

# Aki Sorsa

## List of Publications by Year in descending order

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Version: 2024-02-01

37  
papers

490  
citations

933447

10  
h-index

713466

21  
g-index

38  
all docs

38  
docs citations

38  
times ranked

316  
citing authors

#	ARTICLE	IF	CITATIONS
1	Quantitative prediction of residual stress and hardness in case-hardened steel based on the Barkhausen noise measurement. NDT and E International, 2012, 46, 100-106.	3.7	102
2	Utilization of Barkhausen noise magnetizing sweeps for case-depth detection from hardened steel. NDT and E International, 2012, 52, 95-102.	3.7	60
3	Development of Barkhausen noise calibration blocks for reliable grinding burn detection. Journal of Materials Processing Technology, 2012, 212, 408-416.	6.3	40
4	Effect of Shot Peening Parameters to Residual Stress Profiles and Barkhausen Noise. Journal of Nondestructive Evaluation, 2018, 37, 1.	2.4	30
5	An Efficient Procedure for Identifying the Prediction Model Between Residual Stress and Barkhausen Noise. Journal of Nondestructive Evaluation, 2013, 32, 341-349.	2.4	27
6	Barkhausen Noise Probes and Modelling: A Review. Journal of Nondestructive Evaluation, 2019, 38, 1.	2.4	23
7	Real-coded genetic algorithms and nonlinear parameter identification. , 2008, , .		17
8	Barkhausen noise characterisation during elastic bending and tensile-compression loading of case-hardened and tempered samples. Journal of Materials Science, 2012, 47, 6420-6428.	3.7	17
9	Barkhausen noise-magnetizing voltage sweep measurement in evaluation of residual stress in hardened components. Measurement Science and Technology, 2014, 25, 085602.	2.6	17
10	Optimized laser processing of calibration blocks for grinding burn detection with Barkhausen noise. Journal of Materials Processing Technology, 2012, 212, 2282-2293.	6.3	14
11	Mathematical Analysis and Update of ADM1 Model for Biomethane Production by Anaerobic Digestion. Fermentation, 2021, 7, 237.	3.0	12
12	Genetic Algorithm-Based Variable Selection in Prediction of Hot Metal Desulfurization Kinetics. Steel Research International, 2019, 90, 1900090.	1.8	10
13	Case Depth Prediction of Nitrided Samples with Barkhausen Noise Measurement. Metals, 2019, 9, 325.	2.3	10
14	Detailed Barkhausen noise and microscopy characterization of Jominy end-quench test sample of CF53 steel. Journal of Materials Science, 2020, 55, 4896-4909.	3.7	10
15	Application of a genetic algorithm based model selection algorithm for identification of carbide-based hot metal desulfurization. Applied Soft Computing Journal, 2020, 92, 106330.	7.2	10
16	Development and calibration of a dynamic flotation circuit model. Minerals Engineering, 2016, 96-97, 168-176.	4.3	9
17	Statistical Evaluation of Barkhausen Noise Testing (BNT) for Ground Samples. Sensors, 2019, 19, 4716.	3.8	9
18	Utilization of frequency-domain information of Barkhausen noise signal in quantitative prediction of material properties. AIP Conference Proceedings, 2014, , .	0.4	8

#	ARTICLE	IF	CITATIONS
19	Feature Selection from Barkhausen Noise Data Using Genetic Algorithms with Cross-Validation. Lecture Notes in Computer Science, 2009, , 213-222.	1.3	8
20	Analysis of splashing in Basic Oxygen Furnace through systematic modelling. IFAC-PapersOnLine, 2015, 48, 171-176.	0.9	7
21	Case depth verification of hardened samples with Barkhausen noise sweeps. , 2014, , .		6
22	Model Structure Optimization for Fuel Cell Polarization Curves. Computers, 2018, 7, 60.	3.3	6
23	Prediction of Residual Stresses Using Partial Least Squares Regression on Barkhausen Noise Signals. Journal of Nondestructive Evaluation, 2013, 33, 43.	2.4	5
24	Data-driven Multivariate Analysis of Basic Oxygen Furnace Used in Steel Industry. IFAC-PapersOnLine, 2015, 48, 177-182.	0.9	5
25	Mass-balance Based Multivariate Modelling of Basic Oxygen Furnace Used in Steel Industry. IFAC-PapersOnLine, 2017, 50, 13784-13789.	0.9	5
26	Comparison of feature selection methods applied to Barkhausen noise data set. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14699-14704.	0.4	4
27	An Attempt to Find an Empirical Model between Barkhausen Noise and Stress. Materials Science Forum, 0, 768-769, 209-216.	0.3	3
28	Pilot Plant Simulation as a Tool for More Efficient Mineral Processing. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 11506-11511.	0.4	3
29	Surface Layer Characterization of Shot Peened Gear Specimens. Materials Performance and Characterization, 2018, 7, 20170169.	0.3	3
30	State detection of a wastewater treatment plant. Computer Aided Chemical Engineering, 2007, 24, 1337-1342.	0.5	2
31	Modelling of Material Properties Using Frequency Domain Information from Barkhausen Noise Signal. IFAC-PapersOnLine, 2015, 48, 201-206.	0.9	2
32	Neural Network Model Identification Studies to Predict Residual Stress of a Steel Plate Based on a Non-destructive Barkhausen Noise Measurement. Management and Industrial Engineering, 2022, , 29-45.	0.4	2
33	Systematic Data-Driven Modeling of Bimetallic Catalyst Performance for the Hydrogenation of 5-Ethoxymethylfurfural with Variable Selection and Regularization. Industrial & Engineering Chemistry Research, 2022, 61, 4752-4762.	3.7	2
34	Genetic Algorithms in Model Structure Identification for Fuel Cell Polarization Curve. , 2018, , .		1
35	Case Studies for Genetic Algorithms in System Identification Tasks. Studies in Computational Intelligence, 2010, , 243-260.	0.9	1
36	Characterisation of log loading process. Nordic Pulp and Paper Research Journal, 2014, 29, 195-200.	0.7	0

#	ARTICLE	IF	CITATIONS
37	Effect of log loading on the performance of wood room. Nordic Pulp and Paper Research Journal, 2014, 29, 201-210.	0.7	0