Stefan Martin

List of Publications by Year
in descending order

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54 papers	1,418 citations	331538 21 h-index	360920 35 g-index
54 all docs	54 docs citations	54 times ranked	756 citing authors

#	Article	IF	Citations
1	Deformation Mechanisms in Austenitic TRIP/TWIP Steel as a Function of Temperature. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 49-58.	1.1	211
2	Stacking fault model of âˆ'martensite and itsDIFFaXimplementation. Journal of Applied Crystallography, 2011, 44, 779-787.	1.9	100
3	Stacking faults in high-alloyed metastable austenitic cast steel observed by electron channelling contrast imaging. Scripta Materialia, 2011, 64, 513-516.	2.6	89
4	Reinforcing Mechanism of Mgâ€PSZ Particles in Highlyâ€Alloyed TRIP Steel. Steel Research International, 2011, 82, 1133-1140.	1.0	77
5	Stacking fault energy in austenitic steels determined by usingin situX-ray diffraction during bending. Journal of Applied Crystallography, 2014, 47, 936-947.	1.9	69
6	Influence of Temperature on Phase Transformation and Deformation Mechanisms of Cast CrMnNi-TRIP/TWIP Steel. Solid State Phenomena, 0, 172-174, 172-177.	0.3	65
7	Deformation Bands in Highâ€Alloy Austenitic 16Cr6Mn6Ni TRIP Steel: Phase Transformation and Its Consequences on Strain Hardening at Room Temperature. Steel Research International, 2015, 86, 1187-1196.	1.0	61
8	Deformation of Austenitic CrMnNi TRIP/TWIP Steels: Nature and Role of the É›â˜'martensite. Materials Today: Proceedings, 2015, 2, S643-S646.	0.9	52
9	Interplay of microstructure defects in austenitic steel with medium stacking fault energy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 390-399.	2.6	51
10	Strain Rate Dependent Flow Stress and Energy Absorption Behaviour of Cast CrMnNi TRIP/TWIP Steels. Steel Research International, 2011, 82, 1087-1093.	1.0	46
11	Constitutive modelling of the rate dependent flow stress of cast high-alloyed metastable austenitic TRIP/TWIP steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 594, 72-81.	2.6	43
12	Microstructure Defects Contributing to the Energy Absorption in Cr<scp>M</scp>n<scp>N</scp>i <scp>TRIP</scp> Steels. Advanced Engineering Materials, 2013, 15, 571-582.	1.6	35
13	Prediction of the local deformation mechanisms in metastable austenitic steels from the local concentration of the main alloying elements. Materials Letters, 2015, 159, 484-488.	1.3	32
14	Strainâ€Rateâ€Dependent Flow Stress and Failure of an Mgâ€PSZ Reinforced TRIP Matrix Composite Produced by Spark Plasma Sintering. Steel Research International, 2012, 83, 521-528.	1.0	29
15	Investigations on martensite formation in CrMnNi-TRIP steels. , 2009, , .		29
16	Mechanical properties of high alloyed cast and rolled CrMnNi TRIP steels with varying Ni contents. , 2009, , .		28
17	The influence of martensitic transformation on mechanical properties of cast high alloyed CrMnNi-steel under various strain rates and temperatures. Journal of Physics: Conference Series, 2010, 240, 012098.	0.3	27
18	Investigation of Phase Transformations in High-Alloy Austenitic TRIP Steel Under High Pressure (up to) Tj ETQq0 0 0 rgBT /Overlock 10 T Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 95-111.	1.1	27

#	Article	IF	Citations
19	Deformation Mechanisms in Metastable Austenitic TRIP/TWIP Steels under Compressive Load Studied by in situ Synchrotron Radiation Diffraction. Advanced Engineering Materials, 2019, 21, 1801101.	1.6	25
20	Strength and Failure Behaviour of Spark Plasma Sintered Steelâ€Zirconia Composites Under Compressive Loading. Steel Research International, 2011, 82, 1017-1021.	1.0	23
21	Pitfalls of local and quantitative phase analysis in partially stabilized zirconia. Journal of Applied Crystallography, 2012, 45, 1136-1144.	1.9	23
22	Mechanical Behavior of Deformationâ€Induced Î±â€²â€Martensite and Flow Curve Modeling of a Cast CrMnNi TRIPâ€Steel. Steel Research International, 2012, 83, 529-537.	1.0	23
23	Assessment of the thermodynamic dimension of the stacking fault energy. Philosophical Magazine, 2014, 94, 2967-2979.	0.7	22
24	Cyclic Degradation Behavior of $$ langle 001 angle $$ âŸ¨001âŸ© -Oriented Feâ€“Mnâ€“Alâ€“Ni Single Crystals in Tension. Shape Memory and Superelasticity, 2017, 3, 335-346.	1.1	22
25	Cyclic Deformation of Powder Metallurgy Stainless Steel/Mgâ€PSZ Composite Materials. Steel Research International, 2012, 83, 554-564.	1.0	20
26	Microstructure Changes in <scp>TRIP</scp> Steel/<scp>M</scp>gâ€<scp>PSZ</scp> Composites Induced by Low Compressive Deformation. Advanced Engineering Materials, 2013, 15, 600-608.	1.6	17
27	Orientation relationships between phases arising during compression testing in ZrO2â€“TRIP-steel composites. Journal of Alloys and Compounds, 2013, 577, S578-S582.	2.8	16
28	The crystal structure of (Nb0.75Cu0.25)Sn2 in the Cu-Nb-Sn system. Intermetallics, 2017, 80, 16-21.	1.8	16
29	Microstructure of austenitic stainless steels of various phase stabilities after cyclic and tensile deformation. International Journal of Materials Research, 2011, 102, 1374-1377.	0.1	14
30	Cellular Energy Absorbing TRIP-Steel/Mg-PSZ Composite: Honeycomb Structures Fabricated by a New Extrusion Powder Technology. Advances in Materials Science and Engineering, 2010, 2010, 1-6.	1.0	13
31	Influence of Powder Particle Size on the Compaction Behavior and Mechanical Properties of a High-Alloy Austenitic CrMnNi TRIP Steel During Spark Plasma Sintering. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 170-177.	1.1	13
32	Deformation behaviour of TWIP steels: Constitutive modelling informed by local and integral experimental methods used in concert. Materials Characterization, 2022, 184, 111667.	1.9	9
33	Microstructural and fracture toughness characterisation of a high-strength FeCrMoVC alloy manufactured by rapid solidification. Engineering Fracture Mechanics, 2013, 99, 278-294.	2.0	8
34	Nanoscale twinning in Feâ€“Mnâ€“Alâ€“Ni martensite: a backscatter Kikuchi diffraction study. Journal of Applied Crystallography, 2021, 54, 54-61.	1.9	8
35	An orthorhombic D022-like precursor to Al8Mo3 in the Alâ€“Moâ€“Ti system. Journal of Alloys and Compounds, 2020, 823, 153807.	2.8	7
36	Werkstoffverhalten einer TRIP/TWIP-fÃhigen CrMnNi-Stahlgusslegierung bis zu hohen Dehnraten*. Materialpruefung/Materials Testing, 2010, 52, 588-595.	0.8	7

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37	Casting of Feâ€“CrMnNi and ZrO₂â€Based Metalâ€“Matrix Composites and Their Wear Properties. Steel Research International, 2016, 87, 1111-1117.	1.0	6
38	Stable and Metastable Phase Equilibria Involving the Cu6Sn5 Intermetallic. Journal of Electronic Materials, 2021, 50, 5898-5914.	1.0	6
39	Domain structure of pseudosymmetric Î·â€³-ordered Cu6Sn5 by EBSD analysis. Acta Materialia, 2022, 229, 117828.	3.8	6
40	High Strain-Rate Behavior and Transformation-Induced Plasticity of a High-Strength FeCrMoVWC Alloy Manufactured by Rapid Solidification Technique. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 3642-3653.	1.1	5
41	Thermal Stability of the Commercial Mgâ€PSZ Powders. Advanced Engineering Materials, 2015, 17, 1323-1331.	1.6	5
42	Processing of 17Cr7Mn6Ni TRIP Steel Powder by Extrusion at Room Temperature and Pressureless Sintering. Advanced Engineering Materials, 2020, 22, 2000019.	1.6	5
43	Competition of mechanisms contributing to the texture formation in metastable austenitic steel under compressive load. Materials Characterization, 2021, 176, 111132.	1.9	5
44	Microstructure Aspects of the Deformation Mechanisms in Metastable Austenitic Steels. Springer Series in Materials Science, 2020, , 325-377.	0.4	5
45	Microstructure and mechanical properties of cold extruded, cellular TRIP-matrix composite structures under quasi-static and dynamic compression. , 2010, , .		4
46	High strain rate behavior, transformation-induced plasticity and fracture toughness characterization of cast and additionally tempered Fe85Cr4Mo8V2C1 alloy manufactured using a rapid solidification technique. Journal of Materials Science, 2012, 47, 6915-6928.	1.7	3
47	Interface Phenomena Responsible for Bonding between <scp>TRIP</scp> Steel and Partially Stabilised Zirconia as Revealed by TEM. Advanced Engineering Materials, 2013, 15, 627-637.	1.6	3
48	Forming Complex Graded and Homogeneous Components by Joining Simple Presintered Parts of TRIP-Matrix Composite through Powder Forging. Metals, 2020, 10, 543.	1.0	3
49	Effect of Cu on Nitriding of Î±-Fe. Metals, 2022, 12, 619.	1.0	2
50	Texture evolution during tensile necking of copper processed by equal channel angular extrusion. Journal of Physics: Conference Series, 2010, 240, 012161.	0.3	1
51	Fatigue crack propagation and in-situ observations in three tool steel alloys manufactured using a rapid solidification technique. Journal of Materials Science, 2013, 48, 5324-5333.	1.7	1
52	Quality of dissimilar welded particle-reinforced TRIP/TWIP steels generated by electron beam braze-welding. Welding in the World, Le Soudage Dans Le Monde, 2019, 63, 1655-1667.	1.3	1
53	Orientation Dependence of the Martensitic Transformation in (Zr,Mg)O2 Embedded in a TRIP Steel Matrix. Materials Today: Proceedings, 2015, 2, S727-S730.	0.9	0
54	Preparation of CoGe2-type NiSn2 at 10ÂGPa. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2021, .	0.3	0