

# Nathan J Mcdannold

## List of Publications by Year in descending order

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92  
papers

7,946  
citations

93792

39  
h-index

60403

85  
g-index

103  
all docs

103  
docs citations

103  
times ranked

5590  
citing authors

#	ARTICLE	IF	CITATIONS
1	Low Intensity Focused Ultrasound for Epilepsy – A New Approach to Neuromodulation. <i>Epilepsy Currents</i> , 2022, 22, 156-160.	0.4	10
2	Two-step aberration correction: application to transcranial histotripsy. <i>Physics in Medicine and Biology</i> , 2022, 67, 125009.	1.6	9
3	Lesion location and lesion creation affect outcomes after focused ultrasound thalamotomy. <i>Brain</i> , 2021, 144, 3089-3100.	3.7	18
4	Targeted Blood Brain Barrier Opening With Focused Ultrasound Induces Focal Macrophage/Microglial Activation in Experimental Autoimmune Encephalomyelitis. <i>Frontiers in Neuroscience</i> , 2021, 15, 665722.	1.4	6
5	Focused ultrasound with anti-pGlu3 A $\beta$ enhances efficacy in Alzheimer's disease-like mice via recruitment of peripheral immune cells. <i>Journal of Controlled Release</i> , 2021, 336, 443-456.	4.8	21
6	Focus Ultrasound-Induced Blood-Brain Barrier opening enhances anti-pGlu3 A $\beta$ mAb delivery and amyloid-beta plaque clearance. <i>Alzheimer's and Dementia</i> , 2021, 17, e058725.	0.4	0
7	Blood-brain barrier disruption and delivery of irinotecan in a rat model using a clinical transcranial MRI-guided focused ultrasound system. <i>Scientific Reports</i> , 2020, 10, 8766.	1.6	24
8	Secondary effects on brain physiology caused by focused ultrasound-mediated disruption of the blood-brain barrier. <i>Journal of Controlled Release</i> , 2020, 324, 450-459.	4.8	45
9	Targeted manipulation of pain neural networks: The potential of focused ultrasound for treatment of chronic pain. <i>Neuroscience and Biobehavioral Reviews</i> , 2020, 115, 238-250.	2.9	10
10	Using Phase Data From MR Temperature Imaging to Visualize Anatomy During MRI-Guided Focused Ultrasound Neurosurgery. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 3821-3830.	5.4	11
11	Focused Ultrasound Platform for Investigating Therapeutic Neuromodulation Across the Human Hippocampus. <i>Ultrasound in Medicine and Biology</i> , 2020, 46, 1270-1274.	0.7	42
12	Local anesthesia enhanced with increasing high-frequency ultrasound intensity. <i>Drug Delivery and Translational Research</i> , 2020, 10, 1507-1516.	3.0	3
13	Observed Effects of Whole-Brain Radiation Therapy on Focused Ultrasound Blood-Brain Barrier Disruption. <i>Ultrasound in Medicine and Biology</i> , 2020, 46, 1998-2006.	0.7	7
14	MRI-based thermal dosimetry based on single-slice imaging during focused ultrasound thalamotomy. <i>Physics in Medicine and Biology</i> , 2020, 65, 235018.	1.6	10
15	Predicting Bone Marrow Damage in the Skull After Clinical Transcranial MRI-Guided Focused Ultrasound With Acoustic and Thermal Simulations. <i>IEEE Transactions on Medical Imaging</i> , 2020, 39, 3231-3239.	5.4	5
16	The neurovascular response is attenuated by focused ultrasound-mediated disruption of the blood-brain barrier. <i>NeuroImage</i> , 2019, 201, 116010.	2.1	20
17	Acoustic feedback enables safe and reliable carboplatin delivery across the blood-brain barrier with a clinical focused ultrasound system and improves survival in a rat glioma model. <i>Theranostics</i> , 2019, 9, 6284-6299.	4.6	78
18	Artifact Suppression for Passive Cavitation Imaging Using U-Net CNNs with Uncertainty Quantification. , 2019, , .		4

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19	BSCI-09. MECHANISMS OF ENHANCED DRUG DELIVERY IN BRAIN METASTASES WITH FOCUSED ULTRASOUND-INDUCED BLOOD-TUMOR BARRIER DISRUPTION. <i>Neuro-Oncology Advances</i> , 2019, 1, i2-i2.	0.4	0
20	Intracranial Non-thermal Ablation Mediated by Transcranial Focused Ultrasound and Phase-Shift Nanoemulsions. <i>Ultrasound in Medicine and Biology</i> , 2019, 45, 2104-2117.	0.7	12
21	Virtual Brain Projection for Evaluating Trans-skull Beam Behavior of Transcranial Ultrasound Devices. <i>Ultrasound in Medicine and Biology</i> , 2019, 45, 1850-1856.	0.7	11
22	MRI Monitoring and Quantification of Ultrasound-Mediated Delivery of Liposomes Dually Labeled with Gadolinium and Fluorophore through the Blood-Brain Barrier. <i>Ultrasound in Medicine and Biology</i> , 2019, 45, 1733-1742.	0.7	22
23	Moving toward Noninvasive, Focused Ultrasound Therapeutic Delivery of Drugs in the Brain: Prolonged Opening of Blood-Brain Barrier May Not Be Needed. <i>Radiology</i> , 2019, 291, 467-468.	3.6	5
24	Three-year follow-up of prospective trial of focused ultrasound thalamotomy for essential tremor. <i>Neurology</i> , 2019, 93, e2284-e2293.	1.5	69
25	Modulation of brain function by targeted delivery of GABA through the disrupted blood-brain barrier. <i>NeuroImage</i> , 2019, 189, 267-275.	2.1	31
26	Elementwise approach for simulating transcranial MRI-guided focused ultrasound thermal ablation. <i>Physical Review Research</i> , 2019, 1, .	1.3	28
27	High-frequency, low-intensity ultrasound and microbubbles enhance nerve blockade. <i>Journal of Controlled Release</i> , 2018, 276, 150-156.	4.8	8
28	Volumetric analysis of magnetic resonance-guided focused ultrasound thalamotomy lesions. <i>Neurosurgical Focus</i> , 2018, 44, E6.	1.0	33
29	CADD-32. MECHANISMS OF ENHANCED DRUG DELIVERY IN BRAIN TUMORS WITH FOCUSED ULTRASOUND-INDUCED TRANSIENT BLOOD-TUMOR BARRIER DISRUPTION. <i>Neuro-Oncology</i> , 2018, 20, vi281-vi281.	0.6	0
30	Simultaneous Passive Acoustic Mapping and Magnetic Resonance Thermometry for Monitoring of Cavitation-Enhanced Tumor Ablation in Rabbits Using Focused Ultrasound and Phase-Shift Nanoemulsions. <i>Ultrasound in Medicine and Biology</i> , 2018, 44, 2609-2624.	0.7	6
31	Mechanisms of enhanced drug delivery in brain metastases with focused ultrasound-induced blood-tumor barrier disruption. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, E8717-E8726.	3.3	159
32	Focused ultrasound induced opening of the blood-brain barrier disrupts inter-hemispheric resting state functional connectivity in the rat brain. <i>NeuroImage</i> , 2018, 178, 414-422.	2.1	31
33	Intermediate Range Wireless Power Transfer With Segmented Coil Transmitters for Implantable Heart Pumps. <i>IEEE Transactions on Power Electronics</i> , 2017, 32, 3844-3857.	5.4	86
34	Passive Acoustic Mapping with the Angular Spectrum Method. <i>IEEE Transactions on Medical Imaging</i> , 2017, 36, 983-993.	5.4	64
35	Combined passive acoustic mapping and magnetic resonance thermometry for monitoring phase-shift nanoemulsion enhanced focused ultrasound therapy. <i>Physics in Medicine and Biology</i> , 2017, 62, 6144-6163.	1.6	11
36	Transcranial cavitation-mediated ultrasound therapy at sub-MHz frequency <i>via</i> temporal interference modulation. <i>Applied Physics Letters</i> , 2017, 111, .	1.5	9

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37	Notice of Removal: Evaluation of anticancer agent transport in brain tumors after focused ultrasound-induced blood-brain/blood-tumor barrier disruption. , 2017, , .		0
38	Closed-loop control of targeted ultrasound drug delivery across the bloodâ€‘brain/tumor barriers in a rat glioma model. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E10281-E10290.	3.3	183
39	The Effects of Oxygen on Ultrasound-Induced Bloodâ€‘Brain Barrier Disruption in Mice. Ultrasound in Medicine and Biology, 2017, 43, 469-475.	0.7	47
40	Evaluation of permeability, doxorubicin delivery, and drug retention in a rat brain tumor model after ultrasound-induced blood-tumor barrier disruption. Journal of Controlled Release, 2017, 250, 77-85.	4.8	115
41	Effects on P-Glycoprotein Expression after Blood-Brain Barrier Disruption Using Focused Ultrasound and Microbubbles. PLoS ONE, 2017, 12, e0166061.	1.1	115
42	Association between tumor architecture derived from generalized Q-space MRI and survival in glioblastoma. Oncotarget, 2017, 8, 41815-41826.	0.8	7
43	Mid-range wireless power transfer with segmented coil transmitters for implantable heart pumps. , 2016, , .		2
44	Growth inhibition in a brain metastasis model by antibody delivery using focused ultrasound-mediated blood-brain barrier disruption. Journal of Controlled Release, 2016, 238, 281-288.	4.8	86
45	Preclinical evaluation of a low-frequency transcranial MRI-guided focused ultrasound system in a primate model. Physics in Medicine and Biology, 2016, 61, 7664-7687.	1.6	17
46	Nonthermal ablation of deep brain targets: A simulation study on a large animal model. Medical Physics, 2016, 43, 870-882.	1.6	25
47	Nonthermal ablation in the rat brain using focused ultrasound and an ultrasound contrast agent: long-term effects. Journal of Neurosurgery, 2016, 125, 1539-1548.	0.9	17
48	Safety Validation of Repeated Bloodâ€‘Brain Barrier Disruption Using Focused Ultrasound. Ultrasound in Medicine and Biology, 2016, 42, 481-492.	0.7	68
49	Cavitation-enhanced nonthermal ablation in deep brain targets: feasibility in a large animal model. Journal of Neurosurgery, 2016, 124, 1450-1459.	0.9	52
50	Targeted, noninvasive blockade of cortical neuronal activity. Scientific Reports, 2015, 5, 16253.	1.6	34
51	Power Loss Analysis and Comparison of Segmented and Unsegmented Energy Coupling Coils for Wireless Energy Transfer. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2015, 3, 215-225.	3.7	22
52	Multiple sessions of liposomal doxorubicin delivery via focused ultrasound mediated bloodâ€‘brain barrier disruption: A safety study. Journal of Controlled Release, 2015, 204, 60-69.	4.8	100
53	Evolution of Movement Disorders Surgery Leading to Contemporary Focused Ultrasound Therapy for Tremor. Magnetic Resonance Imaging Clinics of North America, 2015, 23, 515-522.	0.6	8
54	Update on Clinical Magnetic Resonanceâ€‘Guided Focused Ultrasound Applications. Magnetic Resonance Imaging Clinics of North America, 2015, 23, 657-667.	0.6	23

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55	Ultrasound-mediated blood-brain barrier disruption for targeted drug delivery in the central nervous system. <i>Advanced Drug Delivery Reviews</i> , 2014, 72, 94-109.	6.6	332
56	Localized delivery of doxorubicin in vivo from polymer-modified thermosensitive liposomes with MR-guided focused ultrasound-mediated heating. <i>Journal of Controlled Release</i> , 2014, 194, 71-81.	4.8	61
57	Cavitation-enhanced MR-guided focused ultrasound ablation of rabbit tumors <i>in vivo</i> using phase shift nanoemulsions. <i>Physics in Medicine and Biology</i> , 2014, 59, 3465-3481.	1.6	47
58	Combined ultrasound and MR imaging to guide focused ultrasound therapies in the brain. <i>Physics in Medicine and Biology</i> , 2013, 58, 4749-4761.	1.6	88
59	Nonthermal ablation with microbubble-enhanced focused ultrasound close to the optic tract without affecting nerve function. <i>Journal of Neurosurgery</i> , 2013, 119, 1208-1220.	0.9	39
60	Integrated ultrasound and magnetic resonance imaging for simultaneous temperature and cavitation monitoring during focused ultrasound therapies. <i>Medical Physics</i> , 2013, 40, 112901.	1.6	61
61	Accumulation of Phase-Shift Nanoemulsions to Enhance MR-Guided Ultrasound-Mediated Tumor Ablation In Vivo. <i>Journal of Healthcare Engineering</i> , 2013, 4, 109-126.	1.1	42
62	Temporary Disruption of the Blood-Brain Barrier by Use of Ultrasound and Microbubbles: Safety and Efficacy Evaluation in Rhesus Macaques. <i>Cancer Research</i> , 2012, 72, 3652-3663.	0.4	474
63	The kinetics of blood brain barrier permeability and targeted doxorubicin delivery into brain induced by focused ultrasound. <i>Journal of Controlled Release</i> , 2012, 162, 134-142.	4.8	174
64	Blood-Brain Barrier Disruption Caused by Ultrasound Bursts Combined with Microbubbles Depends on Anesthesia. <i>AIP Conference Proceedings</i> , 2011, , .	0.3	0
65	Blood-Brain Barrier Disruption and Vascular Damage Induced by Ultrasound Bursts Combined with Microbubbles can be Influenced by Choice of Anesthesia Protocol. <i>Ultrasound in Medicine and Biology</i> , 2011, 37, 1259-1270.	0.7	55
66	Simultaneous temperature and cavitation activity mapping. , 2011, , .		2
67	Transcranial Magnetic Resonance Imaging-Guided Focused Ultrasound Surgery of Brain Tumors. <i>Neurosurgery</i> , 2010, 66, 323-332.	0.6	504
68	Enhanced permeability of tumor blood vessels in brain using focused ultrasound with microbubbles. , 2010, , .		0
69	Regularized referenceless temperature estimation in PRF-shift MR thermometry. , 2009, , .		4
70	Evaluation of referenceless thermometry in MRI-guided focused ultrasound surgery of uterine fibroids. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 28, 1026-1032.	1.9	46
71	Effects of Acoustic Parameters and Ultrasound Contrast Agent Dose on Focused-Ultrasound Induced Blood-Brain Barrier Disruption. <i>Ultrasound in Medicine and Biology</i> , 2008, 34, 930-937.	0.7	228
72	Effect of Focused Ultrasound Applied With an Ultrasound Contrast Agent on the Tight Junctional Integrity of the Brain Microvascular Endothelium. <i>Ultrasound in Medicine and Biology</i> , 2008, 34, 1093-1104.	0.7	409

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73	Blood-Brain Barrier Disruption Induced by Focused Ultrasound and Circulating Preformed Microbubbles Appears to Be Characterized by the Mechanical Index. <i>Ultrasound in Medicine and Biology</i> , 2008, 34, 834-840.	0.7	248
74	Magnetic resonance acoustic radiation force imaging. <i>Medical Physics</i> , 2008, 35, 3748-3758.	1.6	141
75	Ultrasound Enhanced Delivery of Molecular Imaging and Therapeutic Agents in Alzheimer's Disease Mouse Models. <i>PLoS ONE</i> , 2008, 3, e2175.	1.1	188
76	Temperature mapping considerations in the breast with line scan echo planar spectroscopic imaging. <i>Magnetic Resonance in Medicine</i> , 2007, 58, 1117-1123.	1.9	23
77	Brain arterioles show more active vesicular transport of blood-borne tracer molecules than capillaries and venules after focused ultrasound-evoked opening of the blood-brain barrier. <i>Ultrasound in Medicine and Biology</i> , 2006, 32, 1399-1409.	0.7	149
78	Uterine Leiomyomas: MR Imaging-based Thermometry and Thermal Dosimetry during Focused Ultrasound Thermal Ablation. <i>Radiology</i> , 2006, 240, 263-272.	3.6	207
79	Quality Assurance and System Stability of a Clinical MRI-Guided Focused Ultrasound System: Three-Year Experience. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
80	Evaluation of Referenceless Thermometry in MRI-Guided Focused Ultrasound Surgery of Uterine Fibroids. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
81	Induction of Apoptosis In Vivo in the Rabbit Brain with Focused Ultrasound. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
82	Efficacy of MR-guided Focused Ultrasound Thermal Ablation of Rabbit VX2 Tumors. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
83	Quality assurance and system stability of a clinical MRI-guided focused ultrasound system: Four-year experience. <i>Medical Physics</i> , 2006, 33, 4307-4313.	1.6	35
84	MRI investigation of the threshold for thermally induced blood-brain barrier disruption and brain tissue damage in the rabbit brain. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 913-923.	1.9	155
85	Cellular mechanisms of the blood-brain barrier opening induced by ultrasound in presence of microbubbles. <i>Ultrasound in Medicine and Biology</i> , 2004, 30, 979-989.	0.7	514
86	The use of quantitative temperature images to predict the optimal power for focused ultrasound surgery: In vivo verification in rabbit muscle and brain. <i>Medical Physics</i> , 2002, 29, 356-365.	1.6	27
87	MRI monitoring of the thermal ablation of tissue: Effects of long exposure times. <i>Journal of Magnetic Resonance Imaging</i> , 2001, 13, 421-427.	1.9	70
88	Noninvasive MR Imaging-guided Focal Opening of the Blood-Brain Barrier in Rabbits. <i>Radiology</i> , 2001, 220, 640-646.	3.6	1,264
89	Temperature monitoring with line scan echo planar spectroscopic imaging. <i>Medical Physics</i> , 2001, 28, 346-355.	1.6	33
90	Temperature monitoring in fat with MRI. <i>Magnetic Resonance in Medicine</i> , 2000, 43, 901-904.	1.9	83

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91	Usefulness of MR Imaging-Derived Thermometry and Dosimetry in Determining the Threshold for Tissue Damage Induced by Thermal Surgery in Rabbits. Radiology, 2000, 216, 517-523.	3.6	236
92	MRI evaluation of thermal ablation of tumors with focused ultrasound. Journal of Magnetic Resonance Imaging, 1998, 8, 91-100.	1.9	169