

# Takumi Onchi

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1830884/publications.pdf>

Version: 2024-02-01

80  
papers

646  
citations

687363

13  
h-index

752698

20  
g-index

82  
all docs

82  
docs citations

82  
times ranked

378  
citing authors

#	ARTICLE	IF	CITATIONS
1	Fully non-inductive second harmonic electron cyclotron plasma ramp-up in the QUEST spherical tokamak. Nuclear Fusion, 2017, 57, 126045.	3.5	47
2	Characterization of Initial Low-Aspect Ratio RFP Plasmas in "RELAX". Journal of the Physical Society of Japan, 2007, 76, 123501.	1.6	46
3	Investigation of hydrogen recycling in long-duration discharges and its modification with a hot wall in the spherical tokamak QUEST. Nuclear Fusion, 2017, 57, 126061.	3.5	37
4	Tomography as a promising diagnostic tool for plasma turbulence. Plasma Physics and Controlled Fusion, 2016, 58, 025005.	2.1	26
5	Tangential soft-x ray imaging for three-dimensional structural studies in a reversed field pinch. Review of Scientific Instruments, 2010, 81, 073502.	1.3	22
6	Development of high power gyrotrons for advanced fusion devices. Nuclear Fusion, 2019, 59, 066009.	3.5	20
7	Electron heating of over-dense plasma with dual-frequency electron cyclotron waves in fully non-inductive plasma ramp-up on the QUEST spherical tokamak. Nuclear Fusion, 2020, 60, 016030.	3.5	20
8	MHD Properties of Low-aspect Ratio RFP in RELAX. Journal of Fusion Energy, 2009, 28, 187-190.	1.2	19
9	Non-inductive plasma current ramp-up through oblique injection of harmonic electron cyclotron waves on the QUEST spherical tokamak. Physics of Plasmas, 2021, 28, .	1.9	19
10	Extended operational regimes and MHD behavior in a low-aspect-ratio reversed field pinch in RELAX. Plasma Physics and Controlled Fusion, 2011, 53, 025003.	2.1	15
11	Particle balance in long duration RF driven plasmas on QUEST. Journal of Nuclear Materials, 2015, 463, 1084-1086.	2.7	15
12	Global gas balance and influence of atomic hydrogen irradiation on the wall inventory in steady-state operation of QUEST tokamak. Journal of Nuclear Materials, 2015, 463, 1087-1090.	2.7	15
13	Initial results from solenoid-free plasma start-up using Transient CHI on QUEST. Plasma Physics and Controlled Fusion, 2018, 60, 115001.	2.1	15
14	Effects of compact torus injection on toroidal flow in the STOR-M tokamak. Plasma Physics and Controlled Fusion, 2013, 55, 035003.	2.1	14
15	Self organization of high- $\beta_p$ plasma equilibrium with an inboard poloidal magnetic field null in QUEST. Nuclear Fusion, 2015, 55, 083009.	3.5	13
16	Observation of Large-Scale Profile Change of Magnetic Field in a Low-Aspect Ratio Reversed Field Pinch. Journal of the Physical Society of Japan, 2008, 77, 075005.	1.6	12
17	Quasi-Periodic Growth of a Single Helical Instability in a Low-Aspect Ratio RFP. Plasma and Fusion Research, 2008, 3, 029-029.	0.7	12
18	Current Start-Up Using the New CHI System. Plasma and Fusion Research, 2017, 12, 1202020-1202020.	0.7	11

#	ARTICLE	IF	CITATIONS
19	Particle balance investigation with the combination of the hydrogen barrier model and rate equations of hydrogen state in long duration discharges on an all-metal plasma facing wall in QUEST. Nuclear Fusion, 2019, 59, 076007.	3.5	11
20	28-GHz ECHCD system with beam focusing launcher on the QUEST spherical tokamak. Fusion Engineering and Design, 2019, 146, 1149-1152.	1.9	11
21	Equilibrium Reconstruction and Estimation of Neoclassical Effect in Low-Aspect-Ratio Reversed Field Pinch Experiments on RELAX. Journal of the Physical Society of Japan, 2009, 78, 013501.	1.6	11
22	Dynamical programming based turbulence velocimetry for fast visible imaging of tokamak plasma. Review of Scientific Instruments, 2015, 86, 033505.	1.3	10
23	Extension of Operation Region for Steady State Operation on QUEST by Integrated Control with Hot Walls. Plasma and Fusion Research, 2021, 16, 2402034-2402034.	0.7	9
24	Development Toward a Repetitive Compact Torus Injector. IEEE Transactions on Plasma Science, 2016, 44, 195-200.	1.3	8
25	Modification of plasma control system and hot-wall temperature control system for long-duration plasma sustainment in QUEST. Fusion Engineering and Design, 2018, 129, 202-206.	1.9	8
26	Research Plans for Low-Aspect Ratio Reversed Field Pinch. Fusion Science and Technology, 2007, 51, 197-199.	1.1	7
27	Phase Locking and Unlocking Associated with Transition to Quasi-Single Helicity State in the RELAX Reversed-Field Pinch. Journal of the Physical Society of Japan, 2012, 81, 115001.	1.6	7
28	A prototype diagnostics system to detect ultraviolet emission for plasma turbulence. Review of Scientific Instruments, 2014, 85, 113502.	1.3	7
29	Thermal imaging of plasma with a phased array antenna in QUEST. Review of Scientific Instruments, 2014, 85, 11E808.	1.3	7
30	Hydrogen flux measurements with permeation probes in spherical tokamak QUEST. Vacuum, 2016, 129, 178-182.	3.5	7
31	Spatial distribution of atomic and ion hydrogen flux and its effect on hydrogen recycling in long duration confined and non-confined plasmas. Nuclear Materials and Energy, 2017, 12, 627-632.	1.3	7
32	Observation of Helical Structure by Imaging Diagnostics in a Low-Aspect-Ratio Reversed Field Pinch. Journal of the Physical Society of Japan, 2011, 80, 114501.	1.6	7
33	Observation of Simple Helical Structure in Low Aspect Ratio RFP Using Fast Camera. Plasma and Fusion Research, 2008, 3, 005-005.	0.7	7
34	Density Regimes of Low-Aspect-Ratio RFP Plasmas in RELAX. Plasma and Fusion Research, 2010, 5, S2061-S2061.	0.7	7
35	Design and implementation of fast charging circuit for repetitive compact torus injector. Fusion Engineering and Design, 2014, 89, 2559-2565.	1.9	6
36	Effect of magnetic structure on RF-induced breakdown in QUEST. Physics of Plasmas, 2017, 24, 062513.	1.9	6

#	ARTICLE	IF	CITATIONS
37	Application of Soft X-Ray Imaging System to the STE-2 RFP. Plasma and Fusion Research, 2007, 2, S1063-S1063.	0.7	6
38	Design of Soft-X Ray Imaging System for Magnetic Islands of RFP Plasmas. Plasma and Fusion Research, 2007, 2, S1064-S1064.	0.7	6
39	Plasma current sustainment after iron core saturation in the STOR-M tokamak. Fusion Engineering and Design, 2014, 89, 2467-2471.	1.9	5
40	Analytical Solution of High $\beta_p$ Equilibria with Natural Inboard Poloidal Null Configuration Obtained in the Spherical Tokamak QUEST. Plasma and Fusion Research, 2014, 9, 3402093-3402093.	0.7	5
41	High voltage electrical system of 8.56 GHz CW klystron for electron cyclotron heating on QUEST spherical tokamak. Fusion Engineering and Design, 2019, 146, 2567-2570.	1.9	5
42	Estimation of fuel particle balance in steady state operation with hydrogen barrier model. Nuclear Materials and Energy, 2019, 19, 544-549.	1.3	5
43	Quasi-optical polarizer system for ECHCD experiments in the QUEST. Fusion Engineering and Design, 2019, 146, 1437-1440.	1.9	5
44	Modeling of solenoid-free start-up using 2nd harmonic electron cyclotron heating and current drive in QUEST. AIP Conference Proceedings, 2020, , .	0.4	5
45	Overview of coordinated spherical tokamak research in Japan. Nuclear Fusion, 2022, 62, 042011.	3.5	5
46	Tangential Image of Helical SXR Emissivity Structure in Low-Aspect-Ratio RFP. IEEE Transactions on Plasma Science, 2011, 39, 2410-2411.	1.3	4
47	Plasma confinement modification and convective transport suppression in the scrape-off layer using additional gas puffing in the STOR-M tokamak. Plasma Physics and Controlled Fusion, 2013, 55, 035004.	2.1	4
48	Heat flux and plasma flow in the far scrape-off layer of the inboard poloidal field null configuration in QUEST. Physics of Plasmas, 2015, 22, .	1.9	4
49	Origin and Evolution of Spontaneous Rotation in Plasma Under Different Magnetic Field Geometries in Tokamak QUEST. IEEE Transactions on Plasma Science, 2016, 44, 441-447.	1.3	4
50	Observation of second harmonic electron cyclotron resonance heating and current-drive transition during non-inductive plasma start-up experiment in QUEST. Plasma Physics and Controlled Fusion, 2021, 63, 105002.	2.1	4
51	Design and Initial Result of Time-Resolved Vertical Soft X-Ray Imaging System in Low- $\beta_p$ RFP. Plasma and Fusion Research, 2012, 7, 2402052-2402052.	0.7	4
52	Towards automated gas leak detection through cluster analysis of mass spectrometer data. Fusion Engineering and Design, 2022, 180, 113199.	1.9	4
53	Response of the far scrape-off layer plasma to strong gas puffing in the high poloidal beta configuration of the QUEST spherical tokamak. Plasma Physics and Controlled Fusion, 2016, 58, 115004.	2.1	3
54	Permutation entropy and statistical complexity in characterising low-aspect-ratio reversed-field pinch plasma. Physica Scripta, 2017, 92, 055601.	2.5	3

#	ARTICLE	IF	CITATIONS
55	Spectroscopic Measurements of Impurity Ion Toroidal and Poloidal Flow Velocities and Their Dependence on Vertical Magnetic Field in QUEST Toroidal ECR Plasmas. Plasma and Fusion Research, 2018, 13, 3402087-3402087.	0.7	3
56	HFS Injection of X-Mode for EBW Conversion in QUEST. Plasma and Fusion Research, 2019, 14, 1205038-1205038.	0.7	3
57	Toroidal flow measurements of impurity ions in QUEST ECH plasmas using multiple viewing chords emission spectroscopy. Nuclear Materials and Energy, 2021, 26, 100905.	1.3	3
58	Overview of recent progress on steady state operation of all-metal plasma facing wall device QUEST. Nuclear Materials and Energy, 2021, 27, 101013.	1.3	3
59	Initial Result of Successive SXR Imaging Measurement in Low-A RFP. Plasma and Fusion Research, 2011, 6, 2406096-2406096.	0.7	3
60	Asymmetric toroidal flux generation due to phase locking of internally resonant tearing modes in the RELAX reversed-field pinch. Plasma Physics and Controlled Fusion, 2013, 55, 015005.	2.1	2
61	Adaptive-array Electron Cyclotron Emission diagnostics using data streaming in a Software Defined Radio system. Journal of Instrumentation, 2016, 11, C04010-C04010.	1.2	2
62	Multiple wall-reflection effect in adaptive-array differential-phase reflectometry on QUEST. Journal of Instrumentation, 2016, 11, C01014-C01014.	1.2	2
63	Comparative studies of inner and outer divertor discharges and a fueling study in QUEST. Fusion Engineering and Design, 2016, 109-111, 1365-1370.	1.9	2
64	Effect of magnetic shear on edge turbulence in SOL-like open field line configuration in QUEST. Plasma Physics and Controlled Fusion, 2018, 60, 085014.	2.1	2
65	Spectroscopic Measurement of Hydrogen Atom Density in a Plasma Produced with 28 GHz ECH in QUEST. Atoms, 2020, 8, 44.	1.6	2
66	Quaternion Analysis of a Direct Matrix Converter Based on Space-Vector Modulation. Plasma and Fusion Research, 2021, 16, 2405037-2405037.	0.7	2
67	Initial Results from High-Field-Side Transient CHI Start-Up on QUEST. Plasma and Fusion Research, 2021, 16, 2402048-2402048.	0.7	2
68	Designing an upgrade of ohmic heating system for the QUEST spherical tokamak. Fusion Engineering and Design, 2021, 168, 112362.	1.9	2
69	Parametric Decay Wave Observation in HFS X-Mode Injection in QUEST. Plasma and Fusion Research, 2020, 15, 2402063-2402063.	0.7	2
70	Observation of heat flux and plasma flow in scrape off layer in QUEST. Journal of Nuclear Materials, 2015, 463, 428-431.	2.7	1
71	Electron Bernstein wave conversion of high-field side injected X-modes in QUEST. Plasma Physics and Controlled Fusion, 2020, 62, 035018.	2.1	1
72	Investigation of radial distribution of atomic hydrogen flux to the plasma facing components in steady state discharges in QUEST tokamak. Nuclear Materials and Energy, 2021, 26, 100872.	1.3	1

#	ARTICLE	IF	CITATIONS
73	MHD Equilibrium Reconstruction Using the Visible Light Tomographic Method with Laplacian Eigenfunction. Plasma and Fusion Research, 2021, 16, 2402090-2402090.	0.7	1
74	Fast Tangentially Viewed Soft X-Ray Imaging System Based on Image Intensifier with Microchannel Plate Detector on QUEST. Plasma and Fusion Research, 2019, 14, 1402128-1402128.	0.7	1
75	Measurement of Dynamic Retention with Fast Ejecting System of Targeted Sample (FESTA). Plasma and Fusion Research, 2020, 15, 2402013-2402013.	0.7	1
76	Quaternion Analysis of Transient Phenomena in Matrix Converter Based on Space-Vector Modulation. Plasma and Fusion Research, 2022, 17, 2405025-2405025.	0.7	1
77	Observation of an edge coherent mode and poloidal flow in the electron cyclotron wave induced high $I_p$ plasma in QUEST. Physics of Plasmas, 2016, 23, 082507.	1.9	0
78	Plasma equilibrium based on EC-driven current profile with toroidal rotation on QUEST. Fusion Engineering and Design, 2019, 146, 2628-2631.	1.9	0
79	Prototype of a Quasi-Optical Launcher System of a 4 mm Round-Trip Interferometer for the QUEST Spherical Tokamak Experiments. Plasma and Fusion Research, 2019, 14, 3402122-3402122.	0.7	0
80	Prototype Phased-Array Patch Loop Antennae for Electron Cyclotron Emission Diagnostics. Plasma and Fusion Research, 2019, 14, 3402111-3402111.	0.7	0