

Daryl R Kipke

List of Publications by Year in descending order

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86
papers

7,829
citations

94269

37
h-index

110170

64
g-index

87
all docs

87
docs citations

87
times ranked

6695
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Ultrasml implantable composite microelectrodes with bioactive surfaces for chronic neural interfaces. <i>Nature Materials</i> , 2012, 11, 1065-1073. | 13.3 | 601 |
| 2 | Chronic neural recordings using silicon microelectrode arrays electrochemically deposited with a poly(3,4-ethylenedioxythiophene) (PEDOT) film. <i>Journal of Neural Engineering</i> , 2006, 3, 59-70. | 1.8 | 570 |
| 3 | Neural probe design for reduced tissue encapsulation in CNS. <i>Biomaterials</i> , 2007, 28, 3594-3607. | 5.7 | 417 |
| 4 | Chronic Neural Recording Using Silicon-Substrate Microelectrode Arrays Implanted in Cerebral Cortex. <i>IEEE Transactions on Biomedical Engineering</i> , 2004, 51, 896-904. | 2.5 | 410 |
| 5 | Conducting Polymer Nanotubes Improve Electrical Properties, Mechanical Adhesion, Neural Attachment, and Neurite Outgrowth of Neural Electrodes. <i>Small</i> , 2010, 6, 421-429. | 5.2 | 362 |
| 6 | Long-term neural recording characteristics of wire microelectrode arrays implanted in cerebral cortex. <i>Brain Research Protocols</i> , 1999, 4, 303-313. | 1.7 | 359 |
| 7 | Using a Common Average Reference to Improve Cortical Neuron Recordings From Microelectrode Arrays. <i>Journal of Neurophysiology</i> , 2009, 101, 1679-1689. | 0.9 | 359 |
| 8 | Complex impedance spectroscopy for monitoring tissue responses to inserted neural implants. <i>Journal of Neural Engineering</i> , 2007, 4, 410-423. | 1.8 | 353 |
| 9 | Silicon-substrate intracortical microelectrode arrays for long-term recording of neuronal spike activity in cerebral cortex. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2003, 11, 151-155. | 2.7 | 329 |
| 10 | A finite-element model of the mechanical effects of implantable microelectrodes in the cerebral cortex. <i>Journal of Neural Engineering</i> , 2005, 2, 103-113. | 1.8 | 317 |
| 11 | Tools for Probing Local Circuits: High-Density Silicon Probes Combined with Optogenetics. <i>Neuron</i> , 2015, 86, 92-105. | 3.8 | 284 |
| 12 | Advanced Neurotechnologies for Chronic Neural Interfaces: New Horizons and Clinical Opportunities. <i>Journal of Neuroscience</i> , 2008, 28, 11830-11838. | 1.7 | 256 |
| 13 | Interfacing Conducting Polymer Nanotubes with the Central Nervous System: Chronic Neural Recording using Poly(3,4-ethylenedioxythiophene) Nanotubes. <i>Advanced Materials</i> , 2009, 21, 3764-3770. | 11.1 | 246 |
| 14 | Poly(3,4-ethylenedioxythiophene) (PEDOT) polymer coatings facilitate smaller neural recording electrodes. <i>Journal of Neural Engineering</i> , 2011, 8, 014001. | 1.8 | 225 |
| 15 | Calcium alginate gel: A biocompatible and mechanically stable polymer for endovascular embolization. <i>Journal of Biomedical Materials Research Part B</i> , 2001, 54, 76-86. | 3.0 | 198 |
| 16 | Conducting polymers on hydrogel-coated neural electrode provide sensitive neural recordings in auditory cortex. <i>Acta Biomaterialia</i> , 2010, 6, 57-62. | 4.1 | 186 |
| 17 | Insertion shuttle with carboxyl terminated self-assembled monolayer coatings for implanting flexible polymer neural probes in the brain. <i>Journal of Neuroscience Methods</i> , 2009, 184, 199-205. | 1.3 | 168 |
| 18 | A 64 Channel Programmable Closed-Loop Neurostimulator With 8 Channel Neural Amplifier and Logarithmic ADC. <i>IEEE Journal of Solid-State Circuits</i> , 2010, 45, 1935-1945. | 3.5 | 121 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 19 | The insulation performance of reactive parylene films in implantable electronic devices. <i>Biomaterials</i> , 2009, 30, 6158-6167. | 5.7 | 119 |
| 20 | Hybrid Conducting Polymer-Hydrogel Conduits for Axonal Growth and Neural Tissue Engineering. <i>Advanced Healthcare Materials</i> , 2012, 1, 762-767. | 3.9 | 117 |
| 21 | Repeated voltage biasing improves unit recordings by reducing resistive tissue impedances. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2005, 13, 160-165. | 2.7 | 114 |
| 22 | Voltage Pulses Change Neural Interface Properties and Improve Unit Recordings With Chronically Implanted Microelectrodes. <i>IEEE Transactions on Biomedical Engineering</i> , 2006, 53, 333-340. | 2.5 | 113 |
| 23 | Implantable microelectrode arrays for simultaneous electrophysiological and neurochemical recordings. <i>Journal of Neuroscience Methods</i> , 2008, 174, 62-70. | 1.3 | 101 |
| 24 | Theoretical analysis of intracortical microelectrode recordings. <i>Journal of Neural Engineering</i> , 2011, 8, 045006. | 1.8 | 98 |
| 25 | Na ⁺ coadaptive cortical control. <i>Journal of Neural Engineering</i> , 2005, 2, 52-63. | 1.8 | 94 |
| 26 | Novel multi-sided, microelectrode arrays for implantable neural applications. <i>Biomedical Microdevices</i> , 2011, 13, 441-451. | 1.4 | 80 |
| 27 | In vivo stability and biocompatibility of implanted calcium alginate disks. <i>Journal of Biomedical Materials Research - Part A</i> , 2007, 83A, 1128-1137. | 2.1 | 72 |
| 28 | Microstimulation in auditory cortex provides a substrate for detailed behaviors. <i>Hearing Research</i> , 2005, 210, 112-117. | 0.9 | 66 |
| 29 | Spatiotemporal pH dynamics following insertion of neural microelectrode arrays. <i>Journal of Neuroscience Methods</i> , 2007, 160, 276-287. | 1.3 | 66 |
| 30 | Flow properties of liquid calcium alginate polymer injected through medical microcatheters for endovascular embolization. <i>Journal of Biomedical Materials Research Part B</i> , 2002, 61, 533-540. | 3.0 | 56 |
| 31 | Cortical microstimulation in auditory cortex of rat elicits best-frequency dependent behaviors. <i>Journal of Neural Engineering</i> , 2005, 2, 42-51. | 1.8 | 53 |
| 32 | In vivo performance of a microelectrode neural probe with integrated drug delivery. <i>Neurosurgical Focus</i> , 2009, 27, E8. | 1.0 | 50 |
| 33 | Stability of chronic multichannel neural recordings: Implications for a long-term neural interface. <i>Neurocomputing</i> , 1999, 26-27, 1069-1076. | 3.5 | 49 |
| 34 | Flavopiridol reduces the impedance of neural prostheses in vivo without affecting recording quality. <i>Journal of Neuroscience Methods</i> , 2009, 183, 149-157. | 1.3 | 48 |
| 35 | Calcium Alginate Gel as a Biocompatible Material for Endovascular Arteriovenous Malformation Embolization: Six-month Results in an Animal Model. <i>Neurosurgery</i> , 2005, 56, 793-801. | 0.6 | 45 |
| 36 | Investigation of the material properties of alginate for the development of hydrogel repair of dura mater. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2011, 4, 16-33. | 1.5 | 45 |

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|----|--|-----|-----------|
| 37 | Single electrode micro-stimulation of rat auditory cortex: an evaluation of behavioral performance. <i>Hearing Research</i> , 2003, 179, 62-71. | 0.9 | 42 |
| 38 | Characterization of Implantable Microfabricated Fluid Delivery Devices. <i>IEEE Transactions on Biomedical Engineering</i> , 2004, 51, 138-145. | 2.5 | 41 |
| 39 | Enhanced contrast sensitivity in auditory cortex as cats learn to discriminate sound frequencies. <i>Cognitive Brain Research</i> , 2005, 23, 171-184. | 3.3 | 37 |
| 40 | In Vivo Assessment of Calcium Alginate Gel for Endovascular Embolization of a Cerebral Arteriovenous Malformation Model Using the Swine Rete Mirabile. <i>Neurosurgery</i> , 2002, 51, 453-459. | 0.6 | 35 |
| 41 | PRELIMINARY INVESTIGATION OF CALCIUM ALGINATE GEL AS A BIOCOMPATIBLE MATERIAL FOR ENDOVASCULAR ANEURYSM EMBOLIZATION IN VIVO. <i>Neurosurgery</i> , 2007, 60, 1119-1128. | 0.6 | 33 |
| 42 | A Novel Lead Design for Modulation and Sensing of Deep Brain Structures. <i>IEEE Transactions on Biomedical Engineering</i> , 2016, 63, 148-157. | 2.5 | 31 |
| 43 | Cytotoxic analysis of the conducting polymer PEDOT using myocytes. , 2008, 2008, 1841-4. | | 29 |
| 44 | Fabrication of Polymer Neural Probes with Sub-cellular Features for Reduced Tissue Encapsulation. , 2006, 2006, 4606-9. | | 27 |
| 45 | A Tunable Biquad Switched-Capacitor Amplifier-Filter for Neural Recording. <i>IEEE Transactions on Biomedical Circuits and Systems</i> , 2010, 4, 295-300. | 2.7 | 27 |
| 46 | Multi-site incorporation of bioactive matrices into MEMS-based neural probes. <i>Journal of Neural Engineering</i> , 2005, 2, L23-L28. | 1.8 | 25 |
| 47 | Development of Closed-Loop Neural Interface Technology in a Rat Model: Combining Motor Cortex Operant Conditioning With Visual Cortex Microstimulation. <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> , 2010, 18, 117-126. | 2.7 | 25 |
| 48 | Surgical Implantation of Chronic Neural Electrodes for Recording Single Unit Activity and Electroencephalographic Signals. <i>Journal of Visualized Experiments</i> , 2012, , . | 0.2 | 25 |
| 49 | In Vivo Electrical Conductivity across Critical Nerve Gaps Using Poly(3,4-ethylenedioxythiophene)-Coated Neural Interfaces. <i>Plastic and Reconstructive Surgery</i> , 2010, 126, 1865-1873. | 0.7 | 24 |
| 50 | Polarity of cortical electrical stimulation differentially affects neuronal activity of deep and superficial layers of rat motor cortex. <i>Brain Stimulation</i> , 2011, 4, 228-241. | 0.7 | 22 |
| 51 | The role of flexible polymer interconnects in chronic tissue response induced by intracortical microelectrodes - a modeling and an in vivo study. , 2006, 2006, 3588-91. | | 21 |
| 52 | High gamma power in ECoG reflects cortical electrical stimulation effects on unit activity in layers V/VI. <i>Journal of Neural Engineering</i> , 2013, 10, 066002. | 1.8 | 21 |
| 53 | In-vivo Evaluation of Chronically Implanted Neural Microelectrode Arrays Modified with Poly (3,4-ethylenedioxythiophene) Nanotubes. , 2007, , . | | 17 |
| 54 | Microscale Electrode Implantation during Nerve Repair. <i>Plastic and Reconstructive Surgery</i> , 2011, 128, 270e-278e. | 0.7 | 17 |

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| 55 | A computational model of the cochlear nucleus octopus cell. Journal of the Acoustical Society of America, 1997, 102, 391-402. | 0.5 | 16 |
| 56 | Optimization of Microelectrode Design for Cortical Recording Based on Thermal Noise Considerations. , 2006, 2006, 3361-4. | | 16 |
| 57 | An alginate hydrogel dura mater replacement for use with intracortical electrodes. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 95B, 421-429. | 1.6 | 16 |
| 58 | Use of a Bayesian maximum-likelihood classifier to generate training data for brain-machine interfaces. Journal of Neural Engineering, 2011, 8, 046009. | 1.8 | 16 |
| 59 | Suitability of the Cingulate Cortex for Neural Control. IEEE Transactions on Neural Systems and Rehabilitation Engineering, 2006, 14, 401-409. | 2.7 | 15 |
| 60 | Sensitivity of the cochlear nucleus octopus cell to synaptic and membrane properties: A modeling study. Journal of the Acoustical Society of America, 1997, 102, 403-412. | 0.5 | 12 |
| 61 | Fast wave propagation in auditory cortex of an awake cat using a chronic microelectrode array. Journal of Neural Engineering, 2007, 4, 68-78. | 1.8 | 11 |
| 62 | Mechanisms of the cochlear nucleus octopus cell's onset response: Synaptic effectiveness and threshold. Journal of the Acoustical Society of America, 1998, 103, 1940-1950. | 0.5 | 10 |
| 63 | Lower layers in the motor cortex are more effective targets for penetrating microelectrodes in cortical prostheses. Journal of Neural Engineering, 2009, 6, 026004. | 1.8 | 10 |
| 64 | Functional connectivity in auditory cortex using chronic, multichannel unit recordings. Neurocomputing, 1999, 26-27, 347-354. | 3.5 | 9 |
| 65 | Voltage Biasing, Cyclic Voltammetry, & Electrical Impedance Spectroscopy for Neural Interfaces. Journal of Visualized Experiments, 2012, , . | 0.2 | 9 |
| 66 | Shared-stimulus driving and connectivity in groups of neurons in the dorsal cochlear nucleus. Hearing Research, 1991, 55, 24-38. | 0.9 | 8 |
| 67 | Insertion of a three dimensional silicon microelectrode assembly through a thick meningeal membrane. , 2009, 2009, 1616-8. | | 6 |
| 68 | Neural Interface Dynamics Following Insertion of Hydrus Iridium Oxide Microelectrode Arrays. , 2006, 2006, 3178-81. | | 5 |
| 69 | Acquiring Brain Signals from within the Brain. , 2012, , 81-103. | | 5 |
| 70 | Validation of a novel three-dimensional electrode array within auditory cortex. , 2009, 2009, 2066-9. | | 4 |
| 71 | CNS RECORDING ELECTRODES AND TECHNIQUES. Series on Bioengineering and Biomedical Engineering, 2004, , 761-785. | 0.1 | 4 |
| 72 | Local Drug Delivery System for Dynamic Control of Neural Environment using Parylene-Based Microelectrodes. , 2007, , 3542-3545. | | 3 |

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| 73 | Laminar Analysis of Movement Direction Information in Local Field Potentials of the Rat Motor Cortex. , 2006, 2006, 2589-92. | | 2 |
| 74 | Linear Electrode Depth Estimation in Rat Motor Cortex by Laminar Analysis of Ketamine-Xylazine-Induced Oscillations. , 2007, , . | | 1 |
| 75 | The Electrocorticogram as a Feedback Control Signal for Deep Brain Stimulation of the Subthalamic Nucleus in the hemi-Parkinsonian Rat. , 2007, , . | | 1 |
| 76 | Mechanical characterization of conducting polymer actuated neural probes under physiological settings. , 2010, , . | | 1 |
| 77 | NEXT GENERATION OF CORTICAL DEVICES. Series on Bioengineering and Biomedical Engineering, 2004, , 1197-1216. | 0.1 | 1 |
| 78 | Development of Neural Interfaces for Chronic Use in Neuromotor Prosthetics. , 2007, , . | | 0 |
| 79 | "Talking Directly to the Brain: Implantable Microscale Neural Interfaces for Neuroprostheses and Neuromodulation". , 2007, , . | | 0 |
| 80 | Decoding the Direction of Movements from Interneuron and Projection Cell Populations in the Basal Ganglia. , 2007, , . | | 0 |
| 81 | CNS Recording: Devices and Techniques. Series on Bioengineering and Biomedical Engineering, 2017, , 467-488. | 0.1 | 0 |
| 82 | Laminar Analysis of Movement Direction Information in Local Field Potentials of the Rat Motor Cortex. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , . | 0.5 | 0 |
| 83 | Neural Interface Dynamics Following Insertion of Hydrus Iridium Oxide Microelectrode Arrays. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , . | 0.5 | 0 |
| 84 | Optimization of Microelectrode Design for Cortical Recording Based on Thermal Noise Considerations. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , . | 0.5 | 0 |
| 85 | The role of flexible polymer interconnects in chronic tissue response induced by intracortical microelectrodes - a modeling and an in vivo study. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , . | 0.5 | 0 |
| 86 | Fabrication of Polymer Neural Probes with Sub-cellular Features for Reduced Tissue Encapsulation. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , . | 0.5 | 0 |