

Jan Stenflo

List of Publications by Year in descending order

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84
papers

2,967
citations

201674

27
h-index

168389

53
g-index

85
all docs

85
docs citations

85
times ranked

861
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetic-field structure of the photospheric network. <i>Solar Physics</i> , 1973, 32, 41-63.	2.5	427
2	The Hanle effect and the diagnostics of turbulent magnetic fields in the solar atmosphere. <i>Solar Physics</i> , 1982, 80, 209-226.	2.5	176
3	On the filamentary nature of solar magnetic fields. <i>Solar Physics</i> , 1972, 22, 402-417.	2.5	169
4	Small-scale magnetic structures on the Sun. <i>Astronomy and Astrophysics Review</i> , 1989, 1, 3-48.	25.5	146
5	BIPOLAR MAGNETIC REGIONS ON THE SUN: GLOBAL ANALYSIS OF THE <i>SOHO</i>/MDI DATA SET. <i>Astrophysical Journal</i> , 2012, 745, 129.	4.5	139
6	On the small-scale structure of solar magnetic fields. <i>Solar Physics</i> , 1972, 27, 330-346.	2.5	136
7	Small-Scale Solar Magnetic Fields. <i>Space Science Reviews</i> , 2009, 144, 275.	8.1	128
8	Are â€œEIT Wavesâ€•Fastâ€•Mode MHD Waves?. <i>Astrophysical Journal</i> , 2007, 664, 556-562.	4.5	108
9	Global resonances in the evolution of solar magnetic fields. <i>Nature</i> , 1986, 319, 285-290.	27.8	99
10	Solar magnetic fields as revealed by Stokes polarimetry. <i>Astronomy and Astrophysics Review</i> , 2013, 21, 1.	25.5	82
11	Dependence of the properties of magnetic fluxtubes on area factor or amount of flux. <i>Solar Physics</i> , 1985, 95, 99-118.	2.5	73
12	Solar polarimetry in the near UV with the Zurich Imaging Polarimeter ZIMPOL II. <i>Astronomy and Astrophysics</i> , 2004, 422, 703-708.	5.1	70
13	A model of the supergranulation network and of active-region plages. <i>Solar Physics</i> , 1975, 42, 79-105.	2.5	68
14	Distribution functions for magnetic fields on the quiet Sun. <i>Astronomy and Astrophysics</i> , 2010, 517, A37.	5.1	67
15	New window for spectroscopy. <i>Nature</i> , 1996, 382, 588-588.	27.8	62
16	Tilt of Emerging Bipolar Magnetic Regions on the Sun. <i>Astrophysical Journal</i> , 2008, 688, L115-L118.	4.5	61
17	Evolution of solar magnetic fields over an 11-year period. <i>Solar Physics</i> , 1972, 23, 307-339.	2.5	52
18	The measurement of solar magnetic fields. <i>Reports on Progress in Physics</i> , 1978, 41, 865-907.	20.1	50

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19	Spherical harmonic decomposition of solar magnetic fields. <i>Astronomy and Astrophysics</i> , 2005, 438, 349-363.	5.1	46
20	Collapsed, uncollapsed, and hidden magnetic flux on the quiet Sun. <i>Astronomy and Astrophysics</i> , 2011, 529, A42.	5.1	41
21	Basal magnetic flux and the local solar dynamo. <i>Astronomy and Astrophysics</i> , 2012, 547, A93.	5.1	39
22	Small-Scale Solar Magnetic Fields. , 1976, , 69-99.		36
23	Scaling laws for magnetic fields on the quiet Sun. <i>Astronomy and Astrophysics</i> , 2012, 541, A17.	5.1	34
24	Differential rotation and sector structure of solar magnetic fields. <i>Solar Physics</i> , 1974, 36, 495-515.	2.5	32
25	Polarimetry in the Mg ii h and k lines. <i>Solar Physics</i> , 1987, 111, 243-254.	2.5	30
26	Solar magnetic fields. <i>Journal of Astrophysics and Astronomy</i> , 2008, 29, 19-28.	1.0	30
27	Scattering polarization in strong chromospheric lines. <i>Astronomy and Astrophysics</i> , 2005, 434, 713-724.	5.1	30
28	Search for spectral line polarization in the solar vacuum ultraviolet. <i>Solar Physics</i> , 1980, 66, 13-19.	2.5	29
29	ANALYSIS OF THE FORWARD-SCATTERING HANLE EFFECT IN THE Ca I 4227 Å... LINE. <i>Astrophysical Journal</i> , 2011, 737, 95.	4.5	29
30	Horizontal or vertical magnetic fields on the quiet Sun. <i>Astronomy and Astrophysics</i> , 2013, 555, A132.	5.1	26
31	History of Solar Magnetic Fields Since George Ellery Hale. <i>Space Science Reviews</i> , 2017, 210, 5-35.	8.1	24
32	POLARIZED LINE FORMATION WITH J -STATE INTERFERENCE IN THE PRESENCE OF MAGNETIC FIELDS. I. PARTIAL FREQUENCY REDISTRIBUTION IN THE COLLISIONLESS REGIME. <i>Astrophysical Journal</i> , 2011, 733, 4.	4.5	22
33	CENTER-TO-LIMB OBSERVATIONS AND MODELING OF THE Ca I 4227 Å... LINE. <i>Astrophysical Journal</i> , 2014, 793, 42.	4.5	22
34	A New Mechanism for Polarizing Light from Obscured Stars. <i>Astrophysical Journal</i> , 2007, 668, L63-L66.	4.5	21
35	Hanle-Zeeman Redistribution Matrix. II. Comparison of Classical and Quantum Electrodynamical Approaches. <i>Astrophysical Journal</i> , 2007, 670, 1485-1503.	4.5	21
36	GENERALIZATION OF THE LAST SCATTERING APPROXIMATION FOR THE SECOND SOLAR SPECTRUM MODELING: THE Ca I 4227 Å... LINE AS A CASE STUDY. <i>Astrophysical Journal</i> , 2010, 718, 988-1000.	4.5	21

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37	Polarized Line Formation in Arbitrary Strength Magnetic Fields Angle-averaged and Angle-dependent Partial Frequency Redistribution. <i>Astrophysical Journal</i> , 2017, 844, 97.	4.5	20
38	Hanle-Zeeman Redistribution Matrix. I. Classical Theory Expressions in the Laboratory Frame. <i>Astrophysical Journal</i> , 2007, 663, 625-642.	4.5	19
39	On stellar activity cycles. <i>Astrophysics and Space Science</i> , 1972, 15, 307-312.	1.4	18
40	Evolution of the Sun's magnetic polarities. <i>Solar Physics</i> , 1987, 108, 205-220.	2.5	17
41	Hanle-Zeeman Redistribution Matrix. III. Solution of the Polarized Line Formation Problem. <i>Astrophysical Journal</i> , 2008, 679, 889-899.	4.5	16
42	ORIGIN OF SPATIAL VARIATIONS OF SCATTERING POLARIZATION IN THE WINGS OF THE Ca I 4227 Å... line. <i>Astrophysical Journal</i> , 2009, 699, 1650-1659.	4.5	16
43	Observations of the forward scattering Hanle effect in the Ca II 4227 Å... line. <i>Astronomy and Astrophysics</i> , 2011, 530, L13.	5.1	15
44	Calibration of the 6302/6301 Stokes V line ratio in terms of the 5250/5247 ratio. <i>Astronomy and Astrophysics</i> , 2013, 556, A113.	5.1	13
45	POLARIZED LINE TRANSFER WITH F -STATE INTERFERENCE IN A NON-MAGNETIC MEDIUM: PARTIAL FREQUENCY REDISTRIBUTION EFFECTS IN THE COLLISIONLESS REGIME. <i>Astrophysical Journal</i> , 2012, 758, 112.	4.5	11
46	MODELING THE QUANTUM INTERFERENCE SIGNATURES OF THE Ba II D ₂ 4554 Å... LINE IN THE SECOND SOLAR SPECTRUM. <i>Astrophysical Journal</i> , 2013, 768, 163.	4.5	11
47	POLARIZED SCATTERING WITH PASCHEN-BACK EFFECT, HYPERFINE STRUCTURE, AND PARTIAL FREQUENCY REDISTRIBUTION IN MAGNETIZED STELLAR ATMOSPHERES. <i>Astrophysical Journal</i> , 2014, 786, 150.	4.5	11
48	The Interpretation of Magnetograph Results: The Formation of Absorption Lines in a Magnetic Field. , 1971, , 101-129.		11
49	Observations of resonance polarization in Ca I 4227. <i>Solar Physics</i> , 1974, 37, 31-42.	2.5	10
50	First Polarimetric Measurements and Modeling of the Paschen-Back Effect in CaH Transitions. <i>Astrophysical Journal</i> , 2006, 649, L49-L52.	4.5	10
51	Zeeman line formation in solar magnetic fields. <i>Astronomy and Astrophysics</i> , 2008, 485, 275-287.	5.1	10
52	Scattering physics. <i>Solar Physics</i> , 1996, 164, 1-20.	2.5	9
53	Lines in the wavelength range 4300-6700 Å with large Stokes V amplitudes outside sunspots. <i>Solar Physics</i> , 1986, 107, 57-61.	2.5	8
54	THE QUANTUM INTERFERENCE EFFECTS IN THE SC II 4247 Å... LINE OF THE SECOND SOLAR SPECTRUM. <i>Astrophysical Journal</i> , 2014, 794, 30.	4.5	8

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55	PHYSICS OF POLARIZED SCATTERING AT MULTI-LEVEL ATOMIC SYSTEMS. <i>Astrophysical Journal</i> , 2015, 801, 70.	4.5	8
56	Polarized Line Formation in Arbitrary Strength Magnetic Fields: The Case of a Two-level Atom with Hyperfine Structure Splitting. <i>Astrophysical Journal</i> , 2019, 883, 188.	4.5	8
57	Transition of the Sunspot Number from Zurich to Brussels in 1980: A Personal Perspective. <i>Solar Physics</i> , 2016, 291, 2487-2492.	2.5	7
58	Observational constraints on a "hidden", turbulent magnetic field of the Sun. <i>Solar Physics</i> , 1988, 114, 1.	2.5	6
59	LINE-INTERLOCKING EFFECTS ON POLARIZATION IN SPECTRAL LINES BY RAYLEIGH AND RAMAN SCATTERING. <i>Astrophysical Journal</i> , 2013, 770, 92.	4.5	6
60	POLARIZED LIGHT SCATTERING WITH THE PASCHEN-BACK EFFECT, LEVEL-CROSSING OF FINE STRUCTURE STATES, AND PARTIAL FREQUENCY REDISTRIBUTION. <i>Astrophysical Journal</i> , 2014, 793, 71.	4.5	6
61	Importance of Angle-dependent Partial Frequency Redistribution in Hyperfine Structure Transitions Under the Incomplete Paschen-Back Effect Regime. <i>Astrophysical Journal</i> , 2020, 898, 49.	4.5	6
62	A comparison of simultaneous measurements of the polar magnetic fields made at Crimea and Mount Wilson. <i>Solar Physics</i> , 1970, 15, 265-272.	2.5	5
63	The coronal and interplanetary magnetic fields at the time of the solar eclipse of 7 March, 1970. <i>Solar Physics</i> , 1971, 21, 263-271.	2.5	5
64	POLARIZED SCATTERING OF LIGHT FOR ARBITRARY MAGNETIC FIELDS WITH LEVEL-CROSSINGS FROM THE COMBINATION OF HYPERFINE AND FINE STRUCTURE SPLITTINGS. <i>Astrophysical Journal</i> , 2015, 814, 127.	4.5	5
65	Cycle Patterns of the Axisymmetric Magnetic Field. , 1994, , 365-377.		5
66	Large Scale Solar Magnetic Fields: Temporal Variations. <i>Symposium - International Astronomical Union</i> , 2004, 219, 552-556.	0.1	4
67	Solar magnetic-field measurements using Babinet compensators. <i>Solar Physics</i> , 1969, 6, 480-481.	2.5	3
68	Cosmological constant caused by observer-induced boundary condition. <i>Journal of Physics Communications</i> , 2020, 4, 105001.	1.2	3
69	A fast and accurate guiding system. <i>Solar Physics</i> , 1970, 11, 155-156.	2.5	2
70	Summary lecture. <i>Journal of Astrophysics and Astronomy</i> , 2000, 21, 451-457.	1.0	2
71	Origin of the cosmological constant. <i>Astrophysics and Space Science</i> , 2019, 364, 1.	1.4	2
72	Measuring the Hidden Aspects of Solar Magnetism. <i>Thirty Years of Astronomical Discovery With UKIRT</i> , 2010, , 101-117.	0.3	2

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73	History of Solar Magnetic Fields Since George Ellery Hale. Space Sciences Series of ISSI, 2015, , 5-35.	0.0	2
74	POLARIZED LINE FORMATION WITH LOWER-LEVEL POLARIZATION AND PARTIAL FREQUENCY REDISTRIBUTION. Astrophysical Journal, 2016, 828, 84.	4.5	1
75	A method to obtain a solar velocity map directly in one spectroheliogram. Solar Physics, 1969, 7, 329.	2.5	0
76	Commission 12: Radiation and Structure of the Solar Atmosphere. Transactions of the International Astronomical Union, 1985, 19, 97-100.	0.0	0
77	The second solar spectrum and the hidden magnetism. Proceedings of the International Astronomical Union, 2008, 4, 211-222.	0.0	0
78	Probability distribution functions for the Sun's magnetic field. Astronomische Nachrichten, 2010, 331, 585-588.	1.2	0
79	Nature of the solar dynamo at small scales. Proceedings of the International Astronomical Union, 2012, 8, 119-130.	0.0	0
80	Coherence structure of D_{l1} scattering. Proceedings of the International Astronomical Union, 2014, 10, 136-145.	0.0	0
81	Paschen-Back effect involving atomic fine and hyperfine structure states. Proceedings of the International Astronomical Union, 2014, 10, 154-158.	0.0	0
82	Modeling the center-to-limb variation of the Ca i 4227 Å.. line using FCHHT models. Proceedings of the International Astronomical Union, 2014, 10, 381-386.	0.0	0
83	A revisit to model the Cr i triplet at 5204-5208 Å.. and the Ba ii D2 line at 4554 Å.. in the Second Solar Spectrum. Proceedings of the International Astronomical Union, 2014, 10, 372-376.	0.0	0
84	New possibilities for the diagnostics of solar magnetic fields. Astronomical and Astrophysical Transactions, 2001, 20, 515-524.	0.2	0