Frank Vollertsen

List of Publications by Citations

248 papers	4,881 citations	34 h-index	62 g-index
260 ext. papers	5,505 ext. citations	2.6 avg, IF	5.96 L-index

#	Paper	IF	Citations
248	Laser based additive manufacturing in industry and academia. *CIRP Annals - Manufacturing Technology*, **2017**, 66, 561-583	4.9	304
247	Size effects in manufacturing of metallic components. *CIRP Annals - Manufacturing Technology*, **2009**, 58, 566-587	4.9	297
246	State of the art in micro forming and investigations into micro deep drawing. *Journal of Materials Processing Technology*, **2004**, 151, 70-79	5.3	266
245	Numerical simulation of molten pool dynamics in high power disk laser welding. *Journal of Materials Processing Technology*, **2012**, 212, 262-275	5.3	212
244	State of the art in micro forming. *International Journal of Machine Tools and Manufacture*, **2006**, 46, 1172-1179	5.4	212
243	The Mechanisms of Laser Forming. *CIRP Annals - Manufacturing Technology*, **1993**, 42, 301-304	4.9	194
242	Modelling of laser forming □An review. *Computational Materials Science*, **2009**, 46, 834-840	3.2	113
241	Categories of size effects. *Production Engineering*, **2008**, 2, 377-383	1.9	113
240	Fundamentals on the Manufacturing of Sheet Metal Microparts. *CIRP Annals - Manufacturing Technology*, **1996**, 45, 277-282	4.9	99
239	The laser bending of steel foils for microparts by the buckling mechanism-a model. *Modelling and Simulation in Materials Science and Engineering*, **1995**, 3, 107-119	2	97
238	Dry metal forming: Definition, chances and challenges. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2014**, 1, 59-62	3.8	89
237	Microstructure and mechanical properties of laser-welded joints of TWIP and TRIP steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 2071-2078	5.3	88
236	Size effect in the FE-simulation of micro-forming processes. *Journal of Materials Processing Technology*, **1994**, 45, 371-376	5.3	86
235	Extrusion, channel, and profile bending: a review. *Journal of Materials Processing Technology*, **1999**, 87, 1-27	5.3	85
234	Tribological Size Effects in Sheet Metal Forming Measured by a Strip Drawing Test. *CIRP Annals - Manufacturing Technology*, **2006**, 55, 291-294	4.9	78
233	Laser processing of aluminum□titanium-tailored blanks. *Optics and Lasers in Engineering*, **2005**, 43, 1021-1035	4.6	77
232	Extending Laser Bending for the Generation of Convex Shapes. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, **1995**, 209, 433-442	2.4	72

231	Tribological behaviour of DLC-films and their application in micro deep drawing. *Journal of Materials Processing Technology*, **2012**, 212, 647-652	5.3	51
230	Combined Laser Beam Welding and Brazing Process for Aluminium Titanium Hybrid Structures. *Physics Procedia*, **2011**, 12, 215-223		47
229	Enhancement of Drawability by Local Heat Treatment. *CIRP Annals - Manufacturing Technology*, **1998**, 47, 181-184	4.9	47
228	Analysis, finite element simulation and experimental investigation of friction in tube hydroforming. *Journal of Materials Processing Technology*, **2005**, 170, 220-228	5.3	45
227	Wetting behavior of eutectic Al□Si droplets on zinc coated steel substrates. *Journal of Materials Processing Technology*, **2014**, 214, 123-131	5.3	44
226	On the working accuracy of laser bending. *Journal of Materials Processing Technology*, **1997**, 71, 422-432	5.3	43
225	On the acting pressure in laser deep drawing. *Production Engineering*, **2009**, 3, 1-8	1.9	42
224	Hydroforming of sheet metal pairs. *Journal of Materials Processing Technology*, **1999**, 87, 154-164	5.3	41
223	Effect of electromagnetic Stirring on the Element Distribution in Laser Beam Welding of Aluminium with Filler Wire. *Physics Procedia*, **2011**, 12, 56-65		40
222	Laser-Mig Hybrid Welding Of Aluminium To Steel □Effect Of Process Parameters On Joint Properties. *Welding in the World, Le Soudage Dans Le Monde*, **2012**, 56, 124-132	1.9	39
221	High temperature behaviour of NiCrAlY coatings made by laser cladding. *Surface and Coatings Technology*, **2008**, 202, 2208-2213	4.4	39
220	Magnetic stirring during laser welding of aluminum. *Journal of Laser Applications*, **2006**, 18, 28-34	2.1	39
219	On possibilities for the determination of the coefficient of friction in hydroforming of tubes. *Journal of Materials Processing Technology*, **2002**, 125-126, 412-420	5.3	39
218	Welding Thick Steel Plates with Fibre Lasers and GMAW. *Welding in the World, Le Soudage Dans Le Monde*, **2010**, 54, R62-R70	1.9	38
217	Classification of laser shock forming within the field of high speed forming processes. *Journal of Materials Processing Technology*, **2011**, 211, 953-957	5.3	36
216	Microstructure and mechanical properties of laser welded austenitic high manganese steels. *Science and Technology of Welding and Joining*, **2009**, 14, 517-522	3.7	34
215	Mechanisms and processing limits in laser thermochemical machining. *CIRP Annals - Manufacturing Technology*, **2010**, 59, 251-254	4.9	34
214	Laser beam welding of aluminum to Al-base coated high-strength steel 22MnB5. *Journal of Materials Processing Technology*, **2015**, 217, 88-95	5.3	31

213	Analysis of punch velocity dependent process window in micro deep drawing. *Production Engineering*, **2010**, 4, 553-559	1.9	30
212	Laser reconditioning of crankshafts: From lab to application. *Physics Procedia*, **2010**, 5, 387-397		30
211	Determination of size-dependent friction functions in sheet metal forming with respect to the distribution of the contact pressure. *Production Engineering*, **2008**, 2, 345-350	1.9	30
210	Novel method for joining CFRP to aluminium. *Physics Procedia*, **2010**, 5, 37-45		29
209	Influence of grain refinement on hot cracking in laser welding of aluminum. *Welding in the World, Le Soudage Dans Le Monde*, **2014**, 58, 355-366	1.9	28
208	Influence of Laser Reconditioning on Fatigue Properties of Crankshafts. *Physics Procedia*, **2011**, 12, 512-518		28
207	Flexible Straightening of Car Body Shells by Laser Forming **1993**,		28
206	Residual Stresses in Steel Specimens Induced by Laser Cladding and their Effect on Fatigue Strength. *Physics Procedia*, **2012**, 39, 354-361		25
205	Effect of Thermal Cycle on the Formation of Intermetallic Compounds in Laser Welding of Aluminum-Steel Overlap Joints. *Physics Procedia*, **2011**, 12, 134-141		25
204	Solutions for joining pipe steels using laser-GMA-hybrid welding processes. *Physics Procedia*, **2010**, 5, 77-87		25
203	Non-Thermal Laser Stretch-Forming. *Advanced Materials Research*, **2005**, 6-8, 433-440	0.5	25
202	Microstructure and Properties of Selective Laser Melted High Hardness Tool Steel. *Physics Procedia*, **2013**, 41, 843-848		24
201	X-ray investigation of melt flow behavior under magnetic stirring regime in laser beam welding of aluminum. *Journal of Laser Applications*, **2011**, 23, 032002	2.1	24
200	New approach to evaluate 3D laser printed parts in powder bed fusion-based additive manufacturing in-line within closed space. *Additive Manufacturing*, **2019**, 26, 161-165	6.1	22
199	Gap Bridging Ability in Laser Beam Welding of Thin Aluminum Sheets. *Physics Procedia*, **2014**, 56, 545-553		22
198	Welding with fiber lasers from 200 to 17000 W **2005**,		22
197	Accuracy in process chains using hydroforming. *Journal of Materials Processing Technology*, **2000**, 103, 424-433	5.3	22
196	Joining by laser shock forming: realization and acting pressures. *Production Engineering*, **2014**, 8, 283-290	1.9	21

195	Comparison of coaxial and off-axis nozzle configurations in one step process laser cladding on aluminum substrate. *Journal of Materials Processing Technology*, **2012**, 212, 2514-2519	5.3	21
194	Energy balance in laser-based free form heading. *CIRP Annals - Manufacturing Technology*, **2008**, 57, 291-294	4.9	21
193	Laser-induced liquid-phase jet-chemical etching of metals. *Journal of Materials Processing Technology*, **2004**, 149, 536-540	5.3	21
192	High-speed X-ray investigation of melt dynamics during continuous-wave laser remelting of selective laser melted Co-Cr alloy. *CIRP Annals - Manufacturing Technology*, **2019**, 68, 229-232	4.9	20
191	Fabrication and characterization of Bragg gratings in perfluorinated polymer optical fibers and their embedding in composites. *Mechatronics*, **2016**, 34, 137-146	3	20
190	The Role of Zinc Layer During Wetting of Aluminium on Zinc-coated Steel in Laser Brazing and Welding. *Physics Procedia*, **2014**, 56, 730-739		20
189	Modeling keyhole oscillations during laser deep penetration welding at different spatial laser intensity distributions. *Production Engineering*, **2015**, 9, 167-178	1.9	20
188	An approach to calculate fatigue properties of laser cladded components. *Production Engineering*, **2012**, 6, 137-148	1.9	20
187	Fabrication and Characterization of Bragg Gratings in a Graded-index Perfluorinated Polymer Optical Fiber. *Procedia Technology*, **2014**, 15, 138-146		19
186	High Speed Laser Micro Drilling for Aerospace Applications. *Procedia CIRP*, **2014**, 24, 130-133	1.8	19
185	Wear behaviour in a combined micro blanking and deep drawing process. *CIRP Annals - Manufacturing Technology*, **2014**, 63, 281-284	4.9	19
184	A Method for Deep Drawing with Multiple Elastomer Membranes. *CIRP Annals - Manufacturing Technology*, **1999**, 48, 221-226	4.9	19
183	Comparison of the fatigue strength between additively and conventionally fabricated tool steel 1.2344. *Additive Manufacturing*, **2019**, 27, 217-223	6.1	18
182	Wetting and solidification characteristics of aluminium on zinc coated steel in laser welding and brazing. *Journal of Materials Processing Technology*, **2016**, 238, 352-360	5.3	18
181	Contact-less temperature measurement and control with applications to laser cladding. *Welding in the World, Le Soudage Dans Le Monde*, **2016**, 60, 1-9	1.9	18
180	Effects on the deep drawing diagram in micro forming. *Production Engineering*, **2012**, 6, 11-18	1.9	18
179	Laser-Mig Hybrid Welding of aluminium to steel – A straightforward analytical model for wetting length. *Welding in the World, Le Soudage Dans Le Monde*, **2011**, 55, 58-66	1.9	18
178	Structuring of nanoporous nickel-based superalloy membranes via laser etching. *Journal of Materials Processing Technology*, **2009**, 209, 4739-4743	5.3	18

177	Size Effects in Micro Forming. *Key Engineering Materials*, **2011**, 473, 3-12	0.4	18
176	Additive manufacturing of tool steel by laser metal deposition. *Procedia CIRP*, **2018**, 74, 192-195	1.8	18
175	In Situ Ultrasonic Measurement of the Real Contact Area in Bulk Metal Forming Processes. *CIRP Annals - Manufacturing Technology*, **1992**, 41, 255-258	4.9	17
174	Influence of tool geometry variations on the limiting drawing ratio in micro deep drawing. *International Journal of Material Forming*, **2016**, 9, 253-258	2	16
173	Disturbance of material removal in laser-chemical machining by emerging gas. *CIRP Annals - Manufacturing Technology*, **2013**, 62, 195-198	4.9	16
172	Fabrication of an integrated optical Mach□ehnder interferometer based on refractive index modification of polymethylmethacrylate by krypton fluoride excimer laser radiation. *Applied Surface Science*, **2011**, 257, 5237-5240	6.7	16
171	Keyhole stability during laser welding□art I: modeling and evaluation. *Production Engineering*, **2016**, 10, 443-457	1.9	16
170	Descriptors for High Throughput in Structural Materials Development. *High-Throughput*, **2019**, 8,	4.3	16
169	Effect of Initial Surface Features on Laser Polishing of Co-Cr-Mo Alloy Made by Powder-Bed Fusion. *Jom*, **2019**, 71, 912-919	2.1	16
168	Laser Welding of Large Scale Stainless Steel Aircraft Structures. *Physics Procedia*, **2013**, 41, 106-111		15
167	Forming, Sintering and Rapid Prototyping **1998**, 357-453		15
166	Modelling of friction with respect to size effects. *International Journal of Material Forming*, **2008**, 1, 1231□1234		14
165	Analytical Modeling of the Keyhole Including Multiple Reflections for Analysis of the Influence of Different Laser Intensity Distributions on Keyhole Geometry. *Physics Procedia*, **2013**, 41, 460-468		13
164	Drawability of thin magnetron sputtered Al□r foils in micro deep drawing. *Transactions of Nonferrous Metals Society of China*, **2012**, 22, s268-s274	3.3	13
163	Process layout avoiding reverse drawing wrinkles in hydroforming of sheet metal. *CIRP Annals - Manufacturing Technology*, **2002**, 51, 203-208	4.9	13
162	Mechanisms and processing limits of surface finish using laser-thermochemical polishing. *CIRP Annals - Manufacturing Technology*, **2018**, 67, 201-204	4.9	13
161	Joining Oftitanium-Aluminium Seat Tracks for Aircraft Applications □System Technology and Joint Properties. *Welding in the World, Le Soudage Dans Le Monde*, **2012**, 56, 108-114	1.9	12
160	UV-laser assisted fabrication of Bragg sensor components in a planar polymer chip. *Sensors and Actuators A: Physical*, **2005**, 120, 44-52	3.9	12

159	Forming Behavior during Joining by Laser Induced Shock Waves. *Key Engineering Materials*, **2015**, 651-653, 1451-1456	0.4	11
158	Different types to use laser as a forming tool. *Physics Procedia*, **2010**, 5, 193-203		11
157	Femtosecond-laser-assisted wet chemical etching of polymer materials. *Journal of Applied Polymer Science*, **2006**, 100, 1229-1238	2.9	11
156	Impact of multi-focus beam shaping on the process stability. *Optics and Laser Technology*, **2019**, 112, 278-283	4.2	11
155	Friction and wear performance of different carbon coatings for use in dry aluminium forming processes. *Surface and Coatings Technology*, **2019**, 357, 1048-1059	4.4	11
154	High Speed Joining by Laser Shock Forming. *Advanced Materials Research*, **2014**, 966-967, 597-606	0.5	10
153	Online focus shift measurement in high power fiber laser welding. *Physics Procedia*, **2010**, 5, 455-463		10
152	Endurance limit of pulsed laser hardened component-like specimens Experiment and simulation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2008**, 488, 358-371	5.3	10
151	Deep penetration dispersing of aluminum with TiB2 using a single mode fiber laser. *Production Engineering*, **2008**, 2, 27-32	1.9	10
150	Laser Deep Penetration Welding of an Aluminum Alloy with Simultaneously Applied Vibrations. *Lasers in Manufacturing and Materials Processing*, **2017**, 4, 1-12	2.1	9
149	Advances in macro-scale laser processing. *CIRP Annals - Manufacturing Technology*, **2018**, 67, 719-742	4.9	9
148	On the limit drawing ratio of magnetron sputtered aluminium scandium foils within micro deep drawing. *Production Engineering*, **2010**, 4, 451-456	1.9	9
147	Laser Beam Joining of Dissimilar Thin Sheet Materials. *Steel Research International*, **2005**, 76, 240-244	1.6	9
146	Two-beam Laser Brazing of Thin Sheet Steel for Automotive Industry Using Cu-base Filler Material. *Physics Procedia*, **2014**, 56, 699-708		8
145	Forming Behavior of Thin Foils. *Key Engineering Materials*, **2011**, 473, 1008-1015	0.4	8
144	Undercuts by Laser Shock Forming **2011**,		8
143	Reduction of Hot Cracking in Laser Welding using Hypereutectic AlSi Filler Wire. *Welding in the World, Le Soudage Dans Le Monde*, **2008**, 52, 3-8	1.9	8
142	Laser-MIG-Hybridfügen von Aluminium-Stahl Leichtbaustrukturen. *Laser Technik Journal*, **2007**, 4, 36-40		8

141	Fabrication of a planar polymeric deformation Bragg sensor component by excimer laser radiation. *IEEE Sensors Journal*, **2006**, 6, 331-339	4	8
140	Double etching a simple method of investigating subboundary migration during creep. *Materials Science and Engineering*, **1984**, 67, L9-L14		8
139	Gap tolerant joining of aluminum with steel sheets using the hybrid technique **2006**,		8
138	Metal Forming: Microparts **2001**, 5424-5427		8
137	Laser welding of hidden T-joints with lateral beam oscillation. *Procedia CIRP*, **2018**, 74, 456-460	1.8	8
136	Fracture Analysis of Competing Failure Modes of Aluminum-CFRP Joints Using Three-Layer Titanium Laminates as Transition. *Journal of Materials Engineering and Performance*, **2015**, 24, 3558-3572	1.6	7
135	Effect of tool geometry variations on the punch force in micro deep drawing of rectangular components. *Production Engineering*, **2015**, 9, 195-201	1.9	7
134	Fracture behavior of thin foils. *Journal of Materials Processing Technology*, **2012**, 212, 685-688	5.3	7
133	Laser Brazing of Aluminum with a New Filler Wire AlZn13Si10Cu4. *Physics Procedia*, **2013**, 41, 128-136		7
132	Properties and Prospects of High Brightness Solid State Lasers. *Laser Technik Journal*, **2009**, 6, 27-31		7
131	Distortion and residual stresses in laser beam weld shaft-hub joints. *Physics Procedia*, **2010**, 5, 89-98		7
130	Humping Effect in Welding of Steel with Single-Mode Fibre Laser. *Welding in the World, Le Soudage Dans Le Monde*, **2008**, 52, 9-18	1.9	7
129	UV-laser-assisted liquid phase fluorination of PMMA. *Applied Surface Science*, **2007**, 253, 9435-9442	6.7	7
128	Thermal Generation of Residual Stress Fields for Purpose of Distortion Minimization. *Materialwissenschaft Und Werkstofftechnik*, **2006**, 37, 85-91	0.9	7
127	Mechanical and Laser Micro Deep Drawing. *Key Engineering Materials*, **2007**, 344, 799-806	0.4	7
126	Synthesis of diamond coatings on tungsten carbide with photon plasmatron. *Diamond and Related Materials*, **2005**, 14, 302-307	3.5	7
125	Determination of Forming Limit Diagrams for Thin Foil Materials Based on Scaled Nakajima Test. *Applied Mechanics and Materials*, **2015**, 794, 190-198	0.3	6
124	Energy-based Analysis of Material Dissolution Behavior for Laser-Chemical and Electrochemical Machining. *Procedia CIRP*, **2016**, 45, 347-350	1.8	6

123	Pre-selection of laser-processed materials for dry forming tools by means of a dry oscillating ball-on-disc test. *Production Engineering*, **2014**, 8, 603-611	1.9	6
122	In-situ observation of lubricant flow on laser textured die surface in sheet metal forming. *Procedia Engineering*, **2017**, 207, 2209-2214		6
121	Particle Property Impact on its Distribution During Laser Deep Alloying Processes. *Physics Procedia*, **2014**, 56, 1094-1101		6
120	Wear Behavior of a DLC-Coated Blanking and Deep Drawing Tool Combination. *Key Engineering Materials*, **2013**, 549, 511-517	0.4	6
119	Limits for interferometric measurements on rough surfaces in streaming inhomogeneous media. *Production Engineering*, **2010**, 4, 141-146	1.9	6
118	Upset ratios in laser-based free form heading. *Physics Procedia*, **2010**, 5, 227-232		6
117	Homogenisation of Thickness through High Viscous Fluid Flow. *CIRP Annals - Manufacturing Technology*, **2003**, 52, 233-236	4.9	6
116	Process layout and forming results from deep drawing using pressurized membranes. *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, **2001**, 215, 977-990	2.4	6
115	Thermal Analysis of Laser Chemical Machining: Part I: Static Irradiation. *Materials Sciences and Applications*, **2017**, 08, 685-707	0.3	6
114	Fracture Limits of Metal Foils in Micro Forming **2010**, 49-52		6
113	A strength-model for laser joined hybrid aluminumTitanium transition structures. *CIRP Annals - Manufacturing Technology*, **2016**, 65, 241-244	4.9	6
112	Developments for laser joining with high-quality seam surfaces. *Lightweight Design Worldwide*, **2017**, 10, 6-13	0.3	5
111	Mechanical Properties of High Strength Aluminum Alloy EN AW-7075 Additively Manufactured by Directed Energy Deposition. *Metals*, **2020**, 10, 579	2.3	5
110	Investigation of a UV-laser generated waveguide in a planar polymer chip using an improved interferometric method. *Optics and Lasers in Engineering*, **2012**, 50, 405-412	4.6	5
109	Inductive Preheating in Laser Beam Welding of Multimaterial Joints of 22MnB5 and AA6016. *Physics Procedia*, **2013**, 41, 41-48		5
108	Influence of Tool Geometry Variation on the Punch Force in Micro Deep Drawing. *Key Engineering Materials*, **2013**, 554-557, 1306-1311	0.4	5
107	Process Chains in Microforming Technology Using Scaling Effects **2011**,		5
106	Interaction between Laser Beam and Arc in Hybrid Welding Processes for Dissimilar Materials. *Welding in the World, Le Soudage Dans Le Monde*, **2009**, 53, 58-66	1.9	5

105	Thin nanocrystalline diamond films deposited by LaPlas-CVD at atmospheric pressure. *Production Engineering*, **2010**, 4, 9-14	1.9	5
104	Fibre laser GMA hybrid welding of thin sheet material **2007**,		5
103	Analytical model for free form radii after deep and stretch drawing using pressurised membranes. *Journal of Materials Processing Technology*, **2006**, 174, 363-370	5.3	5
102	Influence of Joint Configuration on the Strength of Laser Welded Presshardened Steel. *Physics Procedia*, **2016**, 83, 373-382		5
101	Chances and Limitations in the Application of Laser Chemical Machining for the Manufacture of Micro Forming Dies. *MATEC Web of Conferences*, **2018**, 190, 15010	0.3	5
100	Laser shock punching: principle and influencing factors. *Production Engineering*, **2019**, 13, 399-407	1.9	4
99	Rapid Material Characterization of Deep-Alloyed Steels by Shock Wave-Based Indentation Technique and Deep Rolling. *Nanomanufacturing and Metrology*, **2019**, 2, 56-64	3.4	4
98	In situ incorporation of silicon into a CVD diamond layer deposited under atmospheric conditions. *Diamond and Related Materials*, **2016**, 65, 47-52	3.5	4
97	In situ doping of diamond coatings with silicon, aluminum and titanium through a modified laser-based CVD process. *Diamond and Related Materials*, **2014**, 41, 41-48	3.5	4
96	Decreasing pore formation in multiple-sheet laser joining with interfacial polymeric contaminations. *Welding in the World, Le Soudage Dans Le Monde*, **2015**, 59, 683-692	1.9	4
95	Grain Refinement by Laser Welding of AA 5083 with Addition of Ti/B. *Physics Procedia*, **2011**, 12, 123-133		4
94	Optimisation of the blank shape for micro deep drawing of rectangular parts **2011**,		4
93	UV-laser-assisted fluorination of polymers. *Materials Letters*, **2007**, 61, 1046-1049	3.3	4
92	Increased efficiency in laser cladding by optimization of beam intensity and travel speed **2005**,		4
91	3D Microstructuring of Mold Inserts by Laser-based Removal. *Advanced Micro & Nanosystems*, **2005**, 131-159		4
90	Additive manufacturing with the lightweight material aluminium alloy EN AW-7075. *Welding in the World, Le Soudage Dans Le Monde*, **2020**, 64, 429-436	1.9	4
89	Determining Absorptivity Variations of Multiple Laser Beam Treatments of Stainless Steel Sheets. *Journal of Manufacturing and Materials Processing*, **2018**, 2, 84	2.2	4
88	Distortion-free laser beam shaping for material processing using a digital micromirror device. *Production Engineering*, **2017**, 11, 365-371	1.9	3

87	Investigations on the occurrence of different wetting regimes in laser brazing of zinc-coated steel sheets. *Welding in the World, Le Soudage Dans Le Monde*, **2020**, 64, 449-456	1.9	3
86	Connection between shock wave induced indentations and hardness by means of neural networks **2019**,		3
85	Electrolytes for Sustainable Laser-Chemical Machining of Titanium, Stellite 21 and Tool Steel X110CrMoV8-2. *Applied Mechanics and Materials*, **2015**, 794, 262-269	0.3	3
84	Distortion effects in micro welding with fibre laser **2010**,		3
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82	Maßgeschneiderte Tribologie durch Laseroberflächenbehandlung. *Materialwissenschaft Und Werkstofftechnik*, **2008**, 39, 88-92	0.9	3
81	Mechanical and Laser Micro Deep Drawing. *Key Engineering Materials*,799-806	0.4	3
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79	Spatters during Laser Deep Penetration Welding with a Bifocal Optic. *Advanced Materials Research*, **2016**, 1140, 123-129	0.5	3
78	Tribological Properties of Multi-Layer a-C:H:W/a-C:H PVD-Coatings Micro-Structured by Picosecond Laser Ablation. *Key Engineering Materials*, **2019**, 809, 439-444	0.4	3
77	Laser micro drilling methods for perforation of aircraft suction surfaces. *Procedia CIRP*, **2018**, 74, 403-406	1.8	3
76	Form filling behaviour of preforms generated by laser rod end melting. *CIRP Annals - Manufacturing Technology*, **2015**, 64, 293-296	4.9	2
75	Comparison of boiling bubble behavior during laser chemical machining under superatmospheric pressure. *Procedia CIRP*, **2020**, 94, 561-564	1.8	2
74	Energy dissipation in laser-based free form heading: a numerical approach. *Production Engineering*, **2014**, 8, 51-61	1.9	2
73	Surface Roughness and Size Effect in Dendrite Arm Spacing at Preforms of AISI 304 (1.4301) Generated by Laser Rod End Melting. *Procedia Engineering*, **2014**, 81, 1589-1594		2
72	Stress analysis based on strain measurement in sheet metal laser bending. *Production Engineering*, **2013**, 7, 647-655	1.9	2
71	Experimental and Numerical Investigation of an Overheated Aluminum Droplet Wetting a Zinc-Coated Steel Surface. *Metals*, **2017**, 7, 535	2.3	2
70	Surface accuracy achieved by upsetting of preforms generated by laser rod end melting. *MATEC Web of Conferences*, **2015**, 21, 09006	0.3	2

69	Gap bridging ability in laser beam welding of thin aluminum sheets **2014**,		2
68	Residual Stress Formation Relating to Peak Temperature- and Austenite Grain Size-based Phase Transformation of S355 Steel. *Physics Procedia*, **2014**, 56, 1343-1352		2
67	Characterization of Ti6Al4V for Integral Transition Structures in FRP□Aluminum Compounds. *Steel Research International*, **2012**, 83, 964-971	1.6	2
66	Mechanical flange forming in steel and copper foil. *Production Engineering*, **2012**, 6, 551-558	1.9	2
65	Laser-chemical precision machining of micro forming tools at low laser powers **2012**,		2
64	Experimental investigation of the melt flow in aluminum during laser welding with magnetic stirring **2010**,		2
63	Simulation of the distortion manipulation of gear wheel teeth by thermal pre-stressing. *Materialwissenschaft Und Werkstofftechnik*, **2009**, 40, 479-484	0.9	2
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60	Process modelling of laser ablating ferrous materials. *Modelling and Simulation in Materials Science and Engineering*, **1997**, 5, 79-92	2	2
59	UV-laser assisted fabrication of dispersive structures in polymeric integrated-optical components **2003**,		2
58	UV-laser assisted Fabrication of integrated-optical Waveguides. *CIRP Annals - Manufacturing Technology*, **2004**, 53, 199-202	4.9	2
57	UV-laser-assisted fabrication of integrated-optical Bragg sensor components in a planar polymer chip **2004**, 5662, 232		2
56	The Influence of a Local Heat Treatment on the Drawing Properties of an Aluminium Alloy **2001**,		2
55	Influence of filler wire oscillation on the seam texture in laser beam brazing **2019**, 359-368		2
54	Investigations on dry sliding of laser cladded aluminum bronze. *Manufacturing Review*, **2016**, 3, 13	1.4	2
53	Analysis of Melting and Melt Expulsion During Nanosecond Pulsed Laser Ablation. *Physics Procedia*, **2016**, 83, 53-61		2
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