

Oliver Brand

List of Publications by Citations

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121
papers

1,334
citations

17
h-index

34
g-index

140
ext. papers

1,577
ext. citations

5.7
avg, IF

4.58
L-index

| # | Paper | IF | Citations |
|-----|---|------|-----------|
| 121 | Complementary metal oxide semiconductor cantilever arrays on a single chip: mass-sensitive detection of volatile organic compounds. <i>Analytical Chemistry</i> , 2002 , 74, 3084-95 | 7.8 | 239 |
| 120 | High Q-Factor In-Plane-Mode Resonant Microsensor Platform for Gaseous/Liquid Environment. <i>Journal of Microelectromechanical Systems</i> , 2008 , 17, 483-493 | 2.5 | 99 |
| 119 | Size-Scalable and High-Density Liquid-Metal-Based Soft Electronic Passive Components and Circuits Using Soft Lithography. <i>Advanced Functional Materials</i> , 2017 , 27, 1604466 | 15.6 | 73 |
| 118 | Thermal Excitation and Piezoresistive Detection of Cantilever In-Plane Resonance Modes for Sensing Applications. <i>Journal of Microelectromechanical Systems</i> , 2010 , 19, 1015-1017 | 2.5 | 73 |
| 117 | Dimensional considerations in achieving large quality factors for resonant silicon cantilevers in air. <i>Journal of Applied Physics</i> , 2009 , 105, 014908 | 2.5 | 60 |
| 116 | Three-dimensional immobilization of beta-galactosidase on a silicon surface. <i>Biotechnology and Bioengineering</i> , 2008 , 99, 261-7 | 4.9 | 57 |
| 115 | CMOS-based microsensors and packaging. <i>Sensors and Actuators A: Physical</i> , 2001 , 92, 1-9 | 3.9 | 57 |
| 114 | Continuous droplet removal upon dropwise condensation of humid air on a hydrophobic micropatterned surface. <i>Langmuir</i> , 2014 , 30, 10133-42 | 4 | 54 |
| 113 | Nanofabrication for all-soft and high-density electronic devices based on liquid metal. <i>Nature Communications</i> , 2020 , 11, 1002 | 17.4 | 46 |
| 112 | Characteristics of laterally vibrating resonant microcantilevers in viscous liquid media. <i>Journal of Applied Physics</i> , 2012 , 111, 014907 | 2.5 | 38 |
| 111 | 3D-Integrated and Multifunctional All-Soft Physical Microsystems Based on Liquid Metal for Electronic Skin Applications. <i>Advanced Electronic Materials</i> , 2018 , 4, 1700434 | 6.4 | 35 |
| 110 | Single-chip mechatronic microsystem for surface imaging and force response studies. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 17011-5 | 11.5 | 35 |
| 109 | A system for seismocardiography-based identification of quiescent heart phases: implications for cardiac imaging. <i>IEEE Transactions on Information Technology in Biomedicine</i> , 2012 , 16, 869-77 | | 33 |
| 108 | All-soft, battery-free, and wireless chemical sensing platform based on liquid metal for liquid- and gas-phase VOC detection. <i>Lab on A Chip</i> , 2017 , 17, 2323-2329 | 7.2 | 27 |
| 107 | All-Soft Supercapacitors Based on Liquid Metal Electrodes with Integrated Functionalized Carbon Nanotubes. <i>ACS Nano</i> , 2020 , 14, 5659-5667 | 16.7 | 27 |
| 106 | Multiscale and Uniform Liquid Metal Thin-Film Patterning Based on Soft Lithography for 3D Heterogeneous Integrated Soft Microsystems: Additive Stamping and Subtractive Reverse Stamping. <i>Advanced Materials Technologies</i> , 2018 , 3, 1800061 | 6.8 | 22 |
| 105 | Mass-sensitive detection of gas-phase volatile organics using disk microresonators. <i>Analytical Chemistry</i> , 2011 , 83, 3305-11 | 7.8 | 19 |

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| 104 | Microfluidic Transduction Harnesses Mass Transport Principles to Enhance Gene Transfer Efficiency. <i>Molecular Therapy</i> , 2017 , 25, 2372-2382 | 11.7 | 15 |
| 103 | Microfluidics for generation and characterization of liquid and gaseous micro- and nanojets. <i>Sensors and Actuators A: Physical</i> , 2007 , 134, 119-127 | 3.9 | 15 |
| 102 | A CMOS-based integrated-system architecture for a static cantilever array. <i>Sensors and Actuators B: Chemical</i> , 2008 , 131, 254-264 | 8.5 | 15 |
| 101 | Packaging of CMOS MEMS. <i>Microelectronics Reliability</i> , 2000 , 40, 1255-1262 | 1.2 | 15 |
| 100 | Lateral-Mode Vibration of Microcantilever-Based Sensors in Viscous Fluids Using Timoshenko Beam Theory. <i>Journal of Microelectromechanical Systems</i> , 2015 , 24, 848-860 | 2.5 | 13 |
| 99 | Characterization of liquid and gaseous micro- and nanojets using microcantilever sensors. <i>Sensors and Actuators A: Physical</i> , 2007 , 134, 128-139 | 3.9 | 13 |
| 98 | CMOS chemical microsensors based on resonant cantilever beams 1998 , 3328, 233 | | 13 |
| 97 | Thin-Film Characterization Using the Bulge Test. <i>Advanced Micro & Nanosystems</i> , 2007 , 67-121 | | 12 |
| 96 | A complementary-metal-oxide-semiconductor-field-effect-transistor-compatible atomic force microscopy tip fabrication process and integrated atomic force microscopy cantilevers fabricated with this process. <i>Ultramicroscopy</i> , 2002 , 91, 9-20 | 3.1 | 12 |
| 95 | Optimal Design of Passive Resonating Wireless Sensors for Wearable and Implantable Devices. <i>IEEE Sensors Journal</i> , 2019 , 19, 7460-7470 | 4 | 10 |
| 94 | Carbon Nanotubes in Microelectronic Applications. <i>Advanced Micro & Nanosystems</i> , 2008 , 1-41 | | 10 |
| 93 | Integrated silicon-based chemical microsystem for portable sensing applications. <i>Sensors and Actuators B: Chemical</i> , 2013 , 180, 50-59 | 8.5 | 8 |
| 92 | An analytical model of a thermally excited microcantilever vibrating laterally in a viscous fluid 2010 , | | 8 |
| 91 | Discrimination of volatile organic compounds using CMOS capacitive chemical microsensors with thickness-adjusted polymer coating 1999 , | | 8 |
| 90 | An iterative curve fitting method for accurate calculation of quality factors in resonators. <i>Review of Scientific Instruments</i> , 2009 , 80, 045105 | 1.7 | 7 |
| 89 | Flip-chip packaged CMOS chemical microsystem for detection of volatile organic compounds 1998 , | | 7 |
| 88 | Fundamental Theory of Resonant MEMS Devices. <i>Advanced Micro & Nanosystems</i> , 2015 , 1-28 | | 6 |
| 87 | Piezoelectric Resonant MEMS. <i>Advanced Micro & Nanosystems</i> , 147-172 | | 6 |

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| 86 | All-soft physical and chemical microsystems based on liquid metal for wearable electronics applications 2017 , | | 5 |
| 85 | Parametrically Excited Micro- and Nanosystems. <i>Advanced Micro & Nanosystems</i> , 2015 , 73-95 | | 5 |
| 84 | Geometrical optimization of resonant cantilevers vibrating in in-plane flexural modes 2010 , | | 5 |
| 83 | Cancellation of environmental effects in resonant mass sensors based on resonance mode and effective mass. <i>Review of Scientific Instruments</i> , 2009 , 80, 063903 | 1.7 | 5 |
| 82 | Temperature compensation method for resonant microsensors based on a controlled stiffness modulation. <i>Journal of Applied Physics</i> , 2008 , 104, 014911 | 2.5 | 5 |
| 81 | CMOS MEMS technology and CAD: the case of thermal microtransducers 1998 , 3328, 2 | | 5 |
| 80 | In-Plane Vibration of Hammerhead Resonators for Chemical Sensing Applications. <i>ACS Sensors</i> , 2020 , 5, 73-82 | 9.2 | 5 |
| 79 | The RADx Tech Clinical Studies Core: A Model for Academic Based Clinical Studies. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021 , 2, 152-157 | 5.9 | 5 |
| 78 | A Low-Leakage Body-Guarded Analog Switch in 0.35- μm BiCMOS and Its Applications in Low-Speed Switched-Capacitor Circuits. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , 2015 , 62, 947-951 | 3.5 | 4 |
| 77 | Bio-inspired fluidic thermal angular accelerometer with inherent linear acceleration rejection. <i>Sensors and Actuators A: Physical</i> , 2018 , 279, 566-576 | 3.9 | 4 |
| 76 | A trimodal system for the acquisition of synchronous echocardiography, electrocardiography, and seismocardiography data. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference</i> , 2011 , 2011, 6911-4 | 0.9 | 4 |
| 75 | Resonant microcantilevers vibrating laterally in viscous liquid media 2010 , | | 4 |
| 74 | Determination of mechanical material properties of piezoelectric ZnO films 1998 , | | 4 |
| 73 | Automated High-Throughput Hermetic Failure Monitoring System for Millimeter-Sized Wireless Implantable Medical Devices 2019 , | | 4 |
| 72 | Point-of-Care Technology Research Network: An evolving model for collaborative translational research in biomedical engineering. <i>Current Opinion in Biomedical Engineering</i> , 2019 , 11, 145-148 | 4.4 | 4 |
| 71 | The RADx Tech Test Verification Core and the ACME POCT in the Evaluation of COVID-19 Testing Devices: A Model for Progress and Change. <i>IEEE Open Journal of Engineering in Medicine and Biology</i> , 2021 , 2, 142-151 | 5.9 | 4 |
| 70 | Diagnosis of acute serious illness: the role of point-of-care technologies. <i>Current Opinion in Biomedical Engineering</i> , 2019 , 11, 22-34 | 4.4 | 3 |
| 69 | ALD TiO ₂ as a top-gate dielectric and passivation layer for InGaZnO ₁₁₅ ISFETs. <i>Semiconductor Science and Technology</i> , 2017 , 32, 114004 | 1.8 | 3 |

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| 68 | Fluid Property Sensors. <i>Advanced Micro & Nanosystems</i> , 2015 , 427-450 | | 3 |
| 67 | Resonant characteristics of rectangular microcantilevers vibrating torsionally in viscous liquid media 2012 , | | 3 |
| 66 | Damping and mass sensitivity of laterally vibrating resonant microcantilevers in viscous liquid media 2011 , | | 3 |
| 65 | Using reactands in CMOS-based calorimetric sensors: new functional materials for electronic noses. <i>Analytical Sciences</i> , 2002 , 18, 109-11 | 1.7 | 3 |
| 64 | Microfabrication, Coil Characterization, and Hermetic Packaging of Millimeter-Sized Free-Floating Neural Probes. <i>IEEE Sensors Journal</i> , 2021 , 21, 13837-13848 | 4 | 3 |
| 63 | All-soft sensing platform based on liquid metal for liquid- and gas-phase VOC detection 2016 , | | 3 |
| 62 | Nanoelectromechanical Systems (NEMS). <i>Advanced Micro & Nanosystems</i> ,203-231 | | 3 |
| 61 | Bio-inspired fluidic thermal angular accelerometer 2016 , | | 2 |
| 60 | Frequency Response of Cantilever Beams Immersed in Viscous Fluids. <i>Advanced Micro & Nanosystems</i> , 2015 , 29-53 | | 2 |
| 59 | Damping in Resonant MEMS. <i>Advanced Micro & Nanosystems</i> , 2015 , 55-71 | | 2 |
| 58 | MEMS Inertial Sensors. <i>Advanced Micro & Nanosystems</i> , 2015 , 327-353 | | 2 |
| 57 | Capacitive Resonators. <i>Advanced Micro & Nanosystems</i> , 2015 , 119-146 | | 2 |
| 56 | Timoshenko beam effects in lateral-mode microcantilever-based sensors in liquids. <i>Micro and Nano Letters</i> , 2013 , 8, 762-765 | 0.9 | 2 |
| 55 | Liquid-Phase Biochemical Sensing with Disk-Type Resonant Microsensor 2007 , | | 2 |
| 54 | Evaluation of Mechanical Properties of MEMS Materials and Their Standardization. <i>Advanced Micro & Nanosystems</i> , 2007 , 1-25 | | 2 |
| 53 | Emerging Loop Heat Pipe Applications for Small-Sat, MARS Mission and ISS 2002 , | | 2 |
| 52 | Compensation, Tuning, and Trimming of MEMS Resonators. <i>Advanced Micro & Nanosystems</i> ,305-325 | | 2 |
| 51 | X-Ray Masks for LIGA Microfabrication. <i>Advanced Micro & Nanosystems</i> , 2008 , 11-50 | | 2 |

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| 50 | Introduction: LIGA and Its Applications. <i>Advanced Micro & Nanosystems</i> , 2008 , 1-10 | | 2 |
| 49 | Modeling the Properties of Carbon Nanotubes for Sensor-Based Devices. <i>Advanced Micro & Nanosystems</i> , 2008 , 181-227 | | 2 |
| 48 | Carbon Nanotube Gas Sensors. <i>Advanced Micro & Nanosystems</i> , 2008 , 311-349 | | 2 |
| 47 | Submicrometer-Scale All-Soft Electronics Based on Liquid Metal 2019 , | | 1 |
| 46 | Analytical Modeling of a Novel High-Q Disk Resonator for Liquid-Phase Applications. <i>Journal of Microelectromechanical Systems</i> , 2015 , 24, 38-49 | 2.5 | 1 |
| 45 | Room-temperature CO ₂ sensing based on interdigitated capacitors and resonant cantilevers 2017 , | | 1 |
| 44 | Finite Element Modeling of Resonators. <i>Advanced Micro & Nanosystems</i> , 2015 , 97-117 | | 1 |
| 43 | Resonant MEMS Chemical Sensors. <i>Advanced Micro & Nanosystems</i> , 2015 , 355-390 | | 1 |
| 42 | Energy Harvesting Devices. <i>Advanced Micro & Nanosystems</i> , 2015 , 451-474 | | 1 |
| 41 | Electrothermal Excitation of Resonant MEMS. <i>Advanced Micro & Nanosystems</i> , 2015 , 173-201 | | 1 |
| 40 | Reliability of MEMS Variable Optical Attenuator. <i>Advanced Micro & Nanosystems</i> , 2007 , 239-266 | | 1 |
| 39 | Novel Temperature Compensation Scheme for Microresonators Based on Controlled Stiffness Modulation 2007 , | | 1 |
| 38 | Uniaxial Tensile Test for MEMS Materials. <i>Advanced Micro & Nanosystems</i> , 2007 , 123-161 | | 1 |
| 37 | Electromechanical Carbon Nanotube Transducers. <i>Advanced Micro & Nanosystems</i> , 2008 , 43-81 | | 1 |
| 36 | Exposure and Development Simulation for Deep X-Ray LIGA. <i>Advanced Micro & Nanosystems</i> , 2008 , 103-142 | | 1 |
| 35 | The Micro Harmonic Drive Gear. <i>Advanced Micro & Nanosystems</i> , 2008 , 351-394 | | 1 |
| 34 | Evolution of the Microspectrometer. <i>Advanced Micro & Nanosystems</i> , 2008 , 281-296 | | 1 |
| 33 | The need for new test verification and regulatory support for innovative diagnostics. <i>Nature Biotechnology</i> , 2021 , 39, 1060-1062 | 44.5 | 1 |

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| 32 | Carbon Nanotube Field Emission Devices. <i>Advanced Micro & Nanosystems</i> , 2008 , 291-309 | | 1 |
| 31 | Organic Resonant MEMS Devices. <i>Advanced Micro & Nanosystems</i> , 233-260 | | 1 |
| 30 | Don't Forget About Human Factors: Lessons Learned from COVID-19 Point-of-Care Testing.. <i>Cell Reports Methods</i> , 2022 , 100222 | | 1 |
| 29 | Elastoplastic Indentation Contact Mechanics of Homogeneous Materials and Coating Substrate Systems. <i>Advanced Micro & Nanosystems</i> , 2007 , 27-65 | | 0 |
| 28 | Inertial Sensors. <i>Advanced Micro & Nanosystems</i> , 2007 , 205-223 | | 0 |
| 27 | Characterization of Carbon Nanotubes by Optical Spectroscopy. <i>Advanced Micro & Nanosystems</i> , 2008 , 125-180 | | 0 |
| 26 | Temperature Compensation of Thermally Actuated, In-Plane Resonant Gas Sensor Using Embedded Oxide-Filled Trenches. <i>Journal of Microelectromechanical Systems</i> , 2020 , 29, 936-941 | 2.5 | 0 |
| 25 | Amine-Functionalized Capacitive Carbon Dioxide Sensor Performance as a Function of Temperature and Sensing Film Thickness. <i>IEEE Sensors Journal</i> , 2021 , 1-1 | 4 | 0 |
| 24 | Refractive X-Ray Lenses Produced by X-Ray Lithography. <i>Advanced Micro & Nanosystems</i> , 2008 , 233-242 | | |
| 23 | Reliability of a Capacitive Pressure Sensor. <i>Advanced Micro & Nanosystems</i> , 2007 , 185-203 | | |
| 22 | Eco Scan MEMS Resonant Mirror. <i>Advanced Micro & Nanosystems</i> , 2007 , 267-290 | | |
| 21 | On-Chip Testing of MEMS. <i>Advanced Micro & Nanosystems</i> , 2007 , 163-183 | | |
| 20 | CMOS-Based Microsensors. <i>ECS Transactions</i> , 2006 , 3, 447-461 | | 1 |
| 19 | High-Accuracy, High-Reliability MEMS Accelerometer. <i>Advanced Micro & Nanosystems</i> , 2007 , 225-237 | | |
| 18 | Carbon Nanotube Direct Integration into Microsystems. <i>Advanced Micro & Nanosystems</i> , 2008 , 83-124 | | |
| 17 | Multiscale Modeling and Simulation for Fluid Mechanics at the Nanoscale. <i>Advanced Micro & Nanosystems</i> , 2008 , 229-290 | | |
| 16 | Devices with Embedded Channels. <i>Advanced Micro & Nanosystems</i> , 261-285 | | |
| 15 | Hermetic Packaging for Resonant MEMS. <i>Advanced Micro & Nanosystems</i> , 287-304 | | |

- 14 RF Applications. *Advanced Micro & Nanosystems*, **2008**, 243-280
- 13 Filled Resist Systems. *Advanced Micro & Nanosystems*, **2008**, 415-441
- 12 Design for LIGA and Safe Manufacturing. *Advanced Micro & Nanosystems*, **2008**, 143-188
- 11 Innovative Exposure Techniques for 3D Microfabrication. *Advanced Micro & Nanosystems*, **2008**, 51-68
- 10 Commercialization of LIGA. *Advanced Micro & Nanosystems*, **2008**, 189-203
- 9 Application of Inspection Devices. *Advanced Micro & Nanosystems*, **2008**, 337-349
- 8 PTFE Photo-Fabrication by Synchrotron Radiation. *Advanced Micro & Nanosystems*, **2008**, 453-468
- 7 Microinjection Molding Machines. *Advanced Micro & Nanosystems*, **2008**, 395-414
- 6 Polymer Optics and Optical MEMS. *Advanced Micro & Nanosystems*, **2008**, 205-232
- 5 Development of Microfluidic Devices Created via the LIGA Process. *Advanced Micro & Nanosystems*, **2008**, 323-335
- 4 Hot Embossing of LIGA Microstructures. *Advanced Micro & Nanosystems*, **2008**, 69-102
- 3 Dramatic Downsizing of Soft X-Ray Synchrotron Light Source from Compact to Tabletop. *Advanced Micro & Nanosystems*, **2008**, 443-452
- 2 Actuator Manufacture with LIGA Processes. *Advanced Micro & Nanosystems*, **2008**, 297-321
- 1 Timoshenko Beam Model for Lateral Vibration of Liquid-Phase Microcantilever-Based Sensors. *Conference Proceedings of the Society for Experimental Mechanics*, **2014**, 115-124

0.3