2010, 50, 052001. | 3.5 | 9 |
| 72 | Density limit experiments on FTU. <i>Nuclear Fusion</i> , 2013, 53, 083002. | 3.5 | 9 |

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| 73 | Chaoticity threshold in magnetized plasmas: Numerical results in the weak coupling regime. <i>Chaos</i> , 2014, 24, 013118. | 2.5 | 9 |
| 74 | A Probe Head for Simultaneous Measurements of Electrostatic and Magnetic Fluctuations in ASDEX Upgrade Edge Plasma. <i>Contributions To Plasma Physics</i> , 2010, 50, 860-865. | 1.1 | 8 |
| 75 | Studies of spatial uniformity of glow discharge cleaning plasmas on the RFX-mod device. <i>Journal of Nuclear Materials</i> , 2013, 438, S1164-S1167. | 2.7 | 8 |
| 76 | Comparative studies of electrostatic turbulence induced transport in presence of resonant magnetic perturbations in RFX-mod. <i>Nuclear Fusion</i> , 2015, 55, 113021. | 3.5 | 8 |
| 77 | 3D nonlinear MHD simulations of ultra-low-q plasmas. <i>Nuclear Fusion</i> , 2008, 48, 115010. | 3.5 | 7 |
| 78 | Characterization of electromagnetic fluctuations in a HiPIMS plasma. <i>Plasma Sources Science and Technology</i> , 2016, 25, 065016. | 3.1 | 7 |
| 79 | Edge plasma properties with 3D magnetic perturbations in RFX-mod. <i>Nuclear Fusion</i> , 2017, 57, 076033. | 3.5 | 7 |
| 80 | A continuously pulsed Reversed Field Pinch core for an ohmically heated hybrid reactor. <i>Fusion Engineering and Design</i> , 2018, 136, 1489-1493. | 1.9 | 7 |
| 81 | On the Electrical and Optical Features of the Plasma Coagulation Controller Low Temperature Atmospheric Plasma Jet. <i>Plasma</i> , 2019, 2, 156-167. | 1.8 | 7 |
| 82 | Turbulent electromagnetic filaments in actively modulated toroidal plasma edge. <i>Nuclear Fusion</i> , 2015, 55, 063041. | 3.5 | 6 |
| 83 | The phenomenology of reconnection events in the reversed field pinch. <i>Nuclear Fusion</i> , 2020, 60, 056023. | 3.5 | 6 |
| 84 | Kink instability suppression and improved efficiency in magneto-plasma-dynamic thrusters. <i>Applied Physics Letters</i> , 2006, 89, 041504. | 3.3 | 5 |
| 85 | Flow Measurements in the Edge Region of the RFX-Mod Experiment. <i>Contributions To Plasma Physics</i> , 2010, 50, 824-829. | 1.1 | 5 |
| 86 | Dependence of the density limit on the toroidal magnetic field on FTU. <i>Nuclear Fusion</i> , 2013, 53, 023007. | 3.5 | 5 |
| 87 | Electrostatic properties and active magnetic topology modification in the RFX-mod edge plasma. <i>Nuclear Fusion</i> , 2013, 53, 083026. | 3.5 | 5 |
| 88 | Characterization of a DC magnetron sputtering device. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2005, 24, 261-270. | 0.9 | 4 |
| 89 | Parallel and perpendicular flows in the RFX-mod edge region. <i>Journal of Nuclear Materials</i> , 2011, 415, S437-S442. | 2.7 | 4 |
| 90 | Spatiotemporal synchronization of drift waves in a magnetron sputtering plasma. <i>Physics of Plasmas</i> , 2014, 21, 102309. | 1.9 | 4 |

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| 91 | On the statistics and features of turbulent structures in RFX-mod. Plasma Physics and Controlled Fusion, 2016, 58, 044009. | 2.1 | 4 |
| 92 | Yaglom law for electrostatic turbulence in laboratory magnetized plasmas. Europhysics Letters, 2009, 86, 25001. | 2.0 | 3 |
| 93 | Laparoscopic versus open surgery for left flexure colon cancer: A propensity score matched analysis from an international cohort. Colorectal Disease, 2022, 24, 177-187. | 1.4 | 3 |
| 94 | Ion heating and energy balance during magnetic reconnection events in the RFX-mod experiment. Nuclear Fusion, 2022, 62, 026030. | 3.5 | 3 |
| 95 | Resistive MHD modes in hollow cathodes external plasma. Plasma Sources Science and Technology, 2022, 31, 015016. | 3.1 | 3 |
| 96 | Dynamics of Ultralow-q plasmas in the RFX-mod device. Nuclear Fusion, 0, , . | 3.5 | 3 |
| 97 | Alfvén waves in reversed-field pinch and tokamak ohmic plasmas: nonlinear 3D MHD modeling and comparison with RFX-mod. Nuclear Fusion, 2022, 62, 086019. | 3.5 | 3 |
| 98 | Helical flow in RFX-mod tokamak plasmas. Nuclear Fusion, 2017, 57, 056033. | 3.5 | 2 |
| 99 | Designing high efficiency glow discharge cleaning systems. Nuclear Materials and Energy, 2019, 19, 468-472. | 1.3 | 2 |
| 100 | Design of embedded electrostatic sensors for the RFX-mod2 device. Journal of Instrumentation, 2019, 14, C11014-C11014. | 1.2 | 2 |
| 101 | Ceramic coatings for arc prevention between plasma facing components. , 2021, , . | | 2 |
| 102 | Magnetic diagnostic of SOL-filaments generated by type I ELMs on JET and ASDEX Upgrade. Journal of Nuclear Materials, 2011, 415, S869-S872. | 2.7 | 1 |
| 103 | The radiofrequency magnetic dipole discharge. Physics of Plasmas, 2016, 23, 053511. | 1.9 | 1 |
| 104 | Analytical relation between peripheral and central density limit on FTU. Plasma Physics and Controlled Fusion, 2017, 59, 085011. | 2.1 | 1 |
| 105 | Magnetic Confinement Fusion Experimental Physics: Reversed Field Pinches. , 2021, , 524-553. | | 1 |
| 106 | The Helical Resonator: A Scheme for Radio Frequency Plasma Generation. Applied Sciences (Switzerland), 2021, 11, 7444. | 2.5 | 1 |
| 107 | Isoperistaltic Jejunal Loop Interposition after Total Gastrectomy for Gastric Cancer in Patients with Familial Adenomatous Polyposis. Journal of Gastric Cancer, 2020, 20, 225. | 2.5 | 1 |
| 108 | Pre-Breakdown Phenomena Between Vacuum Insulated Electrodes: The Role of Accumulation Points in the Onset of Microdischarges. IEEE Transactions on Plasma Science, 2022, 50, 2695-2699. | 1.3 | 1 |

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| 109 | Kink Instabilities in a Magnetoplasdynamic Thruster With and Without External Magnetic Field. , 2004, , . | | 0 |
| 110 | Further Experimental Evidences of the Development of Kink Instabilities in MPD Thrusters. , 2005, , . | | 0 |
| 111 | Perspectives in Ophthalmology. , 2018, , 421-430. | | 0 |
| 112 | Publisher's Note: "CRISP: A compact RF ion source prototype for emittance scanner testing" [Rev. Sci. Instrum. 91, 033314 (2020)]. Review of Scientific Instruments, 2020, 91, 069902. | 1.3 | 0 |
| 113 | CRISP: A compact RF ion source prototype for emittance scanner testing. Review of Scientific Instruments, 2020, 91, 033314. | 1.3 | 0 |
| 114 | 10.1063/5.0028566.1. , 2021, , . | | 0 |
| 115 | Electrode conditioning for the prevention of DC arc formation within a cold plasma. , 2021, , . | | 0 |
| 116 | Double Poloidal Field System With Superconducting and Conventional Copper Coils for Induced High Loop Voltage: A New Concept and a Feasibility Study for an RFP FFHR. IEEE Transactions on Plasma Science, 2022, , 1-7. | 1.3 | 0 |