

# Achim Mahrle

## List of Publications by Year in descending order

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Version: 2024-02-01

27  
papers

301  
citations

840776

11  
h-index

940533

16  
g-index

27  
all docs

27  
docs citations

27  
times ranked

196  
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigation of the influence of a two-step process chain consisting of laser cutting and subsequent forming on the fatigue behavior of AISI 304. International Journal of Fatigue, 2022, 159, 106779.	5.7	5
2	Numerical Analysis of the Primary Gas Boundary Layer Flow Structure in Laser Fusion Cutting in Context to the Striation Characteristics of Cut Edges. Fluids, 2022, 7, 17.	1.7	1
3	Tailored absorptivity: Increasing the laser weldability of copper through surface structuring. Materials Letters, 2021, 283, 128700.	2.6	3
4	Laser fusion cutting: evaluation of gas boundary layer flow state, momentum and heat transfer. Materials Research Express, 2021, 8, 036513.	1.6	9
5	Factorial Analysis of Fiber Laser Fusion Cutting of AISI 304 Stainless Steel: Evaluation of Effects on Process Performance, Kerf Geometry and Cut Edge Roughness. Materials, 2021, 14, 2669.	2.9	7
6	Energy Coupling of Laser Radiation on AISI 304 Stainless Steel: Effect of High Temperatures and Surface Oxidation. Materials, 2019, 12, 2802.	2.9	5
7	Beyond Fresnel: absorption of fibre laser radiation on rough stainless steel surfaces. Journal Physics D: Applied Physics, 2019, 52, 355302.	2.8	13
8	Thermal Efficiency Analysis for Laser-Assisted Plasma Arc Welding of AISI 304 Stainless Steel. Materials, 2019, 12, 1460.	2.9	14
9	Theoretical evaluation of radiation pressure magnitudes and effects in laser material processing. Physica Scripta, 2019, 94, 075004.	2.5	10
10	Efficient air flow control for remote laser beam welding. Journal of Laser Applications, 2018, 30, 032413.	1.7	3
11	Method for high accuracy measurements of energy coupling and melting efficiency under welding conditions. Journal of Laser Applications, 2018, 30, .	1.7	8
12	Dual Wavelength Laser Beam Cutting of High-Performance Composite Materials. Advanced Engineering Materials, 2017, 19, 1600356.	3.5	7
13	Experimental Analysis for Improvements of Process Efficiency and Cut Edge Quality of Fusion Cutting with 11¼m Laser Radiation. Physics Procedia, 2014, 56, 892-900.	1.2	16
14	Crucial role of beam spot position in laser assisted plasma arc welding. Science and Technology of Welding and Joining, 2014, 19, 119-124.	3.1	6
15	Plasma welding with a superimposed coaxial fiber laser beam. Welding in the World, Le Soudage Dans Le Monde, 2013, 57, 857-865.	2.5	4
16	Stabilisation of plasma welding arcs by low power laser beams. Science and Technology of Welding and Joining, 2013, 18, 323-328.	3.1	26
17	Laser-assisted plasma arc welding of stainless steel. Journal of Laser Applications, 2013, 25, .	1.7	20
18	Improvements of the welding performance of plasma arcs by a superimposed fibre laser beam. Proceedings of SPIE, 2012, , .	0.8	5

#	ARTICLE	IF	CITATIONS
19	A comparative study of cut front profiles and absorptivity behavior for disk and CO2 laser beam inert gas fusion cutting. Journal of Laser Applications, 2012, 24, 052006.	1.7	16
20	Experimental and Numerical Investigations of the Interaction between a Plasma Arc And a Laser. Welding in the World, Le Soudage Dans Le Monde, 2012, 56, 93-100.	2.5	14
21	Innovations in high power fiber laser applications. Proceedings of SPIE, 2012, , .	0.8	16
22	Development and experimental analysis of laser-assisted plasma ARC welding. , 2012, , .		2
23	Thermal simulation of pulsed direct laser interference patterning of metallic substrates using the smoothed particle hydrodynamics approach. Journal of Materials Processing Technology, 2012, 212, 689-699.	6.3	17
24	Process characteristics of fibre-laser-assisted plasma arc welding. Journal Physics D: Applied Physics, 2011, 44, 345502.	2.8	41
25	Derivation of optimal processing parameters for conduction mode laser beam welds by simulation. , 2008, , .		1
26	NUMERICAL INVESTIGATION OF TRANSPORT PHENOMENA IN THE FUSION ZONE OF LASER BEAM WELDED JOINTS. Numerical Heat Transfer; Part A: Applications, 2002, 41, 629-642.	2.1	5
27	The influence of fluid flow phenomena on the laser beam welding process. International Journal of Heat and Fluid Flow, 2002, 23, 288-297.	2.4	27