

# Hana Jirkova

## List of Publications by Year in descending order

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80  
papers

538  
citations

933447

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940533

16  
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82  
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82  
docs citations

82  
times ranked

283  
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#	ARTICLE	IF	CITATIONS
1	Influence of metastable retained austenite on macro and micromechanical properties of steel processed by the Q&P process. <i>Journal of Alloys and Compounds</i> , 2014, 615, S163-S168.	5.5	50
2	Microstructure Evolution in ODS Alloys with a High-Volume Fraction of Nano Oxides. <i>Metals</i> , 2018, 8, 1079.	2.3	29
3	Effect of Quenching and Partitioning Temperatures in the Q-P Process on the Properties of AHSS with Various Amounts of Manganese and Silicon. <i>Materials Science Forum</i> , 0, 706-709, 2734-2739.	0.3	27
4	Unconventional structure of X210Cr12 steel obtained by thixoforming. <i>Journal of Alloys and Compounds</i> , 2010, 504, S500-S503.	5.5	21
5	The Effect of Mn and Si on the Properties of Advanced High Strength Steels Processed by Quenching and Partitioning. <i>Materials Science Forum</i> , 0, 654-656, 94-97.	0.3	21
6	The Effect of Chromium on Microstructure Development During Q-P Process. <i>Materials Today: Proceedings</i> , 2015, 2, S627-S630.	1.8	20
7	Metastable structure of austenite base obtained by rapid solidification in a semi-solid state. <i>Journal of Alloys and Compounds</i> , 2011, 509, S312-S315.	5.5	19
8	The Effect of Alloying on Mechanical Properties of Advanced High Strength Steels. <i>Archives of Metallurgy and Materials</i> , 2014, 59, 1189-1192.	0.6	19
9	Structure of miniature components from steel produced by forming in semi-solid state. <i>Transactions of Nonferrous Metals Society of China</i> , 2010, 20, s1037-s1041.	4.2	15
10	Microstructure and Mechanical Behavior of a Mini-Thixoformed Tool Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012, 43, 3034-3038.	2.2	15
11	High Versatility of Niobium Alloyed AHSS. <i>Archives of Metallurgy and Materials</i> , 2017, 62, 1485-1491.	0.6	14
12	Fatigue properties of a low alloy 42SiCr steel heat treated by quenching and partitioning process. <i>Procedia Engineering</i> , 2011, 10, 3310-3315.	1.2	12
13	Effect of the Parameters of Semi-Solid Processing on the Elimination of Sharp-Edged Primary Chromium Carbides from Tool Steel. <i>Metals</i> , 2018, 8, 713.	2.3	12
14	Behaviour of new ODS alloys under single and multiple deformation. <i>Materiali in Tehnologije</i> , 2016, 50, 891-898.	0.5	12
15	The influence of deformation and cooling parameters after transition through semi-solid state on structure development of ledeburite steel. <i>Journal of Alloys and Compounds</i> , 2012, 536, S204-S207.	5.5	11
16	USE OF MULTI-PHASE TRIP STEEL FOR PRESS-HARDENING TECHNOLOGY. <i>Acta Metallurgica Slovaca</i> , 2019, 25, 101-106.	0.7	11
17	Influence of thermomechanical treatment on the grain-growth behaviour of new Fe-Al based alloys with fine Al <sub>2</sub> O <sub>3</sub> precipitates. <i>Materiali in Tehnologije</i> , 2017, 51, 759-768.	0.5	11
18	Microstructure of X210Cr12 steel after the forming in semi-solid state visualized by very low energy SEM in ultra high vacuum. <i>Applied Surface Science</i> , 2013, 275, 403-408.	6.1	10

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19	Continuous Cooling of CMnSi TRIP Steel. <i>Materials Today: Proceedings</i> , 2015, 2, S677-S680.	1.8	10
20	The Role of Expanded Polystyrene and Geocell in Enhancing the Behavior of Buried HDPE Pipes under Trench Loading Using Numerical Analyses. <i>Geosciences (Switzerland)</i> , 2020, 10, 251.	2.2	10
21	Modification of metastable microstructure of CPM15V steel by heat exposure after treatment in semi-solid state. <i>Journal of Alloys and Compounds</i> , 2014, 586, S159-S164.	5.5	9
22	Potential role of machine learning techniques for modeling the hardness of OPH steels. <i>Materials Today Communications</i> , 2021, 26, 101806.	1.9	9
23	Microstructure of tool steel upon combined semi-solid processing and thermomechanical treatment. <i>Journal of Alloys and Compounds</i> , 2014, 586, S165-S167.	5.5	8
24	Mini-Thixoforming of a Steel Produced by Powder Metallurgy. <i>Solid State Phenomena</i> , 0, 192-193, 500-505.	0.3	7
25	Material-technological Modelling of C45 Steel Die Forgings. <i>Procedia Engineering</i> , 2015, 100, 714-721.	1.2	7
26	Hot Rolling vs. Forging: Newly Developed Fe-Al-O Based OPH Alloy. <i>Metals</i> , 2021, 11, 228.	2.3	7
27	Determining Forming Limit Diagrams Using Sub-Sized Specimen Geometry and Comparing FLD Evaluation Methods. <i>Metals</i> , 2021, 11, 484.	2.3	7
28	Investigation on new creep- and oxidation-resistant materials. <i>Materiali in Tehnologije</i> , 2015, 49, 645-651.	0.5	7
29	The Influence of Thermomechanical Treatment of TRIP Steel on its Final Microstructure. <i>Journal of Materials Engineering and Performance</i> , 2009, 18, 385-389.	2.5	6
30	Influence of Austenite Grain Size on Mechanical Properties after Quench and Partitioning Treatment of a 42SiCr Steel. <i>Metals</i> , 2019, 9, 577.	2.3	6
31	High Temperature and Corrosion Properties of A Newly Developed Fe-Al-O Based OPH Alloy. <i>Metals</i> , 2020, 10, 167.	2.3	6
32	Influence of Cooling Rate on Microstructure and Mechanical Properties of 42SiCr Steel after Q&P Process. <i>Manufacturing Technology</i> , 2019, 19, 583-588.	1.4	6
33	Rapid Spheroidization and Grain Refinement Caused by Thermomechanical Treatment for Plain Structural Steel. <i>Materials Science Forum</i> , 0, 706-709, 2770-2775.	0.3	5
34	Optimization of the Q-P Process Parameters for Low Alloyed Steels with 0.2% C. <i>Archives of Metallurgy and Materials</i> , 2014, 59, 1205-1210.	0.6	5
35	High-strength steel components produced by hot metal gas forming. <i>Materials Science and Technology</i> , 2021, 37, 693-701.	1.6	5
36	The Effect of Heat Treatment on the Tribological Properties and Room Temperature Corrosion Behavior of Fe-Cr-Al-Based OPH Alloy. <i>Materials</i> , 2020, 13, 5465.	2.9	5

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37	Semi-Solid Processing of Powder Steels in Cryogenically-Cooled Die. Materials Science Forum, 0, 783-786, 801-806.	0.3	4
38	Microstructure evolution and creep strength of new-generation oxide dispersion strengthened alloys with high volume fraction of nano-oxides. Procedia Structural Integrity, 2019, 17, 427-433.	0.8	4
39	Influence of Chromium and Niobium on the Press-Hardening Process of Multiphase Low-Alloy TRIP Steels. Materials Science Forum, 0, 1016, 636-641.	0.3	4
40	EFFECT OF HEATING TEMPERATURE DURING SEMI-SOLID PROCESSING ON STRUCTURE OF X210CR12 STEEL. Acta Metallurgica Slovaca, 2017, 23, 229-235.	0.7	4
41	EFFECTS OF Q&P PROCESS PARAMETERS ON PROPERTIES OF 42SiCr STEEL. Acta Metallurgica Slovaca, 2018, 24, 126.	0.7	4
42	Material and technological modelling of closed-die forging. Materiali in Tehnologije, 2016, 50, 499-503.	0.5	4
43	Effects of Heat Treatment on Additively Manufactured 316L Stainless Steel. Manufacturing Technology, 2022, 22, 261-266.	1.4	4
44	Combination of International High Pressure Forming and Q-P Process for Production of Hollow Products from Ahs Steel. Advanced Materials Research, 2015, 1127, 9-15.	0.3	3
45	Microstructure Evaluation of New ODS Alloys with Fe-Al Matrix and Al <sub>2</sub> O <sub>3</sub> Particles. , 2017, , .		3
46	Use of Thixoforming as a Manufacturing Method for Metallic Composites. Metals and Materials International, 2020, 26, 1420-1429.	3.4	3
47	Combination of press-hardening and isothermal holding in the treatment of high-strength steels. IOP Conference Series: Materials Science and Engineering, 2020, 723, 012012.	0.6	3
48	Annealing Effects on the Microstructure and Thermomechanical Properties of New-Generation ODS Alloys. Key Engineering Materials, 0, 834, 67-74.	0.4	3
49	Production of shaped semi-products from AHS steels by internal pressure. Materiali in Tehnologije, 2015, 49, 739-744.	0.5	3
50	Advanced Material-Technological Modelling of Complex Dynamic Thermomechanical Processes. Materials Science Forum, 0, 654-656, 1594-1597.	0.3	2
51	Micro-Compression Test of Thixoformed Austenite. Solid State Phenomena, 2012, 192-193, 215-218.	0.3	2
52	Effect of Input Structure of Blank on Development of Final Structure when Processing at Temperatures between Solidus and Liquidus. Procedia Engineering, 2015, 100, 722-729.	1.2	2
53	Various Approaches to Accelerated Carbide Spheroidization of 54SiCr Steel. Key Engineering Materials, 2015, 647, 3-8.	0.4	2
54	Integration of Press-Hardening Technology into Processing of Advanced High Strength Steels. Materials Science Forum, 2018, 941, 317-322.	0.3	2

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55	Microstructural and Hardness Evolution of New Developed OPH Steels. Solid State Phenomena, 0, 294, 92-97.	0.3	2
56	Corrosion Behavior and Mechanical Properties of New Developed Oxide Precipitation Hardened Steels. Key Engineering Materials, 0, 846, 87-92.	0.4	2
57	Resistance of tool steel processed by unconventional forming technology against abrasive wear. Manufacturing Technology, 2021, 21, 241-246.	1.4	2
58	EFFECTS OF COOLING RATE ON THE VOLUME FRACTION OF RETAINED AUSTENITE IN FORGINGS FROM HIGH-STRENGTH Mn-Si STEELS. Acta Metallurgica Slovaca, 2019, 25, 93-100.	0.7	2
59	Innovative Process to Eliminate Ledeburite Network in Tool Steel. Manufacturing Technology, 2017, 17, 940-945.	1.4	2
60	Determination of Transformation Temperatures of Advanced High-Strength Steels and Their Use in Designing Q&P Process Routes. Manufacturing Technology, 2019, 19, 18-22.	1.4	2
61	Assessment the Role of Expanded-Polystyrene Block and Grogrid Layer on Behavior of Buried Pipeline. IOP Conference Series: Earth and Environmental Science, 0, 609, 012014.	0.3	2
62	A New Alloying Concept for Low-Density Steels. Materials, 2022, 15, 2539.	2.9	2
63	Influence of the chemical composition of 20MoCrS4 and low-alloyed TRIP steel on the intensity of high temperature corrosion. Materials and Corrosion - Werkstoffe Und Korrosion, 2007, 58, 704-709.	1.5	1
64	Designing Q&P Process for Experimental Steel with 0.47 % Carbon Content. Advanced Materials Research, 2014, 887-888, 257-261.	0.3	1
65	Capabilities of Unconventional Processing of Multiphase AHSS Steels. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012023.	0.6	1
66	Obtaining a TRIP microstructure by thermomechanical treatment without isothermal holding. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012024.	0.6	1
67	Semi-solid processing of high-chromium tool steel to obtain microstructures without carbide network. IOP Conference Series: Materials Science and Engineering, 2017, 179, 012036.	0.6	1
68	Q-P Process on Steels with Various Carbon and Chromium Contents. , 2013, , 819-824.		1
69	Q&P process in press-hardening of 42SiCr steel. Acta Metallurgica Slovaca, 2018, 24, 52.	0.7	1
70	NEW TREATMENT ROUTE FOR CLOSED-DIE FORGINGS OF STEELS WITH 2.5% MANGANESE. Acta Metallurgica Slovaca, 2018, 24, 119-125.	0.7	1
71	Development of numerical models for the heat-treatment-process optimisation in a closed-die forging production. Materiali in Tehnologije, 2015, 49, 471-475.	0.5	1
72	THERMO-MECHANICAL TREATMENT OF 42SiCr AND 42MnSi STEELS. Acta Metallurgica Slovaca, 2017, 23, 244-250.	0.7	1

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73	Comparison of intensity of high temperature surface damage for 20MoCrS4 steel with varying parameters of dynamical heating. Materials Science and Technology, 2006, 22, 1444-1448.	1.6	0
74	Experimental and Numerical Investigation of the Steel X210Cr12 Forming in Semi-Solid State. Advanced Materials Research, 0, 214, 461-466.	0.3	0
75	Steels with High Temperature Carbides - New Possibilities for Semi-Solid State Processing. Solid State Phenomena, 0, 217-218, 325-331.	0.3	0
76	Steel - a Classic Material with a Large Potential for the Future. IOP Conference Series: Materials Science and Engineering, 2016, 118, 012001.	0.6	0
77	Complex shape metallic glass composites produced in one step by mini-thixoforming. International Journal of Material Forming, 2017, 10, 173-180.	2.0	0
78	Performance Evaluation of Pavements Constructed on EPS Geofom Backfill Using Repeated Plate Load. IOP Conference Series: Earth and Environmental Science, 2019, 221, 012007.	0.3	0
79	Experimental modelling of materials properties and microstructure of new high-strength steels for press-hardening and hot metal gas forming. IOP Conference Series: Materials Science and Engineering, 2021, 1161, 012003.	0.6	0
80	Grain refinement in hypereutectoid steel by semi-solid processing followed by mechanical working. , 2020, , .		0