

# Xiangdong Gao

## List of Publications by Year in Descending Order

**Source:** <https://exaly.com/author-pdf/1771239/xiangdong-gao-publications-by-year.pdf>

**Version:** 2024-04-20

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

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

83

papers

1,615

citations

23

h-index

37

g-index

91

ext. papers

2,000

ext. citations

4.1

avg, IF

5.41

L-index

#	Paper	IF	Citations
83	Research on Microstructure Characteristics of Welded Joint by Magneto-Optical Imaging Method. <i>Metals</i> , <b>2022</b> , 12, 258	2.3	1
82	Multi-angle excited MOI and image processing strategies specified for detection of orthogonal weld defects.. <i>Optics Express</i> , <b>2022</b> , 30, 1280-1292	3.3	1
81	Numerical modeling of thermal behavior of melt pool in laser additive manufacturing of Ni-based diamond tools. <i>Ceramics International</i> , <b>2022</b> ,	5.1	2
80	Monitoring of 304 austenitic stainless-steel laser-MIG hybrid welding process based on EMD-SVM. <i>Journal of Manufacturing Processes</i> , <b>2022</b> , 73, 736-747	5	1
79	Keyhole dynamic status and spatter behavior during welding of stainless steel with adjustable-ring mode laser beam. <i>Journal of Manufacturing Processes</i> , <b>2022</b> , 74, 201-219	5	0
78	Investigation of Laser Butt Welding of AISI 304L and Q235 Steels Based on Numerical and Experimental Analyses. <i>Metals</i> , <b>2022</b> , 12, 803	2.3	0
77	Simulation and Experiments for Magneto-Optical Imaging Detection of Complex Welding Cracks. <i>IEEE Sensors Journal</i> , <b>2022</b> , 1-1	4	0
76	Laser joining technology of polymer-metal hybrid structures - A review. <i>Journal of Manufacturing Processes</i> , <b>2022</b> , 79, 934-961	5	0
75	Optimization of Magneto-Optical Imaging Visualization of Micro-Defects Under Combined Magnetic Field Based on Dynamic Permeability. <i>IEEE Transactions on Instrumentation and Measurement</i> , <b>2021</b> , 70, 1-9	5.2	0
74	Modeling for Tracking Micro Gap Weld Based on Magneto-Optical Sensing and Kalman Filtering. <i>IEEE Sensors Journal</i> , <b>2021</b> , 21, 11598-11614	4	3
73	Effect of current stability on surface formation of GMAW-based multi-layer single-pass additive deposition. <i>Journal of Mechanical Science and Technology</i> , <b>2021</b> , 35, 2449-2458	1.6	
72	Research and prospect of welding monitoring technology based on machine vision. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2021</b> , 115, 3365-3391	3.2	14
71	Adjustable Ring Mode (ARM) laser welding of stainless steels. <i>Optics and Lasers in Engineering</i> , <b>2021</b> , 137, 106360	4.6	7
70	Optimization of weld strength for laser welding of steel to PMMA using Taguchi design method. <i>Optics and Laser Technology</i> , <b>2021</b> , 136, 106726	4.2	9
69	Prohibited Items Detection in X-ray Images Based on Attention Mechanism. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 1986, 012087	0.3	
68	Magneto-Optical Imaging Detection and Reconstruction of Complex-Shaped Weld Defects. <i>Journal of Physics: Conference Series</i> , <b>2021</b> , 1986, 012050	0.3	
67	Simulation and experiment for dynamics of laser welding keyhole and molten pool at different penetration status. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2021</b> , 112, 2301-2312	3.2	16

66	Research on laser welding process and molding effect under energy deviation. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2020</b> , 108, 1863-1874	3.2	2
65	Skin depth and detection ability of magneto-optical imaging for weld defects in alternating magnetic field. <i>Journal of Manufacturing Systems</i> , <b>2020</b> , 55, 44-55	9.1	4
64	Monitoring of keyhole entrance and molten pool with quality analysis during adjustable ring mode laser welding. <i>Applied Optics</i> , <b>2020</b> , 59, 1576-1584	1.7	14
63	Influence of Hysteresis Effect on Contrast of Welding Defects Profile in Magneto-Optical Image. <i>IEEE Sensors Journal</i> , <b>2020</b> , 20, 15034-15042	4	4
62	Real-time monitoring of high-power disk laser welding statuses based on deep learning framework. <i>Journal of Intelligent Manufacturing</i> , <b>2020</b> , 31, 799-814	6.7	23
61	Multidirectional magneto-optical imaging system for weld defects inspection. <i>Optics and Lasers in Engineering</i> , <b>2020</b> , 124, 105812	4.6	8
60	Process stability analysis and weld formation evaluation during disk laser hybrid welding. <i>Optics and Lasers in Engineering</i> , <b>2020</b> , 124, 105835	4.6	11
59	Detection model of invisible weld defects by magneto-optical imaging at rotating magnetic field directions. <i>Optics and Laser Technology</i> , <b>2020</b> , 121, 105772	4.2	5
58	Data-Driven Detection of Laser Welding Defects Based on Real-Time Spectrometer Signals. <i>IEEE Sensors Journal</i> , <b>2019</b> , 19, 9364-9373	4	15
57	Influence of Sampling Frequency on Magneto-Optical Imaging Under Alternating Magnetic Field Excitation. <i>IEEE Sensors Journal</i> , <b>2019</b> , 19, 11591-11600	4	3
56	Weld cracks nondestructive testing based on magneto-optical imaging under alternating magnetic field excitation. <i>Sensors and Actuators A: Physical</i> , <b>2019</b> , 285, 289-299	3.9	12
55	Welding defects detection based on deep learning with multiple optical sensors during disk laser welding of thick plates. <i>Journal of Manufacturing Systems</i> , <b>2019</b> , 51, 87-94	9.1	58
54	High-power disk laser welding statuses monitoring based on analyses of multiple-sensor signals. <i>Journal of Manufacturing Processes</i> , <b>2019</b> , 41, 221-230	5	13
53	Detection of weld imperfection in high-power disk laser welding based on association analysis of multi-sensing features. <i>Optics and Laser Technology</i> , <b>2019</b> , 115, 306-315	4.2	7
52	Online Monitoring of Welding Status Based on a DBN Model During Laser Welding. <i>Engineering</i> , <b>2019</b> , 5, 671-678	9.7	24
51	Identification of weld defects using magneto-optical imaging. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2019</b> , 105, 1713-1722	3.2	3
50	Magneto-optical imaging feature extraction of micro-gap weld joint under nonuniform magnetic field excitation. <i>Applied Optics</i> , <b>2019</b> , 58, 291-301	1.7	3
49	A Low-Cost Welding Status Monitoring Framework for High-Power Disk Laser Welding (December 2018). <i>IEEE Access</i> , <b>2019</b> , 7, 17365-17376	3.5	8

48	Synchronized Monitoring of Droplet Transition and Keyhole Bottom in High Power Laser-MAG Hybrid Welding Process. <i>IEEE Sensors Journal</i> , <b>2019</b> , 19, 3553-3563	4	8
47	Magneto-optical imaging characteristics of weld defects under alternating and rotating magnetic field excitation. <i>Optics and Laser Technology</i> , <b>2019</b> , 112, 188-197	4.2	7
46	Prediction of high power laser welding status based on PCA and SVM classification of multiple sensors. <i>Journal of Intelligent Manufacturing</i> , <b>2019</b> , 30, 821-832	6.7	37
45	Quasi-static axial crushing behaviour and energy absorption of novel metal rope crochet-sintered mesh tubes. <i>Thin-Walled Structures</i> , <b>2018</b> , 127, 120-134	4.7	13
44	Automatic gap tracking during high power laser welding based on particle filtering method and BP neural network. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2018</b> , 96, 685-696	3.2	8
43	Analysis of welding process stability and weld quality by droplet transfer and explosion in MAG-laser hybrid welding process. <i>Journal of Manufacturing Processes</i> , <b>2018</b> , 32, 522-529	5	12
42	Status analysis of keyhole bottom in laser-MAG hybrid welding process. <i>Optics Express</i> , <b>2018</b> , 26, 347-355	3.3	14
41	Magneto-optical imaging characteristics of weld defects under alternating magnetic field excitation. <i>Optics Express</i> , <b>2018</b> , 26, 9972-9983	3.3	20
40	Modeling for detecting weld defects based on magneto-optical imaging. <i>Applied Optics</i> , <b>2018</b> , 57, 6110-6119	4.1	5
39	Detection of Weld Cracks Using Magneto-optical Imaging <b>2018</b> ,		1
38	Elucidation of high-power disk laser welding phenomena by simultaneously observing both top and bottom of weldment. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 88, 1141-1150	3.2	10
37	Laser-induced infrared characteristic analysis for evaluating joint deviation during austenitic stainless steel laser welding. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2017</b> , 88, 1877-1888	2.2	2
36	Tight butt joint weld detection based on optical flow and particle filtering of magneto-optical imaging. <i>Mechanical Systems and Signal Processing</i> , <b>2017</b> , 96, 16-30	7.8	18
35	Effect of joint gap on bead formation in laser butt welding of stainless steel. <i>Journal of Materials Processing Technology</i> , <b>2017</b> , 249, 274-284	5.3	20
34	Magneto-optical imaging deviation model of micro-gap weld joint. <i>Journal of Manufacturing Systems</i> , <b>2017</b> , 42, 82-92	9.1	16
33	Quality Monitoring for Laser Welding Based on High-Speed Photography and Support Vector Machine. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 299	2.6	11
32	Real-time Monitoring for Disk Laser Welding Based on Feature Selection and SVM. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 884	2.6	10
31	Weldment Nondestructive Testing Using Magneto-optical Imaging Induced by Alternating Magnetic Field. <i>Journal of Nondestructive Evaluation</i> , <b>2017</b> , 36, 1	2.1	12

30	Detection of micro gap weld joint by using magneto-optical imaging and Kalman filtering compensated with RBF neural network. <i>Mechanical Systems and Signal Processing</i> , <b>2017</b> , 84, 570-583	7.8	23
29	Magneto-optical imaging characteristics of weld defects under alternating magnetic field excitation <b>2017</b> ,		3
28	Data-driven based analyzing and modeling of MIMO laser welding process by integration of six advanced sensors. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2016</b> , 82, 1127-1139	3.2	12
27	Multi-sensor information fusion for monitoring disk laser welding. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2016</b> , 85, 1167-1175	3.2	16
26	Seam tracking based on Kalman filtering of micro-gap weld using magneto-optical image. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2016</b> , 83, 21-32	3.2	26
25	The high frequency characteristics of laser reflection and visible light during solid state disk laser welding. <i>Laser Physics Letters</i> , <b>2015</b> , 12, 076003	1.5	8
24	Elucidation of Metallic Plume and Spatter Characteristics Based on SVM During High-Power Disk Laser Welding. <i>Plasma Science and Technology</i> , <b>2015</b> , 17, 32-36	1.5	3
23	Weld appearance prediction with BP neural network improved by genetic algorithm during disk laser welding. <i>Journal of Manufacturing Systems</i> , <b>2015</b> , 34, 53-59	9.1	90
22	WPD-PCA-Based Laser Welding Process Monitoring and Defects Diagnosis by Using FNN and SVM. <i>IEEE Transactions on Industrial Electronics</i> , <b>2015</b> , 62, 628-636	8.9	167
21	Modeling for detecting micro-gap weld based on magneto-optical imaging. <i>Journal of Manufacturing Systems</i> , <b>2015</b> , 37, 193-200	9.1	12
20	Monitoring of welding status by molten pool morphology during high-power disk laser welding. <i>Optik</i> , <b>2015</b> , 126, 1797-1802	2.5	19
19	Detection of imperfection formation in disk laser welding using multiple on-line measurements. <i>Journal of Materials Processing Technology</i> , <b>2015</b> , 219, 209-220	5.3	25
18	A Novel Stability Quantification for Disk Laser Welding by Using Frequency Correlation Coefficient Between Multiple-Optics Signals. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2015</b> , 20, 327-337	5.5	14
17	Analysis of characteristics of molten pool using cast shadow during high-power disk laser welding. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2014</b> , 70, 1979-1988	3.2	33
16	. <i>IEEE Transactions on Industrial Informatics</i> , <b>2014</b> , 10, 1285-1295	11.9	68
15	Prediction model of weld width during high-power disk laser welding of 304 austenitic stainless steel. <i>International Journal of Precision Engineering and Manufacturing</i> , <b>2014</b> , 15, 399-405	1.7	26
14	Visual-based spatter detection during high-power disk laser welding. <i>Optics and Lasers in Engineering</i> , <b>2014</b> , 54, 1-7	4.6	32
13	Monitoring of high-power laser welding using high-speed photographing and image processing. <i>Mechanical Systems and Signal Processing</i> , <b>2014</b> , 49, 39-52	7.8	57

12	Detection of micro gap weld using magneto-optical imaging during laser welding. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2014</b> , 73, 23-33	3.2	27
11	Detection of micro-weld joint by magneto-optical imaging. <i>Optics and Laser Technology</i> , <b>2014</b> , 62, 141-151	4.2	28
10	Review of laser welding monitoring. <i>Science and Technology of Welding and Joining</i> , <b>2014</b> , 19, 181-201	3.7	121
9	Monitoring of high-power disk laser welding of type 304 austenitic stainless steel based on keyhole dynamic characteristics. <i>Insight: Non-Destructive Testing and Condition Monitoring</i> , <b>2014</b> , 56, 312-317	1.3	3
8	Neural network of plume and spatter for monitoring high-power disk laser welding. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , <b>2014</b> , 1, 293-298	3.8	21
7	Detection of weld pool width using infrared imaging during high-power fiber laser welding of type 304 austenitic stainless steel. <i>International Journal of Advanced Manufacturing Technology</i> , <b>2014</b> , 74, 1247-1254	3.2	34
6	Analysis of high-power disk laser welding stability based on classification of plume and spatter characteristics. <i>Transactions of Nonferrous Metals Society of China</i> , <b>2013</b> , 23, 3748-3757	3.3	23
5	Multiple-optics sensing of high-brightness disk laser welding process. <i>NDT and E International</i> , <b>2013</b> , 60, 32-39	4.1	33
4	Kalman Filtering Compensated by Radial Basis Function Neural Network for Seam Tracking of Laser Welding. <i>IEEE Transactions on Control Systems Technology</i> , <b>2013</b> , 21, 1916-1923	4.8	34
3	Infrared image recognition for seam tracking monitoring during fiber laser welding. <i>Mechatronics</i> , <b>2012</b> , 22, 370-380	3	45
2	Seam Tracking Monitoring Based on Adaptive Kalman Filter Embedded Elman Neural Network During High-Power Fiber Laser Welding. <i>IEEE Transactions on Industrial Electronics</i> , <b>2012</b> , 59, 4315-4325	8.9	114
1	Weld pool image centroid algorithm for seam tracking in arc welding process <b>2009</b> ,		3