

Harshad Bhadeshia

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

118
papers

6,711
citations

38
h-index

80
g-index

122
ext. papers

7,303
ext. citations

3.1
avg, IF

6.54
L-index

#	Paper	IF	Citations
118	First-principles calculations of elastic constants for epsilon-carbide and the consequences. <i>Materials Science and Technology</i> , 2020 , 36, 615-622	1.5	2
117	Cementite. <i>International Materials Reviews</i> , 2020 , 65, 1-27	16.1	41
116	Tensile behaviour of thermally-stable nanocrystalline bainitic-steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 746, 145-153	5.3	7
115	Harnessing the scientific synergy of welding and additive manufacturing. <i>Science and Technology of Welding and Joining</i> , 2019 , 24, 361-366	3.7	12
114	Critical Assessment 34: Are ϵ and δ carbides transition-phases relative to cementite in steels?. <i>Materials Science and Technology</i> , 2019 , 35, 1301-1305	1.5	4
113	Modelling of size distribution of blocky retained austenite in Si-containing bainitic steels. <i>Materials Science and Technology</i> , 2018 , 34, 54-62	1.5	6
112	Intermetallic-strengthened nanocrystalline bainitic steel. <i>Materials Science and Technology</i> , 2018 , 34, 1976-1979	1.5	3
111	Designing steel to resist hydrogen embrittlement Part 2 δ precipitate characterisation. <i>Materials Science and Technology</i> , 2018 , 34, 1747-1758	1.5	4
110	Solution to the Bagaryatskii and Isaichev ferrite-cementite orientation relationship problem. <i>Materials Science and Technology</i> , 2018 , 34, 1666-1668	1.5	7
109	Elucidating white-etching matter through high-strain rate tensile testing. <i>Materials Science and Technology</i> , 2017 , 33, 307-310	1.5	11
108	Strength and toughness of clean nanostructured bainite. <i>Materials Science and Technology</i> , 2017 , 33, 1171-1179	1.5	8
107	Tempering of Low-Temperature Bainite. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017 , 48, 3410-3418	2.3	19
106	Effect of manganese sulphide particle shape on the pinning of grain boundary. <i>Materials Science and Technology</i> , 2017 , 33, 1013-1018	1.5	5
105	In situ synchrotron X-ray study of bainite transformation kinetics in a low-carbon Si-containing steel. <i>Materials Science and Technology</i> , 2017 , 33, 2147-2156	1.5	18
104	Modelling of transition from upper to lower bainite in multi-component system. <i>Materials Science and Technology</i> , 2017 , 33, 430-437	1.5	5
103	Melt-spinning and semi-solid processing of bainitic steel. <i>Materials Science and Technology</i> , 2017 , 33, 870-878	1.5	2
102	Atomic Mechanism of the Bainite Transformation. <i>HTM - Journal of Heat Treatment and Materials</i> , 2017 , 72, 340-345	0.7	5

101	The Effect of a Two-Stage Heat-Treatment on the Microstructural and Mechanical Properties of a Maraging Steel. <i>Materials</i> , 2017 , 10,	3.5	16
100	Cracks in Martensite Plates as Hydrogen Traps in a Bearing Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 665-673	2.3	13
99	Ausforming of medium carbon steel. <i>Materials Science and Technology</i> , 2015 , 31, 436-442	1.5	16
98	Critical Assessment 13: Elimination of white etching matter in bearing steels. <i>Materials Science and Technology</i> , 2015 , 31, 1011-1015	1.5	51
97	Dry rolling/sliding wear of nanostructured pearlite. <i>Materials Science and Technology</i> , 2015 , 31, 1735-1744	4.5	27
96	Macrosegregation and Microstructural Evolution in a Pressure-Vessel Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 2983-2997	2.3	21
95	Bearing steel microstructures after aircraft gas turbine engine service. <i>Materials Science and Technology</i> , 2014 , 30, 1911-1918	1.5	25
94	Model for multiple stress affected martensitic transformations, microstructural entropy and consequences on scatter in properties. <i>Materials Science and Technology</i> , 2014 , 30, 160-165	1.5	3
93	White-Etching Matter in Bearing Steel. Part I: Controlled Cracking of 52100 Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 4907-4915	2.3	23
92	White-Etching Matter in Bearing Steel. Part II: Distinguishing Cause and Effect in Bearing Steel Failure. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 4916-4931	2.3	55
91	Shear band structure in ballistically tested bainitic steels. <i>Materials Science and Technology</i> , 2014 , 30, 812-817	1.5	3
90	Spheroidisation of hypereutectoid state of nanostructured bainitic steel. <i>Materials Science and Technology</i> , 2014 , 30, 1282-1286	1.5	11
89	Toughness anisotropy in X70 and X80 linepipe steels. <i>Materials Science and Technology</i> , 2014 , 30, 439-446	6.5	10
88	Effects of dilution and baseplate strength on stress distributions in multipass welds deposited using low transformation temperature filler alloys. <i>Science and Technology of Welding and Joining</i> , 2014 , 19, 461-467	3.7	25
87	Effect of interpass temperature on residual stresses in multipass welds produced using low transformation temperature filler alloy. <i>Science and Technology of Welding and Joining</i> , 2014 , 19, 44-51	3.7	42
86	Surface residual stresses in multipass welds produced using low transformation temperature filler alloys. <i>Science and Technology of Welding and Joining</i> , 2014 , 19, 623-630	3.7	21
85	Mechanism and Kinetics of Solid-State Transformation in High-Temperature Processed Linepipe Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013 , 44, 5468-5477	2.3	8
84	Carbon in cubic and tetragonal ferrite. <i>Philosophical Magazine</i> , 2013 , 93, 3714-3725	1.6	30

83	The first bulk nanostructured metal. <i>Science and Technology of Advanced Materials</i> , 2013 , 14, 014202	7.1	89
82	Modelling coarsening behaviour of TiC precipitates in high strength, low alloy steels. <i>Materials Science and Technology</i> , 2013 , 29, 1074-1079	1.5	19
81	Interphase precipitation in TiNb and TiNbMo bearing steel. <i>Materials Science and Technology</i> , 2013 , 29, 309-313	1.5	71
80	Comments on Determination of Ms temperature: methods, meaning and influence of low start phenomenon by T. Sourmail and V. Smanio. <i>Materials Science and Technology</i> , 2013 , 29, 889-889	1.5	4
79	Effect of aluminium on hydrogen-induced fracture behaviour in austenitic FeMn steel. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2013 , 469, 20120458	2.4	59
78	Steels for bearings. <i>Progress in Materials Science</i> , 2012 , 57, 268-435	42.2	575
77	Tool durability maps for friction stir welding of an aluminium alloy. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 3552-3570	2.4	29
76	Spot weldability of TRIP assisted steels with high carbon and aluminium contents. <i>Science and Technology of Welding and Joining</i> , 2012 , 17, 92-98	3.7	26
75	Divorced pearlite in steels. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 2767-2778	2.4	36
74	Duplex Hardening of Steels for Aeroengine Bearings. <i>ISIJ International</i> , 2012 , 52, 1927-1934	1.7	37
73	Thermal stability of retained austenite in bainitic steel: an in situ study. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 3141-3156	2.4	70
72	Extraordinary ductility in Al-bearing TRIP steel. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 234-243	2.4	34
71	Heat transfer coefficients during quenching of steels. <i>Heat and Mass Transfer</i> , 2011 , 47, 315-321	2.2	35
70	Surface Relief Due to Bainite Transformation at 473 K (200 °C). <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 3344-3348	2.3	25
69	Review: friction stir welding tools. <i>Science and Technology of Welding and Joining</i> , 2011 , 16, 325-342	3.7	484
68	Diffusion-controlled growth of pearlite in ternary steels. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 2948-2961	2.4	20
67	Mixed diffusion-controlled growth of pearlite in binary steel. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2011 , 467, 508-521	2.4	26
66	Friction stir welding of dissimilar alloys – a perspective. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 266-270	3.7	202

65	Spot weldability of TRIP steel containing 0.4 wt-%C. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 619-624	3.7	19
64	Induction welding and heat treatment of steel pipes: evolution of crystallographic texture detrimental to toughness. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 137-141	3.7	21
63	Non-equilibrium solidification and ferrite in TRIP steel. <i>Materials Science and Technology</i> , 2010 , 26, 817-823	1.5	38
62	Very Short and Very Long Heat Treatments in the Processing of Steel. <i>Materials and Manufacturing Processes</i> , 2010 , 25, 1-6	4.1	16
61	Nanostructured bainite. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010 , 466, 3-18	2.4	222
60	A Commentary on: Diffusion of Carbon in Austenite with a Discontinuity in Composition. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010 , 41, 1605-1615	2.3	8
59	A Commentary on: Diffusion of Carbon in Austenite with a Discontinuity in Composition. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2010 , 41, 741-751	2.5	
58	Bainite orientation in plastically deformed austenite. <i>International Journal of Materials Research</i> , 2009 , 100, 40-45	0.5	30
57	The Effects of Filler Metal Transformation Temperature on Residual Stresses in a High Strength Steel Weld. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2009 , 131,	1.2	48
56	Effects of weld preheat temperature and heat input on type IV failure. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 436-442	3.7	19
55	Stainless steel weld metal designed to mitigate residual stresses. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 559-565	3.7	41
54	Neural Networks and Information in Materials Science. <i>Statistical Analysis and Data Mining</i> , 2009 , 1, 296-305	3.5	60
53	Performance of neural networks in materials science. <i>Materials Science and Technology</i> , 2009 , 25, 504-510	1.5	76
52	Transformation texture of allotriomorphic ferrite in steel. <i>Materials Science and Technology</i> , 2009 , 25, 892-895	1.5	15
51	Elongation of Irradiated Steels. <i>Materials and Manufacturing Processes</i> , 2009 , 24, 130-137	4.1	3
50	Strength of Ferritic Steels: Neural Networks and Genetic Programming. <i>Materials and Manufacturing Processes</i> , 2008 , 24, 10-15	4.1	26
49	Calculation of crystallographic texture due to displacive transformations. <i>International Journal of Materials Research</i> , 2008 , 99, 342-346	0.5	20
48	Influence of silicon on cementite precipitation in steels. <i>Materials Science and Technology</i> , 2008 , 24, 343-347	3.7	205

47	Characterizing Phase Transformations and Their Effects on Ferritic Weld Residual Stresses with X-Rays and Neutrons. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 3070-3078	2.3	98
46	Crystallographic texture of stress-affected bainite. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2007 , 463, 2309-2328	2.4	72
45	TRIP-assisted steels: cracking of high-carbon martensite. <i>Materials Science and Technology</i> , 2006 , 22, 645-649	1.5	64
44	In-situ observations of lattice parameter fluctuations in austenite and transformation to bainite. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 3281-3289	2.3	180
43	Microstructural evolution in two variants of NF709 at 1023 and 1073 K. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 23-34	2.3	59
42	Mössbauer Analysis of Low-Temperature Bainite. <i>AIP Conference Proceedings</i> , 2005 ,	0	2
41	Carbon-carbon interactions in iron. <i>Journal of Materials Science</i> , 2004 , 39, 3949-3955	4.3	42
40	A model for austenitisation of hypoeutectoid steels. <i>Journal of Materials Science</i> , 2003 , 38, 1195-1201	4.3	31
39	Influence of Deformation on Recrystallization of an Yttrium Oxide Dispersion-Strengthened Iron Alloy (PM2000). <i>Advanced Engineering Materials</i> , 2003 , 5, 232-237	3.5	18
38	Modeling M ₆ C precipitation in niobium-alloyed ferritic stainless steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002 , 33, 3339-3347	2.3	23
37	Acicular ferrite morphologies in a medium-carbon microalloyed steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2001 , 32, 2187-2197	2.3	33
36	Analysis of toughness of welding alloys for high strength low alloy shipbuilding steels. <i>Science and Technology of Welding and Joining</i> , 2001 , 6, 368-374	3.7	12
35	Neural network analysis of strength and ductility of welding alloys for high strength low alloy shipbuilding steels. <i>Science and Technology of Welding and Joining</i> , 2001 , 6, 116-124	3.7	31
34	Estimation of mechanical properties of ferritic steel welds. Part 1: Yield and tensile strength. <i>Science and Technology of Welding and Joining</i> , 2000 , 5, 135-147	3.7	36
33	Bruscatto factor in temper embrittlement of welds. <i>Science and Technology of Welding and Joining</i> , 2000 , 5, 338-340	3.7	4
32	Estimation of mechanical properties of ferritic steel welds. Part 2: Elongation and Charpy toughness. <i>Science and Technology of Welding and Joining</i> , 2000 , 5, 149-160	3.7	23
31	Neural Networks in Materials Science.. <i>ISIJ International</i> , 1999 , 39, 966-979	1.7	450
30	Estimation of bainite plate-thickness in low-alloy steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1998 , 245, 72-79	5.3	224

29	Topology of grain deformation. <i>Materials Science and Technology</i> , 1998 , 14, 832-834	1.5	30
28	Austenite formation in 9Cr1Mo type power plant steels. <i>Science and Technology of Welding and Joining</i> , 1997 , 2, 36-42	3.7	6
27	The evolution of solutions: A thermodynamic analysis of mechanical alloying. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1997 , 28, 2189-2194	2.3	41
26	Stress-affected transformation to lower bainite. <i>Journal of Materials Science</i> , 1996 , 31, 2145-2148	4.3	21
25	Austenite films in bainitic microstructures. <i>Materials Science and Technology</i> , 1995 , 11, 874-882	1.5	158
24	Atom probe and STEM studies of carbide precipitation in 2Cr1Mo steel. <i>Applied Surface Science</i> , 1993 , 67, 334-341	6.7	7
23	Crystallographic texture in mechanically alloyed oxide dispersion-strengthened MA956 and MA957 steels. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1993 , 24, 773-779		28
22	Nonuniform recrystallization in a mechanically alloyed nickel-base superalloy. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1993 , 24, 1049-1055		19
21	Mechanism of the Transition from Bainite to Acicular Ferrite. <i>Materials Transactions, JIM</i> , 1991 , 32, 679-688		62
20	A Model for the Microstructure of Some Advanced Bainitic Steels. <i>Materials Transactions, JIM</i> , 1991 , 32, 689-696		94
19	Crystallographic texture and the austenite grain structure of low-alloy steel weld deposits. <i>Journal of Materials Science Letters</i> , 1991 , 10, 142-144		13
18	Bainite in steels. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1990 , 21, 767-797		416
17	Coupled diffusional/displacive transformations: Part II. Solute trapping. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1990 , 21, 805-809		39
16	The distribution of substitutional alloying elements during the bainite transformation. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1990 , 21, 837-844		44
15	The bainite transformation in chemically heterogeneous 300M high-strength steel. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1990 , 21, 859-875		27
14	The estimation of non-uniform elongation in low-alloy steel weld deposits. <i>Journal of Materials Science</i> , 1990 , 25, 613-618	4.3	1
13	Model for transition from upper to lower bainite. <i>Materials Science and Technology</i> , 1990 , 6, 592-603	1.5	141
12	The microstructure of submerged arc-weld deposits for high-strength steels. <i>Journal of Materials Science</i> , 1989 , 24, 3180-3188	4.3	14

11	The nonuniform distribution of inclusions in low-alloy steel weld deposits. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1988 , 19, 669-674		12
10	Fe-Cr-C hardfacing alloys for high-temperature applications. <i>Journal of Materials Science</i> , 1986 , 21, 1015-1019	4.3	60
9	The austenite grain structure of low-alloy steel weld deposits 1986 , 21, 3947		1
8	The influence of alloying elements on the formation of allotriomorphic ferrite in low-alloy steel weld deposits. <i>Journal of Materials Science Letters</i> , 1985 , 4, 305-308		10
7	Thermodynamic analysis of isothermal transformation diagrams. <i>Metal Science</i> , 1982 , 16, 159-166		236
6	An aspect of the nucleation of burst martensite. <i>Journal of Materials Science</i> , 1982 , 17, 383-386	4.3	18
5	Diffusional Transformations: A Theory for the Formation of Superledges. <i>Physica Status Solidi A</i> , 1982 , 69, 745-750		32
4	Diffusion of carbon in austenite. <i>Metal Science</i> , 1981 , 15, 477-480		57
3	The bainite transformation in a silicon steel. <i>Metallurgical and Materials Transactions A - Physical Metallurgy and Materials Science</i> , 1979 , 10, 895-907		445
2	Analysis of toughness of welding alloys for high strength low alloy shipbuilding steels		1
1	Austenite formation in 9Cr1Mo type power plant steels		1