Harsh Deep Chopra

List of Publications by Year
in descending order

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55 papers	1,419 citations	361413 20 h-index	330143 37 g-index
57 all docs	57 docs citations	57 times ranked	1168 citing authors

#	Article	IF	Citations
1	Giant Magneto-Elastic and Magneto-Volume Effects in Feâ€“Al. Journal of the Physical Society of Japan, 2019, 88, 033702.	1.6	0
2	Nonâ€Joulian Magnetostriction and Nonâ€Joulian Magnetism. Physica Status Solidi (B): Basic Research, 2018, 255, 1800214.	1.5	8
3	Contracting non-Joulian magnets. Physical Review B, 2017, 95, .	3.2	4
4	Addendum: Non-Joulian magnetostriction. Nature, 2016, 538, 416-416.	27.8	11
5	Multifunctional Chargeâ€Transfer Single Crystals through Supramolecular Assembly. Advanced Materials, 2016, 28, 5322-5329.	21.0	21
6	Non-Joulian magnetostriction. Nature, 2015, 521, 340-343.	27.8	96
7	Anisotropic Curie temperature materials. Physica Status Solidi (B): Basic Research, 2013, 250, 387-395.	1.5	16
8	Physical properties of a two-component system at the Fermi and Sharvin length scales. Journal of Applied Physics, 2012, 112, 104320.	2.5	0
9	Strength of metals at the Fermi length scale. Physica Status Solidi - Rapid Research Letters, 2012, 6, 99-101.	2.4	7
10	Mechanics of quantum and Sharvin conductors. Physical Review B, 2011, 83, .	3.2	13
11	Altering magnetostrictive strain pathways via morphology of spontaneously aligned domains. Physical Review B, 2011, 84, .	3.2	5
12	Cooperative motion of domain walls in magnetic multilayers. Physical Review B, 2011, 83, .	3.2	3
13	Morphogenesis of maze-like magnetic domains. Physical Review B, 2010, 82, .	3.2	11
14	Multiple phase transitions found in a magnetic Heusler alloy and thermodynamics of their magnetic internal energy. Physical Review B, 2010, 81, .	3.2	9
15	Channel saturation and conductance quantization in single-atom gold constrictions. Physical Review B, 2010, 82, .	3.2	16
16	Antiferromagnetic spin and twin domain walls govern hysteretic expressions of exchange anisotropy. Physical Review B, 2009, 80, .	3.2	10
17	Mechanistic understanding of transition between quantized conductance plateaus under strain perturbation. Physical Review B, 2008, 78, .	3.2	11
18	Role of magnetostatic interactions in micromagnetic structure of multiferroics. Journal of Applied Physics, 2008, 103, .	2.5	21

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19	The quantum spin-valve in cobalt atomic point contacts. Nature Materials, 2005, 4, 832-837.	27.5	74
20	Magnetic mosaics in crystalline tiles: The novel concept of polymagnets (invited). International Journal of Applied Electromagnetics and Mechanics, 2005, 22, 11-23.	0.6	6
21	Method to study temperature and stress induced magnetic transitions. Review of Scientific Instruments, 2005, 76, 013910.	1.3	5
22	Ballistic magnetoresistance in nickel single-atom conductors without magnetostriction. Physical Review B, 2005, 71, .	3.2	54
23	Magnetoelastic and magnetostatic interactions in exchange-spring multilayers. Physical Review B, 2005, 72, .	3.2	29
24	Pathways of structural and magnetic transition in ferromagnetic shape-memory alloys. Physical Review B, 2004, 70, .	3.2	24
25	Temperature- and field-dependent evolution of micromagnetic structure in ferromagnetic shape-memory alloys. Physical Review B, 2004, 70, .	3.2	45
26	In situ study of temperature dependent magnetothermoelastic correlated behavior in ferromagnetic shape memory alloys. Journal of Applied Physics, 2004, 95, 6951-6953.	2.5	18
27	Fundamental Investigation of Ferromagnetic Shape Memory Alloys: A New Perspective. Materials Research Society Symposia Proceedings, 2003, 785, 1321.	0.1	3
28	100,000 % ballistic magnetoresistance in stable Ni nanocontacts at room temperature. Physical Review B, 2003, 67, .	3.2	86
29	Highly deleterious role of small amounts of carbon on the giant magnetoresistance effect. Journal of Applied Physics, 2003, 93, 8415-8417.	2.5	1
30	Magnetization reversal in half-metallic epitaxial CrO2 films. Journal of Applied Physics, 2002, 92, 5409-5412.	2.5	8
31	Carbon: A bane for giant magnetoresistance magnetic multilayers. Applied Physics Letters, 2002, 80, 2943-2945.	3.3	2
32	Improved interfaces and magnetic properties in spin valves using Ni80Fe20 seed layer. Journal of Applied Physics, 2002, 91, 3891-3895.	2.5	2
33	Ballistic magnetoresistance over 3000% in Ni nanocontacts at room temperature. Physical Review B, 2002, 66, .	3.2	159
34	Surfactant-assisted atomic-level engineering of spin valves. Physical Review B, 2002, 65, .	3.2	20
35	Microfluidic Actuation Using Electrochemically Generated Bubbles. Analytical Chemistry, 2002, 74, 6392-6396.	6.5	106
36	Beam model for calculating magnetostriction strains in thin films and multilayers. Applied Physics Letters, 2001, 79, 3818-3820.	3.3	17

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37	Atomic engineering of spin valves using Ag as a surfactant. Journal of Applied Physics, 2001, 89, 7121-7123.	2.5	23
38	Contributions to switching field in NiOâ€“Coâ€“Cu-based spin valves. Journal of Applied Physics, 2000, 87, 6986-6988.	2.5	4
39	Magnetic behavior of atomically engineered NiOâ€“Coâ€“Cu-based giant magnetoresistance spin valves using Pb as a surface modifier. Acta Materialia, 2000, 48, 3501-3508.	7.9	21
40	Nature of coupling and origin of coercivity in giant magnetoresistance NiO-Co-Cu-based spin valves. Physical Review B, 2000, 61, 9642-9652.	3.2	78
41	Nature of magnetization reversal in exchange-coupled polycrystalline NiO-Co bilayers. Physical Review B, 2000, 61, 15312-15320.	3.2	41
42	Magnetoelastic dependence of switching field in TbFeâ€“FeCo giant magnetostrictive spring-magnet multilayers. Journal of Applied Physics, 2000, 87, 5780-5782.	2.5	14
43	Magnetization reversal in polycrystalline NiOâ€“Co exchange anisotropy coupled bilayers. Journal of Applied Physics, 2000, 87, 4942-4944.	2.5	6
44	Magnetic-field-induced twin boundary motion in magnetic shape-memory alloys. Physical Review B, 2000, 61, R14913-R14915.	3.2	120
45	Magnetic mesostructure of giant magnetostrictive spring magnet type multilayers. Journal of Applied Physics, 1999, 85, 6238-6240.	2.5	7
46	Non-Destructive Evaluation of Mechanical Properties of Magnetic Materials. Materials Research Society Symposia Proceedings, 1999, 591, 158.	0.1	4
47	Observation of domain dynamics in giant magnetoresistive Coâ€“Cu-based polycrystalline multilayers. Journal of Applied Physics, 1997, 81, 4582-4584.	2.5	7
48	Nanostructural considerations in giant magnetoresistive Co-Cu-based symmetric spin valves. Physical Review B, 1997, 55, 8390-8397.	3.2	44
49	Effect of plastic strain on magnetic and mechanical properties of ultralow carbon sheet steel. Journal of Applied Physics, 1997, 81, 4263-4265.	2.5	39
50	Nanostructure, interfaces, and magnetic properties in giant magnetoresistive NiO-Co-Cu-based spin valves. Journal of Applied Physics, 1997, 81, 4017-4019.	2.5	22
51	Giant magnetoresistance in symmetric spin-valves: nanostructure and domain dynamics. Scripta Materialia, 1997, 9, 451-454.	0.5	3
52	Temperature-dependent deformation of polydomain phases in an In-22.5 At. Pct Tl shape memory alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1996, 27, 1695-1700.	2.2	11
53	Domain structures in bent In-22.5 at.%Tl polydomain crystals. Acta Materialia, 1996, 44, 747-751.	7.9	26
54	The structure of metastable {111}, precipitates in an Al-2.5 wt% Cu-1.5 wt% Mg-0.5 wt% Ag alloy. Philosophical Magazine Letters, 1995, 71, 319-324.	1.2	26

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55	Structure-Property Relationship of Ion-Beam Sputtered Nd-Fe-B Magnetic Thin Films On (111) Silicon. Materials Research Society Symposia Proceedings, 1994, 354, 511.	0.1	2