

Christoph Herrmann

List of Publications by Year in descending order

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205
papers

7,049
citations

81743

39
h-index

76769

74
g-index

211
all docs

211
docs citations

211
times ranked

4616
citing authors

#	ARTICLE	IF	CITATIONS
1	Towards energy and resource efficient manufacturing: A processes and systems approach. CIRP Annals - Manufacturing Technology, 2012, 61, 587-609.	1.7	865
2	Metalworking fluidsâ€™Mechanisms and performance. CIRP Annals - Manufacturing Technology, 2015, 64, 605-628.	1.7	308
3	Bio-based plastics - A review of environmental, social and economic impact assessments. Journal of Cleaner Production, 2018, 185, 476-491.	4.6	303
4	Energy oriented simulation of manufacturing systems â€™ Concept and application. CIRP Annals - Manufacturing Technology, 2011, 60, 45-48.	1.7	251
5	Sustainability in manufacturing and factories of the future. International Journal of Precision Engineering and Manufacturing - Green Technology, 2014, 1, 283-292.	2.7	240
6	Process chain simulation to foster energy efficiency in manufacturing. CIRP Journal of Manufacturing Science and Technology, 2009, 1, 221-229.	2.3	214
7	Toward integrated product and process life cycle planningâ€™An environmental perspective. CIRP Annals - Manufacturing Technology, 2012, 61, 681-702.	1.7	155
8	Eco-efficiency of manufacturing processes: A grinding case. CIRP Annals - Manufacturing Technology, 2012, 61, 59-62.	1.7	133
9	A Global Assessment of Manufacturing: Economic Development, Energy Use, Carbon Emissions, and the Potential for Energy Efficiency and Materials Recycling. Annual Review of Environment and Resources, 2013, 38, 81-106.	5.6	115
10	Life Cycle Assessment of 3D Printed Products in a Distributed Manufacturing System. Journal of Industrial Ecology, 2017, 21, S80.	2.8	112
11	Ganzheitliches Life Cycle Management. , 2010, , .		111
12	An Investigation into Fixed Energy Consumption of Machine Tools. , 2011, , 268-273.		106
13	Determining optimal process parameters to increase the eco-efficiency of grinding processes. Journal of Cleaner Production, 2014, 66, 644-654.	4.6	95
14	Implementing Cyber-physical Production Systems in Learning Factories. Procedia CIRP, 2016, 54, 7-12.	1.0	92
15	An Integrated Framework for Life Cycle Engineering. Procedia CIRP, 2017, 61, 2-9.	1.0	88
16	Eco-efficiency of disposable and reusable surgical instrumentsâ€™a scissors case. International Journal of Life Cycle Assessment, 2013, 18, 1137-1148.	2.2	83
17	Life cycle engineering of lightweight structures. CIRP Annals - Manufacturing Technology, 2018, 67, 651-672.	1.7	82
18	Toward Dataâ€™Driven Applications in Lithiumâ€™Ion Battery Cell Manufacturing. Energy Technology, 2020, 8, 1900136.	1.8	79

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19	Energy flexibility of manufacturing systems for variable renewable energy supply integration: Real-time control method and simulation. <i>Journal of Cleaner Production</i> , 2017, 141, 648-661.	4.6	78
20	A simulation-based decision support for eco-efficiency improvements in production systems. <i>Journal of Cleaner Production</i> , 2015, 105, 389-405.	4.6	74
21	Implementation of the WEEE-directive's economic effects and improvement potentials for reuse and recycling in Germany. <i>International Journal of Advanced Manufacturing Technology</i> , 2010, 47, 461-474.	1.5	67
22	Data mining in battery production chains towards multi-criterial quality prediction. <i>CIRP Annals - Manufacturing Technology</i> , 2019, 68, 463-466.	1.7	67
23	Life Cycle Assessment of Electric Vehicles – A Framework to Consider Influencing Factors. <i>Procedia CIRP</i> , 2015, 29, 233-238.	1.0	65
24	Simulation of matrix-structured manufacturing systems. <i>Journal of Manufacturing Systems</i> , 2015, 37, 104-112.	7.6	64
25	SME appropriate concept for continuously improving the energy and resource efficiency in manufacturing companies. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2013, 6, 204-211.	2.3	62
26	Matrix Structures for High Volumes and Flexibility in Production Systems. <i>Procedia CIRP</i> , 2014, 17, 160-165.	1.0	62
27	Mixed Reality in Learning Factories. <i>Procedia Manufacturing</i> , 2018, 23, 153-158.	1.9	60
28	A holistic and rapid sustainability assessment tool for manufacturing SMEs. <i>CIRP Annals - Manufacturing Technology</i> , 2014, 63, 437-440.	1.7	58
29	Multi-level simulation in manufacturing companies: The water-energy nexus case. <i>Journal of Cleaner Production</i> , 2016, 139, 1118-1127.	4.6	58
30	Determining the Main Factors Influencing the Energy Consumption of Electric Vehicles in the Usage Phase. <i>Procedia CIRP</i> , 2016, 48, 352-357.	1.0	55
31	Collaboration Platform for Enabling Industrial Symbiosis: Application of the By-product Exchange Network Model. <i>Procedia CIRP</i> , 2017, 61, 263-268.	1.0	55
32	Modeling the Impact of Manufacturing Uncertainties on Lithium-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2020, 167, 060501.	1.3	55
33	Exploring the Effect of Increased Energy Density on the Environmental Impacts of Traction Batteries: A Comparison of Energy Optimized Lithium-Ion and Lithium-Sulfur Batteries for Mobility Applications. <i>Energies</i> , 2018, 11, 150.	1.6	53
34	A methodology for customized prediction of energy consumption in manufacturing industries. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2015, 2, 163-172.	2.7	51
35	Simulating Process-Product Interdependencies in Battery Production Systems. <i>Procedia CIRP</i> , 2018, 72, 346-351.	1.0	48
36	The Positive Impact Factory – Transition from Eco-efficiency to Eco-effectiveness Strategies in Manufacturing. <i>Procedia CIRP</i> , 2015, 29, 19-27.	1.0	46

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37	Battery production design using multi-output machine learning models. Energy Storage Materials, 2021, 38, 93-112.	9.5	45
38	Economic and environmental value stream map (E ² VSM) simulation for multi-product manufacturing systems. International Journal of Sustainable Engineering, 2016, 9, 354-362.	1.9	43
39	Extending Energy Value Stream Models by the TBS Dimension – Applied on a Multi Product Process Chain in the Railway Industry. Procedia CIRP, 2014, 15, 80-85.	1.0	42
40	Life cycle assessment of a disposable and a reusable surgery instrument set for spinal fusion surgeries. Resources, Conservation and Recycling, 2020, 156, 104704.	5.3	42
41	Data-driven failure mode and effect analysis (FMEA) to enhance maintenance planning. Computers in Industry, 2021, 129, 103451.	5.7	41
42	Energy Load Profile Analysis on Machine Level. Procedia CIRP, 2018, 69, 271-276.	1.0	40
43	Machine learning approach for systematic analysis of energy efficiency potentials in manufacturing processes: A case of battery production. CIRP Annals - Manufacturing Technology, 2020, 69, 21-24.	1.7	39
44	Electronics recycling as an energy efficiency measure – a Life Cycle Assessment (LCA) study on refrigerator recycling in Brazil. Journal of Cleaner Production, 2016, 129, 30-42.	4.6	38
45	Bio-based Plastics - A Building Block for the Circular Economy?. Procedia CIRP, 2018, 69, 573-578.	1.0	38
46	Urban production: State of the art and future trends for urban factories. CIRP Annals - Manufacturing Technology, 2020, 69, 764-787.	1.7	38
47	Life cycle assessment of natural graphite production for lithium-ion battery anodes based on industrial primary data. Journal of Cleaner Production, 2022, 336, 130474.	4.6	38
48	Simulation-based assessment of the energy demand in battery cell manufacturing. Procedia CIRP, 2019, 80, 126-131.	1.0	37
49	Life Cycle Engineering and Sustainable Manufacturing. Journal of Industrial Ecology, 2014, 18, 471-477.	2.8	35
50	Concurrent Design & Life Cycle Engineering in Automotive Lightweight Component Development. Procedia CIRP, 2017, 66, 16-21.	1.0	35
51	An implemented framework to estimate manufacturing-related energy consumption in product design. International Journal of Computer Integrated Manufacturing, 2013, 26, 866-880.	2.9	33
52	Integrated Computational Life Cycle Engineering – Application to the case of electric vehicles. CIRP Annals - Manufacturing Technology, 2018, 67, 25-28.	1.7	33
53	A Multivariate KPI-Based Method for Quality Assurance in Lithium-Ion-Battery Production. Procedia CIRP, 2019, 81, 75-80.	1.0	33
54	The role of life cycle engineering (LCE) in meeting the sustainable development goals – report from a consultation of LCE experts. Journal of Cleaner Production, 2019, 230, 378-382.	4.6	33

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55	End-of-Life Options for Bio-Based Plastics in a Circular Economy – Status Quo and Potential from a Life Cycle Assessment Perspective. Resources, 2020, 9, 90.	1.6	33
56	Multi-level Modeling and Simulation of Manufacturing Systems for Lightweight Automotive Components. Procedia CIRP, 2016, 41, 1049-1054.	1.0	32
57	Target-driven Life Cycle Engineering: Staying within the Planetary Boundaries. Procedia CIRP, 2018, 69, 3-10.	1.0	32
58	Sustainability Assessment and Engineering of Emerging Aircraft Technologies – Challenges, Methods and Tools. Sustainability, 2020, 12, 5663.	1.6	32
59	Shop-floor Life Cycle Assessment. Procedia CIRP, 2017, 61, 393-398.	1.0	31
60	Combining Simulation and Machine Learning as Digital Twin for the Manufacturing of Overmolded Thermoplastic Composites. Journal of Manufacturing and Materials Processing, 2020, 4, 92.	1.0	31
61	Urban Factories and Their Potential Contribution to the Sustainable Development of Cities. Procedia CIRP, 2018, 69, 72-77.	1.0	30
62	Design for reduced resource consumption during the use phase of products. CIRP Annals - Manufacturing Technology, 2017, 66, 635-658.	1.7	29
63	Factors influencing the energy intensity of automotive manufacturing plants. Journal of Cleaner Production, 2017, 142, 2305-2314.	4.6	29
64	Load profile analysis for reducing energy demands of production systems in non-production times. Applied Energy, 2019, 237, 117-130.	5.1	29
65	Smart Manufacturing for Smart Cities – Overview, Insights, and Future Directions. Advanced Intelligent Systems, 2020, 2, 2000043.	3.3	29
66	Dynamic life cycle costing based on lifetime prediction. International Journal of Sustainable Engineering, 2011, 4, 224-235.	1.9	28
67	Multiscale simulation approach for production systems. International Journal of Advanced Manufacturing Technology, 2019, 102, 1373-1390.	1.5	28
68	Life cycle assessment of an automotive factory: Identifying challenges for the decarbonization of automotive production – A case study. Journal of Cleaner Production, 2020, 270, 122330.	4.6	28
69	Ecological and economic evaluation of a novel glycerol based biocide-free metalworking fluid. Journal of Cleaner Production, 2013, 43, 12-19.	4.6	27
70	Sustainability Cockpit: An integrated tool for continuous assessment and improvement of sustainability in manufacturing. CIRP Annals - Manufacturing Technology, 2016, 65, 5-8.	1.7	27
71	An integrated approach for improving energy efficiency of manufacturing process chains. International Journal of Sustainable Engineering, 2016, 9, 11-24.	1.9	27
72	Cooling tower management in manufacturing companies: A cyber-physical system approach. Journal of Cleaner Production, 2019, 211, 428-441.	4.6	27

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73	Combining Life Cycle Assessment and Manufacturing System Simulation: Evaluating Dynamic Impacts from Renewable Energy Supply on Product-Specific Environmental Footprints. <i>International Journal of Precision Engineering and Manufacturing - Green Technology</i> , 2021, 8, 1007-1026.	2.7	27
74	Investigation of a new polymer-water based cutting fluid to substitute mineral oil based fluids in grinding processes. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2013, 6, 254-262.	2.3	26
75	Energy Efficient Process Chain: The Impact of Cutting Fluid Strategies. <i>Procedia CIRP</i> , 2015, 29, 360-365.	1.0	26
76	Integration of automotive service and technology strategies. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2010, 3, 98-106.	2.3	25
77	Bridging the Qualification Gap between Academia and Industry in India. <i>Procedia Manufacturing</i> , 2017, 9, 275-282.	1.9	25
78	Recycling 4.0 – Mapping smart manufacturing solutions to remanufacturing and recycling operations. <i>Procedia CIRP</i> , 2020, 90, 600-605.	1.0	25
79	Modelling and analysis of the energy intensity in polyacrylonitrile (PAN) precursor and carbon fibre manufacturing. <i>Journal of Cleaner Production</i> , 2021, 303, 127105.	4.6	24
80	The water-energy nexus in manufacturing systems: Framework and systematic improvement approach. <i>CIRP Annals - Manufacturing Technology</i> , 2017, 66, 49-52.	1.7	23
81	Tracking and Tracing for Data Mining Application in the Lithium-ion Battery Production. <i>Procedia CIRP</i> , 2020, 93, 162-167.	1.0	23
82	Data-Driven Digital Twins for Technical Building Services Operation in Factories: A Cooling Tower Case Study. <i>Journal of Manufacturing and Materials Processing</i> , 2020, 4, 97.	1.0	23
83	Cyber-physical production system approach for energy and resource efficient planning and operation of plating process chains. <i>Journal of Cleaner Production</i> , 2021, 280, 125160.	4.6	23
84	Improved Visualization in LCA Through the Application of Cluster Heat Maps. <i>Procedia CIRP</i> , 2017, 61, 732-737.	1.0	22
85	Technological evaluation of a novel glycerol based biocide-free metalworking fluid. <i>Journal of Cleaner Production</i> , 2012, 35, 176-182.	4.6	21
86	Life cycle assessment of cubic boron nitride grinding wheels. <i>Journal of Cleaner Production</i> , 2015, 107, 707-721.	4.6	21
87	Data-driven cyber-physical System for Quality Gates in Lithium-ion Battery Cell Manufacturing. <i>Procedia CIRP</i> , 2020, 93, 168-173.	1.0	21
88	Influence of the cutting fluid on process energy demand and surface roughness in grinding – a technological, environmental and economic examination. <i>International Journal of Advanced Manufacturing Technology</i> , 2015, 77, 2005-2017.	1.5	20
89	Increasing Energy Flexibility of Manufacturing Systems through Flexible Compressed Air Generation. <i>Procedia CIRP</i> , 2015, 37, 18-23.	1.0	19
90	A Generic Sankey Tool for Evaluating Energy Value Stream in Manufacturing Systems. <i>Procedia CIRP</i> , 2017, 61, 475-480.	1.0	19

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91	Life Cycle Engineering of Carbon Fibres for Lightweight Structures. Procedia CIRP, 2018, 69, 43-48.	1.0	19
92	Towards energy flexible and energy self-sufficient manufacturing systems. Procedia CIRP, 2019, 81, 683-688.	1.0	19
93	Investigation on the Effects of Nanoparticles on Cutting Fluid Properties and Tribological Characteristics. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 433-447.	2.7	19
94	LCA of Electromobility. , 2018, , 669-693.		18
95	Life Cycle Engineering of future aircraft systems: the case of eVTOL vehicles. Procedia CIRP, 2020, 90, 297-302.	1.0	18
96	Ecologically Benign Lubricants – Evaluation From a Life Cycle Perspective. Clean - Soil, Air, Water, 2007, 35, 427-432.	0.7	17
97	Environmental Impact Analysis of a Water Supply System: Study of an Indian University Campus. Procedia CIRP, 2015, 29, 468-473.	1.0	16
98	Life Cycle Engineering Based on Visual Analytics. Procedia CIRP, 2018, 69, 37-42.	1.0	16
99	Enabling smart manufacturing through a systematic planning framework for edge computing. CIRP Journal of Manufacturing Science and Technology, 2020, 31, 351-369.	2.3	16
100	Life cycle sustainability assessment of potential battery systems for electric aircraft. Procedia CIRP, 2021, 98, 660-665.	1.0	16
101	Model-based energy analysis of a dry room HVAC system in battery cell production. Procedia CIRP, 2021, 98, 157-162.	1.0	16
102	Exploring the Opportunities of System of Systems Engineering to Complement Sustainable Manufacturing and Life Cycle Engineering. Procedia CIRP, 2019, 80, 637-642.	1.0	15
103	Virtual Quality Gates in Manufacturing Systems: Framework, Implementation and Potential. Journal of Manufacturing and Materials Processing, 2020, 4, 106.	1.0	15
104	A modular LCA/LCC-modelling concept for evaluating material and process innovations in carbon fibre manufacturing. Procedia CIRP, 2021, 98, 529-534.	1.0	15
105	Drivers and Barriers of Environmentally Conscious Manufacturing: A Comparative Study of Indian and German Organizations. , 2012, , 97-102.		14
106	Assessing Combined Water-Energy-Efficiency Measures in the Automotive Industry. Procedia CIRP, 2015, 29, 50-55.	1.0	14
107	Development and testing of a novel glycerol/chitosan based biocide-free hydraulic fluid. Journal of Cleaner Production, 2016, 112, 3589-3596.	4.6	14
108	Life Cycle Oriented Industrial Value Creation in Cities. Procedia CIRP, 2018, 69, 94-99.	1.0	14

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109	Analyzing different material supply strategies in matrix-structured manufacturing systems. Procedia CIRP, 2019, 81, 1004-1009.	1.0	14
110	A Concept for Blockchain-Based LCA and its Application in the Context of Aircraft MRO. Procedia CIRP, 2021, 98, 394-399.	1.0	14
111	Stepwise approach to reduce the costs and environmental impacts of grinding processes. International Journal of Advanced Manufacturing Technology, 2014, 71, 919-931.	1.5	13
112	Life Cycle Assessment for the comparison of urban and non-urban produced products. Procedia CIRP, 2019, 80, 405-410.	1.0	13
113	Cradle-to-Gate Analysis of the Embodied Energy in Lithium Ion Batteries. Procedia CIRP, 2019, 80, 304-309.	1.0	13
114	Multi-Criteria Optimization in the Production of Lithium-Ion Batteries. Procedia Manufacturing, 2020, 43, 720-727.	1.9	13
115	Environmental Aspects of the Recycling of Lithium-Ion Traction Batteries. Sustainable Production, Life Cycle Engineering and Management, 2018, , 267-288.	0.2	13
116	Investigation of A New Ecologically Benign Metalworking Fluid in Abrasive Machining Processes to Substitute Mineral Oil Based Fluids. Procedia CIRP, 2012, 1, 393-398.	1.0	12
117	Toolbox for Increasing Resource Efficiency in the European Metal Mechanic Sector. Procedia CIRP, 2017, 61, 40-45.	1.0	12
118	Experiencing Closed Loop Manufacturing in a Learning Environment. Procedia Manufacturing, 2017, 9, 57-64.	1.9	12
119	Environmental Impacts of Cooling Tower Operations – The Influence of Regional Conditions on Energy and Water Demands. Procedia CIRP, 2018, 69, 277-282.	1.0	12
120	Data-and Expert-Driven Analysis of Cause-Effect Relationships in the Production of Lithium-Ion Batteries. , 2019, , .		12
121	The Influence of Manufacturing Plant Site Selection on Environmental Impact of Machining Processes. Procedia CIRP, 2019, 80, 186-191.	1.0	12
122	Integrated Material-Energy-Quality Assessment for Lithium-ion Battery Cell Manufacturing. Procedia CIRP, 2021, 98, 388-393.	1.0	12
123	Development of a Decision Support System for 3D Printing Processes based on Cyber Physical Production Systems. Procedia CIRP, 2021, 98, 348-353.	1.0	12
124	Using Jatropha Oil Based Metalworking Fluids in Machining Processes: A Functional and Ecological Life Cycle Evaluation. , 2012, , 311-316.		12
125	Energy Efficient Cutting Fluid Supply: The Impact of Nozzle Design. Procedia CIRP, 2017, 61, 564-569.	1.0	11
126	Framework of a Modular Tool Box for the Design of Process Chains in Automotive Component Manufacturing. Procedia CIRP, 2017, 63, 739-744.	1.0	11

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127	Bottleneck reduction strategies for energy efficiency in the battery manufacturing. Procedia CIRP, 2021, 104, 1017-1022.	1.0	11
128	Comparative Analysis for Solar Energy Based Learning Factory: Case Study for TU Braunschweig and BITS Pilani. Procedia CIRP, 2018, 69, 407-411.	1.0	10
129	Exploring the Potentials of Mixed Reality for Life Cycle Engineering. Procedia CIRP, 2018, 69, 638-643.	1.0	10
130	Transferring life cycle engineering to surface engineering. Procedia CIRP, 2020, 90, 557-562.	1.0	10
131	Design of Eco-Efficient Body Parts for Electric Vehicles Considering Life Cycle Environmental Information. Sustainability, 2020, 12, 5838.	1.6	10
132	Integrated computational product and production engineering for multi-material lightweight structures. International Journal of Advanced Manufacturing Technology, 2020, 110, 2551-2571.	1.5	10
133	A Tool-supported Approach towards Water Efficiency in Manufacturing. Procedia CIRP, 2015, 28, 34-39.	1.0	9
134	Utilizing Gaming Technology for Simulation of Urban Production. Procedia CIRP, 2017, 61, 469-474.	1.0	9
135	Automated statistical evaluation of energy data in the automotive production. Procedia CIRP, 2019, 81, 1154-1159.	1.0	9
136	Integration of Energy Oriented Manufacturing Simulation into the Life Cycle Evaluation of Lightweight Body Parts. International Journal of Precision Engineering and Manufacturing - Green Technology, 0, , 1.	2.7	9
137	3d Thermal Climate Monitoring in Factory Buildings. Procedia CIRP, 2015, 29, 98-103.	1.0	8
138	Unlocking water efficiency improvements in manufacturing – From approach to tool support. CIRP Journal of Manufacturing Science and Technology, 2017, 19, 7-18.	2.3	8
139	Machine learning and simulation-based surrogate modeling for improved process chain operation. International Journal of Advanced Manufacturing Technology, 2021, 117, 2297-2307.	1.5	8
140	Process Modeling and Simulation of Tableting – An Agent-Based Simulation Methodology for Direct Compression. Pharmaceutics, 2021, 13, 996.	2.0	8
141	Ontology-based Traceability System for Interoperable Data Acquisition in Battery Cell Manufacturing. Procedia CIRP, 2021, 104, 1215-1220.	1.0	8
142	Research-based Learning for Skill Development of Engineering Graduates: An empirical study. Procedia Manufacturing, 2019, 31, 323-329.	1.9	7
143	Das Humanpotenzial einer taktunabhängigen Montage. ZWF Zeitschrift fuer Wirtschaftlichen Fabrikbetrieb, 2014, 109, 687-690.	0.2	7
144	Comparison of conventional and electric passenger aircraft for short-haul flights – A life cycle sustainability assessment. Procedia CIRP, 2022, 105, 464-469.	1.0	7

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145	Energy efficiency of Heating, Ventilation and Air Conditioning systems in production environments through model-predictive control schemes: The case of battery production. Journal of Cleaner Production, 2022, 350, 131354.	4.6	7
146	Achieving Environmental Performance Goals - Evaluation of Impact Factors Using a Knowledge Discovery in Databases Approach. Procedia CIRP, 2016, 48, 230-235.	1.0	6
147	Transferring experience labs for production engineering students to universities in newly industrialized countries. IOP Conference Series: Materials Science and Engineering, 2018, 297, 012053.	0.3	6
148	Integrating environmental impact targets in early phases of production planning for lightweight structures. Procedia CIRP, 2019, 80, 168-173.	1.0	6
149	Implementing mixed reality in automotive life cycle engineering: A visual analytics based approach. Procedia CIRP, 2019, 80, 717-722.	1.0	6
150	Energy flexible management of industrial technical building services: a synergetic data-driven and simulation approach for cooling towers. Procedia CIRP, 2019, 81, 775-780.	1.0	6
151	Urban factoriesâ€”interdisciplinary perspectives on resource efficiency. , 2020, , 41-52.		6
152	Model-based analysis, control and dosing of electroplating electrolytes. International Journal of Advanced Manufacturing Technology, 2020, 111, 1751-1766.	1.5	6
153	Urbane Produktion: Ã–konomie als Analogie fÃ¼r eine nachhaltige WertschÃ¶pfung in StÃ¤dten. , 2018, , 195-207.		6
154	Ontology-based approach to support life cycle engineering: Development of a data and knowledge structure. Procedia CIRP, 2022, 105, 398-403.	1.0	6
155	Implementation of a cyber-physical cooling storage station in a learning factory. Procedia Manufacturing, 2019, 31, 142-147.	1.9	5
156	An Investigation into Holistic Planning of Urban Factories. Procedia CIRP, 2019, 80, 649-654.	1.0	5
157	Feature Selection Based on Visual Analytics for Quality Prediction in Aluminium Die Casting. , 2019, , .		5
158	Cutting fluid emissions in grinding processes: influence of process parameters on particle size and mass concentration. International Journal of Advanced Manufacturing Technology, 2019, 101, 773-783.	1.5	5
159	Towards knowledge based LCE of battery technologies. Procedia CIRP, 2020, 90, 683-688.	1.0	5
160	Enabling Energy Efficient HVAC Operation Through IWSNs. IEEE Transactions on Green Communications and Networking, 2022, 6, 132-147.	3.5	5
161	Energy efficiency of technical building services in production environmentsâ€”Application to dry rooms in battery production. CIRP Annals - Manufacturing Technology, 2021, 70, 21-24.	1.7	5
162	Architecture and development approach for integrated cyber-physical production-service systems (CPPSS). Procedia CIRP, 2020, 90, 742-747.	1.0	5

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163	Synergetic Modelling of Energy and Resource Efficiency as well as Occupational Safety and Health Risks of Plating Process Chains. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 795-815.	2.7	5
164	Model-based identification of production tolerances in battery production. Procedia CIRP, 2021, 104, 1059-1064.	1.0	5
165	Digitalization Platform for Mechanistic Modeling of Battery Cell Production. Sustainability, 2022, 14, 1530.	1.6	5
166	How to characterize a NDT method for weld inspection in battery cell manufacturing using deep learning. International Journal of Advanced Manufacturing Technology, 2022, 119, 4829.	1.5	5
167	Methodology for a combined uncertainty analysis and data quality rating of existing graphite datasets in context of battery LCAs. Procedia CIRP, 2022, 105, 577-582.	1.0	5
168	Model-based energy flexibility analysis of a dry room HVAC system in battery cell production. Procedia CIRP, 2022, 105, 410-415.	1.0	5
169	Comparative thermal analysis of cutting fluids in pendular surface grinding. International Journal of Advanced Manufacturing Technology, 2016, 87, 1751-1763.	1.5	4
170	Integrative simulation of information flows in manufacturing systems. Procedia CIRP, 2019, 81, 647-652.	1.0	4
171	Urban Factories: Identifying Products for Production in Cities. , 2019, , 185-198.		4
172	Biological transformation of manufacturing as a pathway towards environmental sustainability: Calling for systemic thinking. CIRP Journal of Manufacturing Science and Technology, 2020, 34, 157-157.	2.3	4
173	Wertschöpfungs durch Mehrfachnutzung. ZWF Zeitschrift fuer Wirtschaftlichen Fabrikbetrieb, 2008, 103, 602-606.	0.2	4
174	Life Cycle Engineering Modelling Framework for batteries powering electric aircrafts – the contribution of eVTOLs towards a more sustainable urban mobility. Procedia CIRP, 2022, 105, 368-373.	1.0	4
175	Systematic Development of Sustainability-Oriented Cyber-Physical Production Systems. Sustainability, 2022, 14, 2080.	1.6	4
176	A data mining approach for continuous battery cell manufacturing processes from development towards production. Advances in Industrial and Manufacturing Engineering, 2022, 4, 100078.	1.2	4
177	Machine learning based analysis of factory energy load curves with focus on transition times for anomaly detection. Procedia CIRP, 2020, 93, 461-466.	1.0	3
178	Product System Modularization in LCA Towards a Graph Theory Based Optimization for Product Design Alternatives. Sustainable Production, Life Cycle Engineering and Management, 2019, , 37-44.	0.2	3
179	Data-driven Analysis of Product Property Propagation to Support Process-integrated Quality Management in Manufacturing Systems. Procedia CIRP, 2021, 104, 900-905.	1.0	3
180	Methodic Eco-design Considering Consumer Needs and Requirements - Case study with Computer Mouse. , 0, , .		2

#	ARTICLE	IF	CITATIONS
181	Supporting SMEs towards adopting mixed reality : A training concept to bring the reality-virtuality continuum into application. , 2018, , .		2
182	Evaluation of the Recyclability of Traction Batteries Using the Concept of Information Theory Entropy. , 2019, , 93-103.		2
183	Integration of product entropy and LCA to screen the potential environmental impacts of complex product systems at the end-of-life stage. CIRP Annals - Manufacturing Technology, 2019, 68, 25-28.	1.7	2
184	Edge Computing for the Production Industry A Systematic Approach to Enable Decision Support and Planning of Edge. , 2019, , .		2
185	Towards Eco-Factories of the Future. Sustainable Production, Life Cycle Engineering and Management, 2019, , 1-15.	0.2	2
186	Life Cycle Assessment of Industrial Cooling Towers. Sustainable Production, Life Cycle Engineering and Management, 2019, , 135-146.	0.2	2
187	Life Cycle Engineering of Composite Materials. , 2021, , 235-244.		2
188	LCA based analysis of product portfolios - towards decarbonization. Procedia CIRP, 2022, 105, 519-524.	1.0	2
189	Multi-scale Simulation for Energy Flexible Factories and Factory Networks: A System of Systems Perspective. Procedia CIRP, 2022, 105, 404-409.	1.0	2
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