

Matti MÄäntysalo

List of Publications by Year in descending order

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107
papers

2,893
citations

218381

26
h-index

189595

50
g-index

107
all docs

107
docs citations

107
times ranked

3373
citing authors

#	ARTICLE	IF	CITATIONS
1	Effect of Electrode Structure on the Performance of Fully Printed Piezoelectric Energy Harvesters. , 2022, 1, 24-31.		4
2	An improved exponential model for charge and discharge behavior of printed supercapacitor modules under varying load conditions. Journal of Power Sources, 2022, 535, 231475.	4.0	16
3	Flexible Polymer Rectifying Diode on Plastic Foils with MoO ₃ Hole Injection. , 2022, , .		0
4	Assessment of a Cyclic Bending Test Method for Printed Flexible Supercapacitor. , 2022, , .		3
5	Unobtrusive, Low-Cost Out-of-Hospital, and In-Hospital Measurement and Monitoring System. Advanced Intelligent Systems, 2021, 3, 2000030.	3.3	2
6	Inkjet-Printed, Nanofiber-Based Soft Capacitive Pressure Sensors for Tactile Sensing. IEEE Sensors Journal, 2021, 21, 26286-26293.	2.4	10
7	Impedance plethysmography-based method in the assessment of subclinical atherosclerosis. Atherosclerosis, 2021, 319, 101-107.	0.4	7
8	Rolling reliability of polyurethane and polyurethane-acrylic ICAs interconnections on printed stretchable electronics. Microelectronics Reliability, 2021, 119, 114067.	0.9	2
9	Fully Integrated Wireless Elastic Wearable Systems for Health Monitoring Applications. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2021, 11, 1022-1027.	1.4	11
10	Fully Printed Unobtrusive and Skin-conformable Piezoelectric Energy Harvester. , 2021, , .		3
11	Failure Mechanisms in Flip-Chip Bonding on Stretchable Printed Electronics. Advanced Engineering Materials, 2021, 23, 2100264.	1.6	12
12	Self-Powered, Ultrathin, and Transparent Printed Pressure Sensor for Biosignal Monitoring. ACS Applied Electronic Materials, 2021, 3, 4362-4375.	2.0	18
13	Improvements in the electromechanical properties of stretchable interconnects by locally tuning the stiffness. Flexible and Printed Electronics, 2020, 5, 015004.	1.5	3
14	Bending reliability of screen-printed vias for a flexible energy module. Npj Flexible Electronics, 2020, 4, .	5.1	13
15	Mechanically driven strategies to improve electromechanical behaviour of printed stretchable electronic systems. Scientific Reports, 2020, 10, 12037.	1.6	4
16	Formulation, printing, and poling method for piezoelectric films based on PVDF-TrFE. Journal of Applied Physics, 2020, 128, .	1.1	15
17	Inkjet Printable Polydimethylsiloxane for All-Inkjet-Printed Multilayered Soft Electrical Applications. ACS Applied Materials & Interfaces, 2020, 12, 11990-11997.	4.0	53
18	Drying-Mediated Self-Assembly of Graphene for Inkjet Printing of High-Rate Micro-supercapacitors. Nano-Micro Letters, 2020, 12, 40.	14.4	45

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19	Deformability Analysis and Improvement in Stretchable Electronics Systems Through Finite Element Analysis. Lecture Notes in Mechanical Engineering, 2020, , 755-763.	0.3	3
20	Inkjet printing, laser-based micromachining, and micro-3D printing technologies for MEMS. , 2020, , 531-545.		6
21	Inkjettable, polydimethylsiloxane based soft electronics. , 2020, , .		2
22	All Printed Flexible Piezoelectric Pressure Sensor with Interdigitated Electrodes. , 2020, , .		4
23	Design of Thin, High Permittivity, Multiband, Monopole-Like Antennas. , 2020, , .		0
24	Effect of Different ECG Leads on Estimated R-R Intervals and Heart Rate Variability Parameters. , 2019, 2019, 3786-3790.		9
25	Evaluation of Printed P(VDF-TrFE) Pressure Sensor Signal Quality in Arterial Pulse Wave Measurement. IEEE Sensors Journal, 2019, 19, 11072-11080.	2.4	18
26	Printed Flexible Microelectrode for Application of Nanosecond Pulsed Electric Fields on Cells. Materials, 2019, 12, 2713.	1.3	6
27	Validation of Printed, Skin-Mounted Multilead Electrode for ECG Measurements. Advanced Materials Technologies, 2019, 4, 1900246.	3.0	19
28	A Fully Printed Ultra-Thin Charge Amplifier for On-Skin Biosignal Measurements. IEEE Journal of the Electron Devices Society, 2019, 7, 566-574.	1.2	23
29	Screen Printed Temporary Tattoos for Skin-Mounted Electronics. , 2019, , .		3
30	Non-Invasive Flexible and Stretchable Wearable Sensors With Nano-Based Enhancement for Chronic Disease Care. IEEE Reviews in Biomedical Engineering, 2019, 12, 34-71.	13.1	52
31	Screen-Printed Curvature Sensors for Soft Robots. IEEE Sensors Journal, 2018, 18, 223-230.	2.4	70
32	Electrical Contacts in SOI MEMS Using Aerosol Jet Printing. IEEE Journal of the Electron Devices Society, 2018, 6, 34-40.	1.2	16
33	Processing of printed silver patterns on an ETFE substrate. , 2018, , .		0
34	Screen Printed Vias for a Flexible Energy Harvesting and Storage Module. , 2018, , .		8
35	Lifetime and reliability of flexible aqueous supercapacitors: constant voltage floating and bending experiments. , 2018, , .		4
36	The Effect of Encapsulation Geometry on the Performance of Stretchable Interconnects. Micromachines, 2018, 9, 645.	1.4	14

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37	Evaluation of screen printed silver trace performance and long-term reliability against environmental stress on a low surface energy substrate. <i>Microelectronics Reliability</i> , 2018, 86, 54-65.	0.9	7
38	Geometry Analysis in Screen-Printed Stretchable Interconnects. <i>IEEE Transactions on Components, Packaging and Manufacturing Technology</i> , 2018, 8, 1344-1352.	1.4	13
39	High Resolution E-Jet Printed Temperature Sensor on Artificial Skin. <i>IFMBE Proceedings</i> , 2018, , 839-842.	0.2	8
40	Electrode Comparison for Textile-Integrated Electrocardiogram and Impedance Pneumography Measurement. <i>IFMBE Proceedings</i> , 2018, , 302-305.	0.2	1
41	High-Resolution E-Jet Enhanced MEMS Packaging. <i>ECS Meeting Abstracts</i> , 2018, , .	0.0	0
42	Combination of E-Jet and Inkjet Printing for Additive Fabrication of Multilayer High-Density RDL of Silicon Interposer. <i>IEEE Transactions on Electron Devices</i> , 2017, 64, 1217-1224.	1.6	23
43	Inkjet printing technology for increasing the I/O density of 3D TSV interposers. <i>Microsystems and Nanoengineering</i> , 2017, 3, 17002.	3.4	28
44	Chip-by-chip configurable interconnection using digital printing techniques. <i>Journal of Micromechanics and Microengineering</i> , 2017, 27, 045009.	1.5	2
45	Comparison of simple algorithms for estimating respiration rate from electrical impedance pneumography signals in wearable devices. <i>Health and Technology</i> , 2017, 7, 21-31.	2.1	16
46	Fabrication and characterization of screen printed stretchable carbon interconnects. , 2017, , .		3
47	Inkjet printed metallic micropillars for bare die flip-chip bonding. <i>Flexible and Printed Electronics</i> , 2017, 2, 045005.	1.5	10
48	Soft actuators with screen-printed curvature sensors. , 2017, , .		6
49	Benchmark study of screen printable silver inks on a PPE based substrate. , 2017, , .		0
50	Capability Assessment of Inkjet Printing for Reliable RFID Applications. <i>IEEE Transactions on Device and Materials Reliability</i> , 2017, 17, 281-290.	1.5	10
51	Printed soft-electronics for remote body monitoring. , 2017, , .		1
52	High density R2R screen printed silver interconnections for hybrid system integration. , 2016, , .		2
53	Testing and modeling the performance of stretchable screen printed UHF RFID tag under strain. , 2016, , .		0
54	Printed, skin-mounted hybrid system for ECG measurements. , 2016, , .		10

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55	Optimal Short Distance Electrode Locations for Impedance Pneumography Measurement from the Frontal Thoracic Area. IFMBE Proceedings, 2016, , 1144-1149.	0.2	5
56	Screen-Printed Stretchable Interconnects. , 2016, , .		2
57	RF measurements to pinpoint defects in inkjet-printed, thermally and mechanically stressed coplanar waveguides. Microelectronics Reliability, 2016, 65, 142-150.	0.9	3
58	Screen-Printing Fabrication and Characterization of Stretchable Electronics. Scientific Reports, 2016, 6, 25784.	1.6	151
59	Inkjet-Printed Graphene/PEDOT:PSS Temperature Sensors on a Skin-Conformable Polyurethane Substrate. Scientific Reports, 2016, 6, 35289.	1.6	253
60	Evaluation of Aerosol, Superfine Inkjet, and Photolithography Printing Techniques for Metallization of Application Specific Printed Electronic Circuits. IEEE Transactions on Electron Devices, 2016, 63, 1246-1253.	1.6	28
61	Inkjet Printing, Laser-Based Micromachining and Micro 3D Printing Technologies for MEMS. , 2015, , 550-564.		3
62	Comparison of laser and intense pulsed light sintering (IPL) for inkjet-printed copper nanoparticle layers. Scientific Reports, 2015, 5, 8832.	1.6	142
63	Inkjet-printed wireless epidermal electronics. , 2015, , .		0
64	Inkjet printed single layer high-density circuitry for a MEMS device. , 2015, , .		6
65	Metallization of high density TSVs using super inkjet technology. , 2015, , .		10
66	Inkjet filling of TSVs with silver nanoparticle ink. , 2014, , .		11
67	Inkjet printed nano-particle Cu process for fabrication of re-distribution layers on silicon wafer. , 2014, , .		6
68	Integration of inkjet and RF SoC technologies to fabricate wireless physiological monitoring system. , 2014, , .		7
69	Characterization of Laser Sintering of Copper Nanoparticle Ink by FEM and Experimental Testing. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2014, 4, 2018-2025.	1.4	10
70	Inkjet printing in manufacturing of stretchable interconnects. , 2014, , .		19
71	Inkjet printed wireless biosensors on stretchable substrate. , 2014, , .		9
72	Alternative sintering methods compared to conventional thermal sintering for inkjet printed silver nanoparticle ink. Thin Solid Films, 2014, 556, 452-459.	0.8	154

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73	A Health-IoT Platform Based on the Integration of Intelligent Packaging, Unobtrusive Bio-Sensor, and Intelligent Medicine Box. IEEE Transactions on Industrial Informatics, 2014, 10, 2180-2191.	7.2	548
74	Reliability of SMD interconnections on flexible low-temperature substrates with inkjet-printed conductors. Microelectronics Reliability, 2014, 54, 272-280.	0.9	15
75	Integration of f-MWCNT Sensor and Printed Circuits on Paper Substrate. IEEE Sensors Journal, 2013, 13, 3948-3956.	2.4	33
76	Body-Worn Antennas Making a Splash: Lifejacket-Integrated Antennas for Global Search and Rescue Satellite System. IEEE Antennas and Propagation Magazine, 2013, 55, 324-341.	1.2	43
77	Oven Sintering Process Optimization for Inkjet-Printed Ag Nanoparticle Ink. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 350-356.	1.4	56
78	Electrical and humidity-sensing characterization of inkjet-printed multi-walled carbon nanotubes for smart packaging. , 2013, , .		3
79	Electrical Performance Characterization of an Inkjet-Printed Flexible Circuit in a Mobile Application. IEEE Transactions on Components, Packaging and Manufacturing Technology, 2013, 3, 1604-1610.	1.4	35
80	FAILURE MODE CHARACTERIZATION IN INKJET-PRINTED CPW LINES UTILIZING A HIGH-FREQUENCY NETWORK ANALYZER AND POST-PROCESSED TDR ANALYSIS. Progress in Electromagnetics Research C, 2013, 43, 1-14.	0.6	4
81	The Effect of Laser Sintering Process Parameters on Cu Nanoparticle Ink in Room Conditions. Optics and Photonics Journal, 2013, 03, 40-44.	0.3	30
82	The effect of sintering profile and printed layer variations with inkjet-printed large-area applications. , 2012, , .		1
83	Inkjet printed flexible user interface module. , 2012, , .		7
84	A system-on-chip and paper-based inkjet printed electrodes for a hybrid wearable bio-sensing system. , 2012, 2012, 5026-9.		6
85	RF Design for Inkjet Technology: Antenna Geometries and Layer Thickness Optimization. IEEE Antennas and Wireless Propagation Letters, 2012, 11, 188-191.	2.4	30
86	Heterogeneous Integration of Bio-Sensing System-on-Chip and Printed Electronics. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2012, 2, 672-682.	2.7	35
87	Dynamic bending test analysis of inkjet-printed conductors on flexible substrates. , 2012, , .		24
88	System integration of smart packages using printed electronics. , 2012, , .		21
89	Electrical performance and reliability evaluation of inkjet-printed Ag interconnections on paper substrates. Materials Letters, 2012, 88, 68-72.	1.3	40
90	Reliability of ICA attachment of SMDs on inkjet-printed substrates. Microelectronics Reliability, 2012, 52, 2709-2715.	0.9	29

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91	Bio-Patch Design and Implementation Based on a Low-Power System-on-Chip and Paper-Based Inkjet Printing Technology. IEEE Transactions on Information Technology in Biomedicine, 2012, 16, 1043-1050.	3.6	58
92	Inkjet-Printed RF Structures on BST-Polymer Composites: An Application of a Monopole Antenna for 2.4GHz Wireless Local Area Network Operation. International Journal of Applied Ceramic Technology, 2011, 8, 940-946.	1.1	11
93	Environmental protection of inkjet-printed Ag conductors. Microelectronic Engineering, 2011, 88, 2970-2976.	1.1	28
94	Low temperature nanoparticle sintering with continuous wave and pulse lasers. Optics and Laser Technology, 2011, 43, 570-576.	2.2	97
95	Functional fluid jetting performance optimization. Microelectronics Reliability, 2010, 50, 864-871.	0.9	7
96	Inkjetting dielectric layer for electronic applications. Microelectronic Engineering, 2010, 87, 1984-1991.	1.1	18
97	Utilizing inkjet printing to fabricate electrical interconnections in a system-in-package. Microelectronic Engineering, 2010, 87, 2382-2390.	1.1	38
98	Characterization of ICA attachment of SMD on inkjet-printed substrates. , 2010, , .		4
99	Sintering of printed nanoparticle structures using laser treatment. , 2009, , .		13
100	Capability of inkjet technology in electronics manufacturing. , 2009, , .		31
101	Surface energy patterning for inkjet printing in device fabrication. , 2009, , .		9
102	An inkjet-deposited antenna for 2.4 GHz applications. AEU - International Journal of Electronics and Communications, 2009, 63, 31-35.	1.7	67
103	Controlling warpage of molded package for inkjet manufacturing. Microelectronic Engineering, 2008, 85, 518-526.	1.1	10
104	Inkjet printed System-in-Package design and manufacturing. Microelectronics Journal, 2008, 39, 1740-1750.	1.1	59
105	High-frequency characterization and simulation of conductor loss in printable electronics technology. , 2007, , .		3
106	Evaluation of Inkjet Technology for Electronic Packaging and System Integration. , 2007, , .		43
107	Analysis of Embedded Baluns in 3D Packages. Journal of Microelectronics and Electronic Packaging, 2006, 3, 201-208.	0.8	0