Heiko O Jacobs

List of Publications by Year
in descending order

51 papers	1,922 citations	331670 21 h-index	243625 44 g-index
51 all docs	51 docs citations	51 times ranked	1891 citing authors

#	Article	IF	Citations
1	Fabrication of a Cylindrical Display by Patterned Assembly. Science, 2002, 296, 323-325.	12.6	426
2	Microscope Projection Photolithography for Rapid Prototyping of Masters with Micron-Scale Features for Use in Soft Lithography. Langmuir, 2001, 17, 6005-6012.	3.5	128
3	Shape-and-solder-directed self-assembly to package semiconductor device segments. Applied Physics Letters, 2004, 85, 3635-3637.	3.3	109
4	Self-assembly of microscopic chiplets at a liquidâ€“liquidâ€“solid interface forming a flexible segmented monocrystalline solar cell. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 993-998.	7.1	102
5	Sequential shape-and-solder-directed self-assembly of functional microsystems. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 12814-12817.	7.1	98
6	Integration of ZnO Microcrystals with Tailored Dimensions Forming Light Emitting Diodes and UV Photovoltaic Cells. Nano Letters, 2008, 8, 1477-1481.	9.1	97
7	A First Implementation of an Automated Reelâ€toâ€Reel Fluidic Selfâ€Assembly Machine. Advanced Materials, 2014, 26, 5942-5949.	21.0	97
8	Biomimetic self-assembly of a functional asymmetrical electronic device. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 4937-4940.	7.1	88
9	Patterned Growth and Transfer of ZnO Micro and Nanocrystals with Size and Location Control. Advanced Materials, 2008, 20, 1474-1478.	21.0	80
10	Charging Process and Coulomb-Force-Directed Printing of Nanoparticles with Sub-100-nm Lateral Resolution. Nano Letters, 2005, 5, 2078-2084.	9.1	65
11	Printing nanoparticle building blocks from the gas phase using nanoxerography. Applied Physics Letters, 2003, 83, 5527-5529.	3.3	63
12	Integrated multilayer stretchable printed circuit boards paving the way for deformable active matrix. Nature Communications, 2019, 10, 4909.	12.8	59
13	Effective localized collection and identification of airborne species through electrodynamic precipitation and SERS-based detection. Nature Communications, 2013, 4, 1636.	12.8	52
14	Printing nanoparticles from the liquid and gas phases using nanoxerography. Nanotechnology, 2003, 14, 1057-1063.	2.6	47
15	Fringing Field Directed Assembly of Nanomaterials. Nano Letters, 2006, 6, 2790-2796.	9.1	46
16	Printing of organic and inorganic nanomaterials using electrospray ionization and Coulomb-force-directed assembly. Applied Physics Letters, 2005, 87, 263119.	3.3	36
17	Millimeter Thin and Rubberâ€Like Solidâ€State Lighting Modules Fabricated Using Rollâ€toâ€Roll Fluidic Selfâ€Assembly and Lamination. Advanced Materials, 2015, 27, 3661-3668.	21.0	28
18	Continuous nanoparticle generation and assembly by atmospheric pressure arc discharge. Applied Physics Letters, 2009, 95, .	3.3	25

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19	Gas Phase Electrodeposition: A Programmable Multimaterial Deposition Method for Combinatorial Nanostructured Device Discovery. Nano Letters, 2010, 10, 4494-4500.	9.1	23
20	Effective Collection and Detection of Airborne Species Using SERSâ€Based Detection and Localized Electrodynamic Precipitation. Advanced Materials, 2013, 25, 3554-3559.	21.0	23
21	Localized Collection of Airborne Analytes: A Transport Driven Approach to Improve the Response Time of Existing Gas Sensor Designs. Advanced Functional Materials, 2014, 24, 3706-3714.	14.9	22
22	Selfâ€Tiling Monocrystalline Silicon; a Process to Produce Electrically Connected Domains of Si and Microconcentrator Solar Cell Modules on Plastic Supports. Advanced Materials, 2011, 23, 2727-2733.	21.0	21
23	Surface Tension Directed Fluidic Self-Assembly of Semiconductor Chips across Length Scales and Material Boundaries. Micromachines, 2016, 7, 54.	2.9	21
24	Approaching Gas Phase Electrodeposition: Process and Optimization to Enable the Selfâ€Aligned Growth of 3D Nanobridgeâ€Based Interconnects. Advanced Materials, 2016, 28, 1770-1779.	21.0	19
25	Deformable printed circuit boards that enable metamorphic electronics. NPG Asia Materials, 2016, 8, e336-e336.	7.9	18
26	Approaching Roll-to-Roll Fluidic Self-Assembly: Relevant Parameters, Machine Design, and Applications. Journal of Microelectromechanical Systems, 2015, 24, 1928-1937.	2.5	17
27	Mimicking Electrodeposition in the Gas Phase: A Programmable Concept for Selected-Area Fabrication of Multimaterial Nanostructures. Small, 2010, 6, 1117-1124.	10.0	14
28	3D Metamorphic Stretchable Microphone Arrays. Advanced Materials Technologies, 2017, 2, 1700131.	5.8	13
29	Coreâ€“Shell Transformation-Imprinted Solder Bumps Enabling Low-Temperature Fluidic Self-Assembly and Self-Alignment of Chips and High Melting Point Interconnects. ACS Applied Materials & Interfaces, 2018, 10, 40608-40613.	8.0	13
30	Stress-adaptive meander track for stretchable electronics. Flexible and Printed Electronics, 2018, 3, 032001.	2.7	11
31	Fluidic Self-Assembly on Electroplated Multilayer Solder Bumps with Tailored Transformation Imprinted Melting Points. Scientific Reports, 2019, 9, 11325.	3.3	11
32	Corona Discharge Assisted Growth Morphology Switching of Tin-Doped Gallium Oxide for Optical Gas Sensing Applications. Crystal Growth and Design, 2019, 19, 6945-6953.	3.0	6
33	Engineered Solder-Directed Self-Assembly Across Length Scales. Materials Research Society Symposia Proceedings, 2007, 990, 1.	0.1	5
34	Gas Phase Electrodeposition Enabling the Programmable Three-Dimensional Growth of a Multimodal Room Temperature Nanobridge Gas Sensor Array. ACS Applied Materials & Interfaces, 2019, 11, 33497-33504.	8.0	5
35	Three-dimensional platinum nanoparticle-based bridges for ammonia gas sensing. Scientific Reports, 2021, 11, 12551.	3.3	5
36	Active Matrixâ€Based Collection of Airborne Analytes: An Analyte Recording Chip Providing Exposure History and Finger Print. Advanced Materials, 2014, 26, 7600-7607.	21.0	4

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37	Metamorphic hemispherical microphone array for three-dimensional acoustics. Applied Physics Letters, 2017, 111, .	3.3	4
38	Metamorphic Stretchable Touchpad. Advanced Materials Technologies, 2019, 4, 1800446.	5.8	4
39	Localized collection of airborne biological hazards for environmental monitoring. Sensors and Actuators B: Chemical, 2018, 273, 906-915.	7.8	3
40	Corona assisted gallium oxide nanowire growth on silicon carbide. Journal of Crystal Growth, 2019, 509, 107-111.	1.5	3
41	Combinatorial gas phase electrodeposition for fabrication of three-dimensional multimodal gas sensor array. Materials Today: Proceedings, 2020, 33, 2451-2457.	1.8	3
42	ZnO Nanowire/p-GaN Heterojunction LEDs. Materials Research Society Symposia Proceedings, 2007, 1018, 1.	0.1	2
43	Corona Assisted Ga Based Nanowire Growth on 3C-SiC(111)/Si(111) Pseudosubstrates. Materials Science Forum, 0, 897, 642-645.	0.3	2
44	Localized and Programmable Chemical Vapor Deposition Using an Electrically Charged and Guided Molecular Flux. ACS Nano, 2020, 14, 12885-12894.	14.6	2
45	Nanoparticle gas phase electrodeposition: Fundamentals, fluid dynamics, and deposition kinetics. Journal of Aerosol Science, 2021, 151, 105652.	3.8	2
46	Gas Phase Nanoparticle Integration. Materials Research Society Symposia Proceedings, 2007, 1002, 1.	0.1	0
47	Inside Front Cover: Patterned Growth and Transfer of ZnO Micro and Nanocrystals with Size and Location Control (Adv. Mater. 8/2008). Advanced Materials, 2008, 20, NA-NA.	21.0	0
48	Fluidic Surface-Tension-Directed Self-Assembly of Miniaturized Semiconductor Dies Across Length Scales and 3D Topologies. Materials Research Society Symposia Proceedings, 2009, 1179, 8.	0.1	0
49	Gas Phase Electrodeposition: A Programmable Localized Deposition Method for Rapid Combinatorial Investigation of Nanostuctured Devices and 3D Bulk Heterojunction Photovoltaic Cells. Materials Research Society Symposia Proceedings, 2012, 1439, 57-62.	0.1	0
50	Localized Collection of Airborne Analytes: A Transport Driven Approach to Improve the Response Time of Existing Gas Sensor Designs including SERS based Detection of Small Molecules. Materials Research Society Symposia Proceedings, 2015, 1746, 1.	0.1	0
51	Corona Assisted Tuning of Gallium Oxide Growth on 3C-SiC(111)/Si(111) Pseudosubstrates. Materials Science Forum, 0, 1004, 102-109.	0.3	0