Neal Crocker

List of Publications by Year
in descending order

54 papers	1,275 citations	361296 20 h-index	360920 35 g-index
54 all docs	54 docs citations	54 times ranked	1062 citing authors

#	Article	IF	Citations
1	New methodology for measuring electron density perturbations caused by plasma coherent modes using profile reflectometry: Magnitudes and radial profiles in DIII-D. Review of Scientific Instruments, 2021, 92, 043550.	0.6	1
2	Stabilization of AlfvÃ©n Eigenmodes in DIII-D via Controlled Energetic Ion Density Ramp and Validation of Theory and Simulations. Physical Review Letters, 2021, 126, 155001.	2.9	10
3	Stability of beta-induced AlfvÃ©n eigenmodes (BAE) in DIII-D. Nuclear Fusion, 2021, 61, 066031.	1.6	15
4	Multiscale Chirping Modes Driven by Thermal Ions in a Plasma with Reactor-Relevant Ion Temperature. Physical Review Letters, 2021, 127, 025001.	2.9	8
5	Isotope dependence of beta-induced AlfvÃ©n eigenmode (BAE) and low frequency mode (LFM) stability in DIII-D. Nuclear Fusion, 2021, 61, 106021.	1.6	6
6	Analytic stability boundaries for compressional and global AlfvÃ©n eigenmodes driven by fast ions. II. Interaction via Landau resonance. Physics of Plasmas, 2020, 27, 022512.	0.7	5
7	Analytic stability boundaries for compressional and global AlfvÃ©n eigenmodes driven by fast ions. I. Interaction via ordinary and anomalous cyclotron resonances. Physics of Plasmas, 2020, 27, 022513.	0.7	10
8	Numerical simulations of global AlfvÃ©n eigenmodes excitation and stabilization in NSTX-U. Physics of Plasmas, 2019, 26, .	0.7	15
9	Density perturbation mode structure of high frequency compressional and global AlfvÃ©n eigenmodes in the National Spherical Torus Experiment using a novel reflectometer analysis technique. Nuclear Fusion, 2018, 58, 016051.	1.6	12
10	First step toward a synthetic diagnostic for magnetic fluctuation measurements using cross-polarization scattering on DIII-D. Review of Scientific Instruments, 2018, 89, 10H113.	0.6	3
11	Global AlfvÃ©n eigenmode scaling and suppression: experiment and theory. Nuclear Fusion, 2018, 58, 082022.	1.6	9
12	Nonlinear simulations of beam-driven compressional AlfvÃ©n eigenmodes in NSTX. Physics of Plasmas, 2017, 24, .	0.7	22
13	Evaluation of low-frequency operational limit of proposed ITER low-field-side reflectometer waveguide run including miter bends. Review of Scientific Instruments, 2017, 88, 103508.	0.6	6
14	Suppression of AlfvÃ©n Modes on the National Spherical Torus Experiment Upgrade with Outboard Beam Injection. Physical Review Letters, 2017, 118, 265001.	2.9	31
15	Non-perturbative measurement of cross-field thermal diffusivity reduction at the O-point of 2/1 neoclassical tearing mode islands in the DIII-D tokamak. Physics of Plasmas, 2016, 23, .	0.7	46
16	Measurement of local, internal magnetic fluctuations via cross-polarization scattering in the DIII-D tokamak (invited). Review of Scientific Instruments, 2016, 87, 11E601.	0.6	11
17	Mitigation of AlfvÃ©nic activity by 3D magnetic perturbations on NSTX. Plasma Physics and Controlled Fusion, 2016, 58, 085003.	0.9	23
18	Simultaneous measurement of magnetic and density fluctuations via cross-polarization scattering and Doppler backscattering on the DIII-D tokamak. Review of Scientific Instruments, 2016, 87, 11E726.	0.6	11

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19	Intermediate-k density and magnetic field fluctuations during inter-ELM pedestal evolution in MAST. Plasma Physics and Controlled Fusion, 2016, 58, 014020.	0.9	31
20	Coupling of Neutral-Beam-Driven Compressional AlfvÃ©n Eigenmodes to Kinetic AlfvÃ©n Waves in NSTX Tokamak and Energy Channeling. Physical Review Letters, 2015, 115, 015001.	2.9	36
21	Hybrid simulation of toroidal AlfvÃ©n eigenmode on the National Spherical Torus Experiment. Physics of Plasmas, 2015, 22, 042509.	0.7	13
22	Development of a cross-polarization scattering system for the measurement of internal magnetic fluctuations in the DIII-D tokamak. Review of Scientific Instruments, 2014, 85, 11D838.	0.6	12
23	Growth and decay of runaway electrons above the critical electric field under quiescent conditions. Physics of Plasmas, 2014, 21, 022514.	0.7	60
24	Non-linear modulation of short wavelength compressional AlfvÃ©n eigenmodes. Physics of Plasmas, 2013, 20, 042112.	0.7	18
25	A sensitivity assessment of millimeter-wave polarimetry for measurement of magnetic fluctuations associated with microtearing modes in NSTX-U. Plasma Physics and Controlled Fusion, 2013, 55, 045011.	0.9	4
26	Experimental validation of Mueller-Stokes theory and investigation of the influence of the Cotton-Mouton effect on polarimetry in a magnetized fusion plasma. Physics of Plasmas, 2013, 20, 102519.	0.7	2
27	Comparison of Measurement and Modeling of Current Profile Changes due to Neutral Beam Ion Redistribution during TAE Avalanches in NSTX. Plasma and Fusion Research, 2013, 8, 2402119-2402119.	0.3	1
28	Simulation of microtearing turbulence in national spherical torus experiment. Physics of Plasmas, 2012, 19, 056119.	0.7	53
29	Design of a millimeter-wave polarimeter for NSTX-Upgrade and initial test on DIII-D. Review of Scientific Instruments, 2012, 83, 10E321.	0.6	6
30	High spatial sampling global mode structure measurements via multichannel reflectometry in NSTX. Plasma Physics and Controlled Fusion, 2011, 53, 105001.	0.9	48
31	Effects of toroidal rotation shear on toroidicity-induced AlfvÃ©n eigenmodes in the National Spherical Torus Experiment. Physics of Plasmas, 2010, 17, 122501.	0.7	17
32	A Ka-band tunable direct-conversion correlation reflectometer for NSTX. Review of Scientific Instruments, 2010, 81, 10D917.	0.6	1
33	Interaction between Faraday rotation and Cottonâ€“Mouton effects in polarimetry modeling for NSTX. Review of Scientific Instruments, 2010, 81, 10D519.	0.6	9
34	Three-wave interactions between fast-ion driven modes in the National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, .	0.7	7
35	Experimental studies on fast-ion transport by AlfvÃ©n wave avalanches on the National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, .	0.7	56
36	Beta-induced AlfvÃ©n-acoustic eigenmodes in National Spherical Torus Experiment and DIII-D driven by beam ions. Physics of Plasmas, 2009, 16, .	0.7	75

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37	Modeling fast-ion transport during toroidal AlfvÃ©n eigenmode avalanches in National Spherical Torus Experiment. Physics of Plasmas, 2009, 16, 122505.	0.7	59
38	REVIEW OF THE NATIONAL SPHERICAL TORUS EXPERIMENT RESEARCH RESULTS. , 2009, , .		0
39	AlfvÃ©n cascade modes at high Î² in the National Spherical Torus Experiment. Physics of Plasmas, 2008, 15, .	0.7	20
40	Predictions and observations of global beta-induced AlfvÃ©nâ€"acoustic modes in JET and NSTX. Plasma Physics and Controlled Fusion, 2007, 49, B371-B383.	0.9	57
41	Î² suppression of AlfvÃ©n cascade modes in the National Spherical Torus Experiment. Physics of Plasmas, 2007, 14, .	0.7	41
42	Collective fast ion instability-induced losses in National Spherical Tokamak Experiment. Physics of Plasmas, 2006, 13, 056109.	0.7	89
43	Ultrafast millimeter-wave frequency-modulated continuous-wave reflectometry for NSTX. Review of Scientific Instruments, 2006, 77, 10E926.	0.6	14
44	Three-Wave Interactions between Fast-Ion Modes in the National Spherical Torus Experiment. Physical Review Letters, 2006, 97, 045002.	2.9	41
45	On the transition to drift turbulence in a magnetized plasma column. Physics of Plasmas, 2005, 12, 052320.	0.7	110
46	High-resolution dual-polarization frequency modulated reflectometer density profile measurements on DIII-D. Review of Scientific Instruments, 2004, 75, 3800-3803.	0.6	20
47	Measurement of the Current Sheet during Magnetic Reconnection in a Toroidal Plasma. Physical Review Letters, 2003, 90, 035003.	2.9	26
48	Initial Report On The Transition to Turbulence in a Magnetized Plasma Column. AIP Conference Proceedings, 2003, , .	0.3	3
49	Plasma flow in MST: Effects of edge biasing and momentum transport from nonlinear magnetic torques. European Physical Journal D, 2000, 50, 1471-1476.	0.4	5
50	Modifications to the edge current profile with auxiliary edge current drive and improved confinement in a reversed-field pinch. Physics of Plasmas, 2000, 7, 3491-3494.	0.7	20
51	Enhanced Confinement with Plasma Biasing in the MST Reversed Field Pinch. Physical Review Letters, 1997, 79, 1865-1868.	2.9	42
52	Signal analysis of fluctuations in toroidal fusion plasmas. Review of Scientific Instruments, 1993, 64, 2428-2433.	0.6	6
53	Recent results from the ATF torsatron. Physics of Fluids B, 1991, 3, 2261-2269.	1.7	19
54	Novel internal measurements of ion cyclotron frequency range fast-ion driven modes. Nuclear Fusion, 0, , .	1.6	10