

# Carl R Sovinec

## List of Publications by Year in descending order

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36  
papers

661  
citations

471509

17  
h-index

580821

25  
g-index

38  
all docs

38  
docs citations

38  
times ranked

628  
citing authors

#	ARTICLE	IF	CITATIONS
1	Formation and sustainment of electrostatically driven spheromaks in the resistive magnetohydrodynamic model. <i>Physics of Plasmas</i> , 2001, 8, 475-490.	1.9	71
2	Computational modeling of fully ionized magnetized plasmas using the fluid approximation. <i>Physics of Plasmas</i> , 2006, 13, 058103.	1.9	48
3	Edge localized linear ideal magnetohydrodynamic instability studies in an extended-magnetohydrodynamic code. <i>Physics of Plasmas</i> , 2010, 17, 032103.	1.9	42
4	Lower-hybrid poloidal current drive for fluctuation reduction in a reversed field pinch. <i>Physics of Plasmas</i> , 1994, 1, 3517-3519.	1.9	37
5	Moment approach to deriving parallel heat flow for general collisionality. <i>Physics of Plasmas</i> , 2009, 16, 022312.	1.9	29
6	Simulation of spheromak evolution and energy confinement. <i>Physics of Plasmas</i> , 2005, 12, 056106.	1.9	26
7	Dynamics of the major disruption of a DIII-D plasma. <i>Physics of Plasmas</i> , 2005, 12, 056113.	1.9	25
8	Magnetic reconnection with asymmetry in the outflow direction. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	24
9	Magnetic reconnection process in transient coaxial helicity injection. <i>Physics of Plasmas</i> , 2013, 20, .	1.9	23
10	Transport reduction by current profile control in the reversed-field pinch. <i>Physics of Plasmas</i> , 1995, 2, 2440-2446.	1.9	22
11	First-order finite-Larmor-radius fluid modeling of tearing and relaxation in a plasma pinch. <i>Physics of Plasmas</i> , 2012, 19, .	1.9	22
12	Effects of asymmetries in computations of forced vertical displacement events. <i>Plasma Physics and Controlled Fusion</i> , 2019, 61, 024003.	2.1	21
13	$m=1$ ideal internal kink modes in a line-tied screw pinch. <i>Physics of Plasmas</i> , 2006, 13, 092102.	1.9	20
14	Calculating electron cyclotron current drive stabilization of resistive tearing modes in a nonlinear magnetohydrodynamic model. <i>Physics of Plasmas</i> , 2010, 17, 012502.	1.9	20
15	NIMROD resistive magnetohydrodynamic simulations of spheromak physics. <i>Physics of Plasmas</i> , 2008, 15, 032502.	1.9	19
16	3D simulations of vertical displacement events in tokamaks: A benchmark of M3D-C1, NIMROD, and JOREK. <i>Physics of Plasmas</i> , 2021, 28, .	1.9	19
17	Axisymmetric simulations of vertical displacement events in tokamaks: A benchmark of M3D-C1, NIMROD, and JOREK. <i>Physics of Plasmas</i> , 2020, 27, 022505.	1.9	18
18	Nonlinear modeling of forced magnetic reconnection in slab geometry with NIMROD. <i>Physics of Plasmas</i> , 2017, 24, .	1.9	16

#	ARTICLE	IF	CITATIONS
19	First-order finite-Larmor-radius effects on magnetic tearing in pinch configurations. Physics of Plasmas, 2011, 18, .	1.9	15
20	Stabilizing effects of edge current density on pedestal instabilities. Physics of Plasmas, 2012, 19, 032503.	1.9	15
21	Magnetohydrodynamic simulations of direct current helicity injection for current drive in tokamaks. Physics of Plasmas, 1996, 3, 1038-1046.	1.9	13
22	Resistive magnetohydrodynamic simulations of helicity-injected startup plasmas in National Spherical Torus eXperiment. Physics of Plasmas, 2013, 20, .	1.9	13
23	Simulation of current-filament dynamics and relaxation in the Pegasus Spherical Tokamak. Physics of Plasmas, 2012, 19, .	1.9	12
24	Nature of axial tail instability and bubbleâ€blob formation in nearâ€Earth plasma sheet. Journal of Geophysical Research: Space Physics, 2013, 118, 653-663.	2.4	12
25	Mode penetration induced by transient magnetic perturbations. Physics of Plasmas, 2018, 25, 082507.	1.9	12
26	The effect of artificial diffusivity on the flute instability. Physics of Plasmas, 2005, 12, 084504.	1.9	9
27	Zero- $\hat{r}^2$ modeling of coaxial helicity injection in the HIT-II spherical torus. Physics of Plasmas, 2011, 18, .	1.9	9
28	Two-fluid and finite Larmor radius effects on helicity evolution in a plasma pinch. Physics of Plasmas, 2016, 23, .	1.9	9
29	A laboratory model for the Parker spiral and magnetized stellar winds. Nature Physics, 2019, 15, 1095-1100.	16.7	9
30	Two-fluid studies of edge relaxation events in tokamaks. Journal of Physics: Conference Series, 2007, 78, 012070.	0.4	7
31	Self-consistent simulations of nonlinear magnetohydrodynamics and profile evolution in stellarator configurations. Physics of Plasmas, 2013, 20, .	1.9	7
32	The influence of boundary and edge-plasma modeling in computations of axisymmetric vertical displacement. Physics of Plasmas, 2020, 27, .	1.9	7
33	Laminar and turbulent plasmoid ejection in a laboratory Parker Spiral current sheet. Journal of Plasma Physics, 2021, 87, .	2.1	3
34	Computational study of runaway electrons in MST tokamak discharges with applied resonant magnetic perturbation. Physics of Plasmas, 2022, 29, .	1.9	3
35	MAGNETIC COLLIMATION AND MAGNETOHYDRODYNAMIC KINK INSTABILITY DRIVEN BY DIFFERENTIAL ROTATION. International Journal of Modern Physics D, 2008, 17, 1707-1713.	2.1	2
36	Direct measurements of the 3D plasma velocity in single-helical-axis RFP plasmas. Physics of Plasmas, 2021, 28, 012510.	1.9	0