

# Nathan Mcdannold

## List of Publications by Year in descending order

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106  
papers

12,985  
citations

39113

52  
h-index

39744

98  
g-index

113  
all docs

113  
docs citations

113  
times ranked

6647  
citing authors

#	ARTICLE	IF	CITATIONS
1	Lesion location and lesion creation affect outcomes after focused ultrasound thalamotomy. <i>Brain</i> , 2021, 144, 3089-3100.	3.7	18
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	The neurovascular response is attenuated by focused ultrasound-mediated disruption of the blood-brain barrier. <i>NeuroImage</i> , 2019, 201, 116010.	2.1	20
10	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
11	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
12	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
13	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
14	Elementwise approach for simulating transcranial MRI-guided focused ultrasound thermal ablation. <i>Physical Review Research</i> , 2019, 1, .	1.3	28
15	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
16	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
17	Passive Acoustic Mapping with the Angular Spectrum Method. <i>IEEE Transactions on Medical Imaging</i> , 2017, 36, 983-993.	5.4	64
18	The Effects of Oxygen on Ultrasound-Induced Blood-brain Barrier Disruption in Mice. <i>Ultrasound in Medicine and Biology</i> , 2017, 43, 469-475.	0.7	47

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19	Evaluation of permeability, doxorubicin delivery, and drug retention in a rat brain tumor model after ultrasound-induced blood-tumor barrier disruption. <i>Journal of Controlled Release</i> , 2017, 250, 77-85.	4.8	115
20	Effects on P-Glycoprotein Expression after Blood-Brain Barrier Disruption Using Focused Ultrasound and Microbubbles. <i>PLoS ONE</i> , 2017, 12, e0166061.	1.1	115
21	Association between tumor architecture derived from generalized Q-space MRI and survival in glioblastoma. <i>Oncotarget</i> , 2017, 8, 41815-41826.	0.8	7
22	5th International Symposium on Focused Ultrasound. <i>Journal of Therapeutic Ultrasound</i> , 2016, 4, .	2.2	1
23	Preclinical evaluation of a low-frequency transcranial MRI-guided focused ultrasound system in a primate model. <i>Physics in Medicine and Biology</i> , 2016, 61, 7664-7687.	1.6	17
24	Nonthermal ablation in the rat brain using focused ultrasound and an ultrasound contrast agent: long-term effects. <i>Journal of Neurosurgery</i> , 2016, 125, 1539-1548.	0.9	17
25	Safety Validation of Repeated Blood-Brain Barrier Disruption Using Focused Ultrasound. <i>Ultrasound in Medicine and Biology</i> , 2016, 42, 481-492.	0.7	68
26	Cavitation-enhanced nonthermal ablation in deep brain targets: feasibility in a large animal model. <i>Journal of Neurosurgery</i> , 2016, 124, 1450-1459.	0.9	52
27	Targeted, noninvasive blockade of cortical neuronal activity. <i>Scientific Reports</i> , 2015, 5, 16253.	1.6	34
28	Potential of minimally invasive procedures in the treatment of uterine fibroids: a focus on magnetic resonance-guided focused ultrasound therapy. <i>International Journal of Women's Health</i> , 2015, 7, 901.	1.1	19
29	Ultrasound-mediated blood-brain barrier disruption for targeted drug delivery in the central nervous system. <i>Proceedings of SPIE</i> , 2015, , .	0.8	1
30	Transcranial Assessment and Visualization of Acoustic Cavitation: Modeling and Experimental Validation. <i>IEEE Transactions on Medical Imaging</i> , 2015, 34, 1270-1281.	5.4	35
31	Drug Delivery to the Brain via Focused Ultrasound. , 2015, , 441-474.		2
32	Enhancement in blood-tumor barrier permeability and delivery of liposomal doxorubicin using focused ultrasound and microbubbles: evaluation during tumor progression in a rat glioma model. <i>Physics in Medicine and Biology</i> , 2015, 60, 2511-2527.	1.6	78
33	Multiple sessions of liposomal doxorubicin delivery via focused ultrasound mediated blood-brain barrier disruption: A safety study. <i>Journal of Controlled Release</i> , 2015, 204, 60-69.	4.8	100
34	Evolution of Movement Disorders Surgery Leading to Contemporary Focused Ultrasound Therapy for Tremor. <i>Magnetic Resonance Imaging Clinics of North America</i> , 2015, 23, 515-522.	0.6	8
35	Update on Clinical Magnetic Resonance-Guided Focused Ultrasound Applications. <i>Magnetic Resonance Imaging Clinics of North America</i> , 2015, 23, 657-667.	0.6	23
36	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

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37	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
38	Multiple treatments with liposomal doxorubicin and ultrasound-induced disruption of blood-tumor and blood-brain barriers improve outcomes in a rat glioma model. <i>Journal of Controlled Release</i> , 2013, 169, 103-111.	4.8	202
39	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
40	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
41	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
42	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
43	Improved Anti-Tumor Effect of Liposomal Doxorubicin After Targeted Blood-Brain Barrier Disruption by MRI-Guided Focused Ultrasound in Rat Glioma. <i>Ultrasound in Medicine and Biology</i> , 2012, 38, 1716-1725.	0.7	246
44	Ultrasound-mediated blood-brain/blood-tumor barrier disruption improves outcomes with trastuzumab in a breast cancer brain metastasis model. <i>Journal of Controlled Release</i> , 2012, 163, 277-284.	4.8	185
45	Controlled Ultrasound-Induced Blood-Brain Barrier Disruption Using Passive Acoustic Emissions Monitoring. <i>PLoS ONE</i> , 2012, 7, e45783.	1.1	150
46	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
47	Simultaneous temperature and cavitation activity mapping. , 2011, , .		2
48	Transcranial Magnetic Resonance Imaging-Guided Focused Ultrasound Surgery of Brain Tumors. <i>Neurosurgery</i> , 2010, 66, 323-332.	0.6	504
49	Enhanced permeability of tumor blood vessels in brain using focused ultrasound with microbubbles. , 2010, , .		0
50	Evaluation of three-dimensional temperature distributions produced by a low-frequency transcranial focused ultrasound system within ex vivo human skulls. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2010, 57, 1967-1976.	1.7	23
51	Impact of Focused Ultrasound-enhanced Drug Delivery on Survival in Rats with Glioma. <i>AIP Conference Proceedings</i> , 2009, , .	0.3	12
52	MRI-based thermal dosimetry and diffusion-weighted imaging of MRI-guided focused ultrasound thermal ablation of uterine fibroids. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 29, 404-411.	1.9	39
53	Image-Guided Thermal Therapy of Uterine Fibroids. <i>Seminars in Ultrasound, CT and MRI</i> , 2009, 30, 91-104.	0.7	53
54	Current status and future potential of MRI-guided focused ultrasound surgery. <i>Journal of Magnetic Resonance Imaging</i> , 2008, 27, 391-399.	1.9	114

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55	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
56	Progress and problems in the application of focused ultrasound for blood-brain barrier disruption. <i>Ultrasonics</i> , 2008, 48, 279-296.	2.1	219
57	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
58	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
59	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
60	Magnetic resonance acoustic radiation force imaging. <i>Medical Physics</i> , 2008, 35, 3748-3758.	1.6	141
61	MRI-Guided FUS and its Clinical Applications. , 2008, , 275-307.		0
62	Effects of High Intensity Focused Ultrasound on the Brain. <i>AIP Conference Proceedings</i> , 2007, , .	0.3	2
63	Targeted delivery of doxorubicin to the rat brain at therapeutic levels using MRI-guided focused ultrasound. <i>International Journal of Cancer</i> , 2007, 121, 901-907.	2.3	492
64	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
65	Use of Ultrasound Pulses Combined with Definity for Targeted Blood-Brain Barrier Disruption: A Feasibility Study. <i>Ultrasound in Medicine and Biology</i> , 2007, 33, 584-590.	0.7	136
66	Integrated Therapy Delivery Systems. , 2007, , 55-67.		0
67	Experimental Uses of Magnetic Resonance Imaging-Guided Focused Ultrasound Surgery. , 2007, , 43-54.		0
68	Blood-Brain Barrier Opening. , 2007, , 161-170.		0
69	Focal disruption of the blood-brain barrier due to 260-kHz ultrasound bursts: a method for molecular imaging and targeted drug delivery. <i>Journal of Neurosurgery</i> , 2006, 105, 445-454.	0.9	277
70	Targeted delivery of antibodies through the blood-brain barrier by MRI-guided focused ultrasound. <i>Biochemical and Biophysical Research Communications</i> , 2006, 340, 1085-1090.	1.0	305
71	Pre-clinical testing of a phased array ultrasound system for MRI-guided noninvasive surgery of the brain-A primate study. <i>European Journal of Radiology</i> , 2006, 59, 149-156.	1.2	211
72	Does the phase of menstrual cycle affect MR-guided focused ultrasound surgery of uterine leiomyomas?. <i>European Journal of Radiology</i> , 2006, 59, 203-207.	1.2	12

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73	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
74	Induction of apoptosis in vivo in the rabbit brain with focused ultrasound and Optison®. <i>Ultrasound in Medicine and Biology</i> , 2006, 32, 1923-1929.	0.7	56
75	Image-guided neurosurgery at Brigham and Women's Hospital. <i>IEEE Engineering in Medicine and Biology Magazine</i> , 2006, 25, 67-73.	1.1	34
76	Uterine Leiomyomas: MR Imaging-based Thermometry and Thermal Dosimetry during Focused Ultrasound Thermal Ablation. <i>Radiology</i> , 2006, 240, 263-272.	3.6	207
77	Targeted Drug Delivery to the Brain by MRI-guided Focused Ultrasound. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
78	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
79	Evaluation of Referenceless Thermometry in MRI-Guided Focused Ultrasound Surgery of Uterine Fibroids. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
80	Induction of Apoptosis In Vivo in the Rabbit Brain with Focused Ultrasound. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
81	Efficacy of MR-guided Focused Ultrasound Thermal Ablation of Rabbit VX2 Tumors. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	0
82	Noninvasive localized delivery of Herceptin to the mouse brain by MRI-guided focused ultrasound-induced blood-brain barrier disruption. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 11719-11723.	3.3	589
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	A Magnetic Resonance Imaging-Compatible, Large-Scale Array for Trans-Skull Ultrasound Surgery and Therapy. <i>Journal of Ultrasound in Medicine</i> , 2005, 24, 1117-1125.	0.8	79
85	MRI-guided targeted blood-brain barrier disruption with focused ultrasound: Histological findings in rabbits. <i>Ultrasound in Medicine and Biology</i> , 2005, 31, 1527-1537.	0.7	292
86	Focal beam distortion and treatment planning in abdominal focused ultrasound surgery. <i>Medical Physics</i> , 2005, 32, 1270-1280.	1.6	59
87	Local and reversible blood-brain barrier disruption by noninvasive focused ultrasound at frequencies suitable for trans-skull sonications. <i>NeuroImage</i> , 2005, 24, 12-20.	2.1	596
88	MR Imaging-controlled Focused Ultrasound Ablation: A Noninvasive Image-Guided Surgery. <i>Magnetic Resonance Imaging Clinics of North America</i> , 2005, 13, 545-560.	0.6	162
89	Heat-activated Liposomal MR Contrast Agent: Initial in Vivo Results in Rabbit Liver and Kidney. <i>Radiology</i> , 2004, 230, 743-752.	3.6	74
90	MRI monitoring of heating produced by ultrasound absorption in the skull: In vivo study in pigs. <i>Magnetic Resonance in Medicine</i> , 2004, 51, 1061-1065.	1.9	63

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91	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
92	500-element ultrasound phased array system for noninvasive focal surgery of the brain: A preliminary rabbit study with ex vivo human skulls. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 100-107.	1.9	320
93	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
94	Noninvasive thermal ablation of hepatocellular carcinoma by using magnetic resonance imaging-guided focused ultrasound. <i>Gastroenterology</i> , 2004, 127, S242-S247.	0.6	63
95	<b>MRI Guidance of Focused Ultrasound Therapy of Uterine Fibroids:</b> Early Results. <i>American Journal of Roentgenology</i> , 2004, 183, 1713-1719.	1.0	370
96	MRI-guided focused ultrasound surgery in the brain: Tests in a primate model. <i>Magnetic Resonance in Medicine</i> , 2003, 49, 1188-1191.	1.9	67
97	The threshold for brain damage in rabbits induced by bursts of ultrasound in the presence of an ultrasound contrast agent (Optison <sup>Å</sup> ). <i>Ultrasound in Medicine and Biology</i> , 2003, 29, 473-481.	0.7	133
98	MR Imaging <sup>Å</sup> -guided Focused Ultrasound Surgery of Uterine Leiomyomas: A Feasibility Study. <i>Radiology</i> , 2003, 226, 897-905.	3.6	547
99	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
100	Intraoperative magnetic resonance imaging and magnetic resonance imaging <sup>Å</sup> -guided therapy for brain tumors. <i>Neuroimaging Clinics of North America</i> , 2002, 12, 665-683.	0.5	41
101	Apoptosis in ultrasound-produced threshold lesions in the rabbit brain. <i>Ultrasound in Medicine and Biology</i> , 2001, 27, 111-117.	0.7	72
102	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
103	Noninvasive MR Imaging <sup>Å</sup> -guided Focal Opening of the Blood-Brain Barrier in Rabbits. <i>Radiology</i> , 2001, 220, 640-646.	3.6	1,264
104	Comparison of modelled and observed in vivo temperature elevations induced by focused ultrasound: implications for treatment planning. <i>Physics in Medicine and Biology</i> , 2001, 46, 1785-1798.	1.6	54
105	Temperature monitoring with line scan echo planar spectroscopic imaging. <i>Medical Physics</i> , 2001, 28, 346-355.	1.6	33
106	MRI evaluation of thermal ablation of tumors with focused ultrasound. <i>Journal of Magnetic Resonance Imaging</i> , 1998, 8, 91-100.	1.9	169