Colin M Roach

List of Publications by Year
in descending order

41 papers	1,270 citations	331670 21 h-index	345221 36 g-index
41 all docs	41 docs citations	41 times ranked	778 citing authors

#	Article	IF	Citations
1	Kinetic Instabilities that Limit<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>in the Edge of a Tokamak Plasma: A Picture of an<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>H</mml:mi></mml:math>-Mode Pedestal. Physical Review Letters, 2012, 108, 135002.	7.8	116
2	Micro-tearing modes in the mega ampere spherical tokamak. Plasma Physics and Controlled Fusion, 2007, 49, 1113-1128.	2.1	89
3	Gyrokinetic simulations of spherical tokamaks. Plasma Physics and Controlled Fusion, 2009, 51, 124020.	2.1	84
4	Transport and confinement in the Mega AmpÃ¨re Spherical Tokamak (MAST) plasma. Plasma Physics and Controlled Fusion, 2003, 45, A175-A204.	2.1	77
5	Towards the construction of a model to describe the inter-ELM evolution of the pedestal on MAST. Plasma Physics and Controlled Fusion, 2011, 53, 115010.	2.1	72
6	Turbulent Transport in Tokamak Plasmas with Rotational Shear. Physical Review Letters, 2011, 106, 175004.	7.8	69
7	Transport Bifurcation in a Rotating Tokamak Plasma. Physical Review Letters, 2010, 105, 215003.	7.8	55
8	Microtearing modes at the top of the pedestal. Plasma Physics and Controlled Fusion, 2013, 55, 074006.	2.1	53
9	Microstability physics as illuminated in the spherical tokamak. Plasma Physics and Controlled Fusion, 2005, 47, B323-B336.	2.1	50
10	Trapped particle precession in advanced tokamaks. Plasma Physics and Controlled Fusion, 1995, 37, 679-698.	2.1	43
11	Microstability in a â€œMAST-likeâ€• high confinement mode spherical tokamak equilibrium. Physics of Plasmas, 2004, 11, 5085-5094.	1.9	42
12	Toroidal and slab ETG instability dominance in the linear spectrum of JET-ILW pedestals. Nuclear Fusion, 2020, 60, 126045.	3.5	40
13	H-Mode Operation in the START Spherical Tokamak. Physical Review Letters, 2000, 84, 495-498.	7.8	39
14	Collisionality scaling of the electron heat flux in ETG turbulence. Plasma Physics and Controlled Fusion, 2017, 59, 055002.	2.1	33
15	Transition to subcritical turbulence in a tokamak plasma. Journal of Plasma Physics, 2016, 82, .	2.1	32
16	Comparison of BES measurements of ion-scale turbulence with direct gyro-kinetic simulations of MAST L-mode plasmas. Plasma Physics and Controlled Fusion, 2014, 56, 025012.	2.1	31
17	Intermediate-<i>k</i> density and magnetic field fluctuations during inter-ELM pedestal evolution in MAST. Plasma Physics and Controlled Fusion, 2016, 58, 014020.	2.1	31
18	Zero-Turbulence Manifold in a Toroidal Plasma. Physical Review Letters, 2012, 109, 265001.	7.8	28

#	Article	IF	Citations
19	Microstability analysis of pellet fuelled discharges in MAST. Plasma Physics and Controlled Fusion, 2014, 56, 035004.	2.1	26
20	Electron temperature gradient driven transport in a MAST H-mode plasma. Plasma Physics and Controlled Fusion, 2006, 48, 685-697.	2.1	24
21	Role of the separatrix density in the pedestal performance in deuterium low triangularity JET-ILW plasmas and comparison with JET-C. Nuclear Fusion, 2021, 61, 126054.	3.5	24
22	Ion-scale turbulence in MAST: anomalous transport, subcritical transitions, and comparison to BES measurements. Plasma Physics and Controlled Fusion, 2017, 59, 114003.	2.1	21
23	Analysis of pressure profiles and transport simulations of MAST discharges. Plasma Physics and Controlled Fusion, 2007, 49, 1477-1496.	2.1	20
24	The role of ETG modes in JETâ€"ILW pedestals with varying levels of power and fuelling. Nuclear Fusion, 2022, 62, 086028.	3.5	20
25	Charge dependence of neoclassical and turbulent transport of light impurities on MAST. Plasma Physics and Controlled Fusion, 2015, 57, 095001.	2.1	14
26	Thermal confinement and transport in spherical tokamaks: a review. Plasma Physics and Controlled Fusion, 2021, 63, 123001.	2.1	14
27	Linear gyrokinetic stability of a high Î² non-inductive spherical tokamak. Nuclear Fusion, 2022, 62, 016009.	3.5	14
28	The impact of fuelling and W radiation on the performance of high-power, ITER-baseline scenario plasmas in JET-ILW. Plasma Physics and Controlled Fusion, 2021, 63, 095013.	2.1	13
29	Enhanced performance in the START tokamak. Plasma Physics and Controlled Fusion, 1998, 40, 615-620.	2.1	12
30	Modelling ohmic confinement experiments on the START tokamak. Plasma Physics and Controlled Fusion, 1996, 38, 2187-2203.	2.1	10
31	The dependence of exhaust power components on edge gradients in JET-C and JET-ILW H-mode plasmas. Plasma Physics and Controlled Fusion, 2020, 62, 055010.	2.1	10
32	Effects of impurities on electron temperature gradient modes. Plasma Physics and Controlled Fusion, 2008, 50, 115002.	2.1	9
33	Global gyrokinetic turbulence simulations of MAST plasmas. Plasma Physics and Controlled Fusion, 2012, 54, 085012.	2.1	8
34	Canonical profiles and transport model for the toroidal rotation in tokamaks. Plasma Physics and Controlled Fusion, 2011, 53, 085025.	2.1	7
35	A scale-separated approach for studying coupled ion and electron scale turbulence. Plasma Physics and Controlled Fusion, 2019, 61, 065025.	2.1	7
36	A new quasilinear saturation rule for tokamak turbulence with application to the isotope scaling of transport. Nuclear Fusion, 2022, 62, 096005.	3.5	7

#	Article	IF	Citations
37	Three-dimensional inhomogeneity of electron-temperature-gradient turbulence in the edge of tokamak plasmas. Nuclear Fusion, 2022, 62, 086045.	3.5	7
38	Application of canonical profiles transport model to the H-mode shots in tokamaks. Plasma Physics Reports, 2010, 36, 645-658.	0.9	6
39	Towards understanding reactor relevant tokamak pedestals. Nuclear Fusion, 0, , .	3.5	6
40	Stabilisation of short-wavelength instabilities by parallel-to-the-field shear in long-wavelength <i>E</i> Ã— <i>B</i> flows. Journal of Plasma Physics, 2020, 86, .	2.1	4
41	A one-dimensional tearing mode equation for pedestal stability studies in tokamaks. Journal of Plasma Physics, 2018, 84, .	2.1	3