Kullervo Hynynen

List of Publications by Citations

245 papers	20,246 citations	78 h-index	138 g-index
291 ext. papers	23,726 ext. citations	6.2 avg, IF	7.15 L-index

#	Paper	IF	Citations
245	Noninvasive MR imaging-guided focal opening of the blood-brain barrier in rabbits. *Radiology*, **2001**, 220, 640-6	20.5	977
244	A Randomized Trial of Focused Ultrasound Thalamotomy for Essential Tremor. *New England Journal of Medicine*, **2016**, 375, 730-9	59.2	522
243	MR imaging-guided focused ultrasound surgery of fibroadenomas in the breast: a feasibility study. *Radiology*, **2001**, 219, 176-85	20.5	504
242	Local and reversible blood-brain barrier disruption by noninvasive focused ultrasound at frequencies suitable for trans-skull sonications. *NeuroImage*, **2005**, 24, 12-20	7.9	502
241	Noninvasive localized delivery of Herceptin to the mouse brain by MRI-guided focused ultrasound-induced blood-brain barrier disruption. *Proceedings of the National Academy of Sciences of the United States of America*, **2006**, 103, 11719-23	11.5	485
240	MR imaging-guided focused ultrasound surgery of uterine leiomyomas: a feasibility study. *Radiology*, **2003**, 226, 897-905	20.5	474
239	Targeted delivery of doxorubicin to the rat brain at therapeutic levels using MRI-guided focused ultrasound. *International Journal of Cancer*, **2007**, 121, 901-7	7.5	431
238	Transcranial magnetic resonance imaging- guided focused ultrasound surgery of brain tumors: initial findings in 3 patients. *Neurosurgery*, **2010**, 66, 323-32; discussion 332	3.2	421
237	Cellular mechanisms of the blood-brain barrier opening induced by ultrasound in presence of microbubbles. *Ultrasound in Medicine and Biology*, **2004**, 30, 979-89	3.5	408
236	MR-guided focused ultrasound thalamotomy for essential tremor: a proof-of-concept study. *Lancet Neurology, The*, **2013**, 12, 462-8	24.1	401
235	Blood-brain barrier opening in Alzheimer's disease using MR-guided focused ultrasound. *Nature Communications*, **2018**, 9, 2336	17.4	368
234	Demonstration of potential noninvasive ultrasound brain therapy through an intact skull. *Ultrasound in Medicine and Biology*, **1998**, 24, 275-83	3.5	328
233	Effect of focused ultrasound applied with an ultrasound contrast agent on the tight junctional integrity of the brain microvascular endothelium. *Ultrasound in Medicine and Biology*, **2008**, 34, 1093-104	3.5	322
232	500-element ultrasound phased array system for noninvasive focal surgery of the brain: a preliminary rabbit study with ex vivo human skulls. *Magnetic Resonance in Medicine*, **2004**, 52, 100-7	4.4	260
231	Targeted delivery of antibodies through the blood-brain barrier by MRI-guided focused ultrasound. *Biochemical and Biophysical Research Communications*, **2006**, 340, 1085-90	3.4	256
230	MRI-guided targeted blood-brain barrier disruption with focused ultrasound: histological findings in rabbits. *Ultrasound in Medicine and Biology*, **2005**, 31, 1527-37	3.5	254
229	Antibodies targeted to the brain with image-guided focused ultrasound reduces amyloid-beta plaque load in the TgCRND8 mouse model of Alzheimer's disease. *PLoS ONE*, **2010**, 5, e10549	3.7	253

228	Focal disruption of the blood-brain barrier due to 260-kHz ultrasound bursts: a method for molecular imaging and targeted drug delivery. *Journal of Neurosurgery*, **2006**, 105, 445-54	3.2	242
227	Blood-brain barrier: real-time feedback-controlled focused ultrasound disruption by using an acoustic emissions-based controller. *Radiology*, **2012**, 263, 96-106	20.5	241
226	Blood-Brain Barrier Opening in Primary Brain Tumors with Non-invasive MR-Guided Focused Ultrasound: A Clinical Safety and Feasibility Study. *Scientific Reports*, **2019**, 9, 321	4.9	233
225	MR temperature mapping of focused ultrasound surgery. *Magnetic Resonance in Medicine*, **1994**, 31, 628-36	4.4	224
224	MR-guided focused ultrasound surgery. *Journal of Computer Assisted Tomography*, **1992**, 16, 956-65	2.2	220
223	Uterine leiomyomas: MR imaging-guided focused ultrasound surgery--results of different treatment protocols. *Radiology*, **2007**, 243, 885-93	20.5	205
222	Improved anti-tumor effect of liposomal doxorubicin after targeted blood-brain barrier disruption by MRI-guided focused ultrasound in rat glioma. *Ultrasound in Medicine and Biology*, **2012**, 38, 1716-25	3.5	199
221	Ultrasound for drug and gene delivery to the brain. *Advanced Drug Delivery Reviews*, **2008**, 60, 1209-17	18.5	196
220	Blood-brain barrier disruption induced by focused ultrasound and circulating preformed microbubbles appears to be characterized by the mechanical index. *Ultrasound in Medicine and Biology*, **2008**, 34, 834-40	3.5	196
219	Amyloid-β plaque reduction, endogenous antibody delivery and glial activation by brain-targeted, transcranial focused ultrasound. *Experimental Neurology*, **2013**, 248, 16-29	5.7	190
218	Effects of acoustic parameters and ultrasound contrast agent dose on focused-ultrasound induced blood-brain barrier disruption. *Ultrasound in Medicine and Biology*, **2008**, 34, 930-7	3.5	190
217	Uterine leiomyomas: MR imaging-based thermometry and thermal dosimetry during focused ultrasound thermal ablation. *Radiology*, **2006**, 240, 263-72	20.5	184
216	Targeted delivery of neural stem cells to the brain using MRI-guided focused ultrasound to disrupt the blood-brain barrier. *PLoS ONE*, **2011**, 6, e27877	3.7	183
215	Pre-clinical testing of a phased array ultrasound system for MRI-guided noninvasive surgery of the brain--a primate study. *European Journal of Radiology*, **2006**, 59, 149-56	4.7	180
214	Progress and problems in the application of focused ultrasound for blood-brain barrier disruption. *Ultrasonics*, **2008**, 48, 279-96	3.5	179
213	Optimization of spoiled gradient-echo phase imaging for in vivo localization of a focused ultrasound beam. *Magnetic Resonance in Medicine*, **1996**, 36, 745-52	4.4	178
212	Focused ultrasound surgery in oncology: overview and principles. *Radiology*, **2011**, 259, 39-56	20.5	172
211	Ultrasound technology for hyperthermia. *Ultrasound in Medicine and Biology*, **1999**, 25, 871-87	3.5	171

210	Alzheimer disease in a mouse model: MR imaging-guided focused ultrasound targeted to the hippocampus opens the blood-brain barrier and improves pathologic abnormalities and behavior. *Radiology*, **2014**, 273, 736-45	20.5	166
209	Ultrasound enhanced delivery of molecular imaging and therapeutic agents in Alzheimer's disease mouse models. *PLoS ONE*, **2008**, 3, e2175	3.7	162
208	First-in-human trial of blood-brain barrier opening in amyotrophic lateral sclerosis using MR-guided focused ultrasound. *Nature Communications*, **2019**, 10, 4373	17.4	160
207	MRI-guided focused ultrasound treatments. *Ultrasonics*, **2010**, 50, 221-9	3.5	157
206	Multi-frequency characterization of the speed of sound and attenuation coefficient for longitudinal transmission of freshly excised human skulls. *Physics in Medicine and Biology*, **2011**, 56, 219-50	3.8	154
205	MRI evaluation of thermal ablation of tumors with focused ultrasound. *Journal of Magnetic Resonance Imaging*, **1998**, 8, 91-100	5.6	153
204	Focusing of therapeutic ultrasound through a human skull: a numerical study. *Journal of the Acoustical Society of America*, **1998**, 104, 1705-15	2.2	148
203	Thermal dosimetry of a focused ultrasound beam in vivo by magnetic resonance imaging. *Medical Physics*, **1999**, 26, 2017-26	4.4	146
202	Noninvasive arterial occlusion using MRI-guided focused ultrasound. *Ultrasound in Medicine and Biology*, **1996**, 22, 1071-7	3.5	142
201	Focused ultrasound delivers targeted immune cells to metastatic brain tumors. *Cancer Research*, **2013**, 73, 1892-9	10.1	137
200	Microbubble contrast agent with focused ultrasound to create brain lesions at low power levels: MR imaging and histologic study in rabbits. *Radiology*, **2006**, 241, 95-106	20.5	134
199	A hemisphere array for non-invasive ultrasound brain therapy and surgery. *Physics in Medicine and Biology*, **2000**, 45, 3707-19	3.8	134
198	Localized harmonic motion imaging: theory, simulations and experiments. *Ultrasound in Medicine and Biology*, **2003**, 29, 1405-13	3.5	133
197	MRI investigation of the threshold for thermally induced blood-brain barrier disruption and brain tissue damage in the rabbit brain. *Magnetic Resonance in Medicine*, **2004**, 51, 913-23	4.4	132
196	Uterine leiomyomas: MR imaging-guided focused ultrasound surgery--imaging predictors of success. *Radiology*, **2008**, 249, 187-94	20.5	130
195	Focused ultrasound-mediated drug delivery through the blood-brain barrier. *Expert Review of Neurotherapeutics*, **2015**, 15, 477-91	4.3	129
194	Multiphoton imaging of ultrasound/Optison mediated cerebrovascular effects in vivo. *Journal of Cerebral Blood Flow and Metabolism*, **2007**, 27, 393-403	7.3	129
193	Targeted delivery of self-complementary adeno-associated virus serotype 9 to the brain, using magnetic resonance imaging-guided focused ultrasound. *Human Gene Therapy*, **2012**, 23, 1144-55	4.8	123

192	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. *Ultrasound in Medicine and Biology*, **2006**, 32, 1399-409	3.5	121
191	The threshold for brain damage in rabbits induced by bursts of ultrasound in the presence of an ultrasound contrast agent (Optison). *Ultrasound in Medicine and Biology*, **2003**, 29, 473-81	3.5	121
190	Acute Inflammatory Response Following Increased Blood-Brain Barrier Permeability Induced by Focused Ultrasound is Dependent on Microbubble Dose. *Theranostics*, **2017**, 7, 3989-4000	12.1	119
189	Potential adverse effects of high-intensity focused ultrasound exposure on blood vessels in vivo. *Ultrasound in Medicine and Biology*, **1996**, 22, 193-201	3.5	119
188	Temperature mapping using the water proton chemical shift: a chemical shift selective phase mapping method. *Magnetic Resonance in Medicine*, **1997**, 38, 845-51	4.4	115
187	The potential of transskull ultrasound therapy and surgery using the maximum available skull surface area. *Journal of the Acoustical Society of America*, **1999**, 105, 2519-27	2.2	110
186	To heat or not to heat: Challenges with clinical translation of thermosensitive liposomes. *Journal of Controlled Release*, **2017**, 249, 63-73	11.7	108
185	Use of ultrasound pulses combined with Definity for targeted blood-brain barrier disruption: a feasibility study. *Ultrasound in Medicine and Biology*, **2007**, 33, 584-90	3.5	108
184	MRI detection of the thermal effects of focused ultrasound on the brain. *Ultrasound in Medicine and Biology*, **2000**, 26, 871-80	3.5	103
183	Stimulation of hippocampal neurogenesis by transcranial focused ultrasound and microbubbles in adult mice. *Brain Stimulation*, **2014**, 7, 304-7	5.1	97
182	The impact of standing wave effects on transcranial focused ultrasound disruption of the blood-brain barrier in a rat model. *Physics in Medicine and Biology*, **2010**, 55, 5251-67	3.8	93
181	Focused ultrasound disruption of the blood-brain barrier: a new frontier for therapeutic delivery in molecular neurooncology. *Neurosurgical Focus*, **2012**, 32, E3	4.2	92
180	Enhanced delivery of gold nanoparticles with therapeutic potential into the brain using MRI-guided focused ultrasound. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2012**, 8, 1133-42	6	89
179	Focused-ultrasound disruption of the blood-brain barrier using closely-timed short pulses: influence of sonication parameters and injection rate. *Ultrasound in Medicine and Biology*, **2011**, 37, 587-94	3.5	89
178	Key factors that affect sonoporation efficiency in in vitro settings: the importance of standing wave in sonoporation. *Biochemical and Biophysical Research Communications*, **2007**, 359, 860-5	3.4	89
177	Two-photon fluorescence microscopy study of cerebrovascular dynamics in ultrasound-induced blood-brain barrier opening. *Journal of Cerebral Blood Flow and Metabolism*, **2011**, 31, 1852-62	7.3	88
176	Simultaneous magnetic resonance phase and magnitude temperature maps in muscle. *Magnetic Resonance in Medicine*, **1996**, 35, 309-15	4.4	88
175	Drug delivery to the brain by focused ultrasound induced blood-brain barrier disruption: quantitative evaluation of enhanced permeability of cerebral vasculature using two-photon microscopy. *Journal of Controlled Release*, **2013**, 172, 274-280	11.7	86

174	Three-dimensional transcranial ultrasound imaging of microbubble clouds using a sparse hemispherical array. *IEEE Transactions on Biomedical Engineering*, **2014**, 61, 1285-94	5	84
173	Focused ultrasound thalamotomy location determines clinical benefits in patients with essential tremor. *Brain*, **2018**, 141, 3405-3414	11.2	84
172	Super-resolution Ultrasound Imaging. *Ultrasound in Medicine and Biology*, **2020**, 46, 865-891	3.5	83
171	Correlation of ultrasound phase with physical skull properties. *Ultrasound in Medicine and Biology*, **2002**, 28, 617-24	3.5	83
170	Noninvasive and targeted drug delivery to the brain using focused ultrasound. *ACS Chemical Neuroscience*, **2013**, 4, 519-26	5.7	82
169	In vitro and in vivo high-intensity focused ultrasound thrombolysis. *Investigative Radiology*, **2012**, 47, 217-25	10.1	82
168	Focused ultrasound for targeted delivery of siRNA and efficient knockdown of Htt expression. *Journal of Controlled Release*, **2012**, 163, 125-9	11.7	81
167	DDEL-01. ENHANCING DRUG DELIVERY WITH MRgFUS FOR DIFFUSE INTRINSIC PONTINE GLIOMA MODEL. *Neuro-Oncology*, **2020**, 22, iii283-iii283	1	78
166	Patterns of thermal deposition in the skull during transcranial focused ultrasound surgery. *IEEE Transactions on Biomedical Engineering*, **2004**, 51, 1693-706	5	77
165	A numerical study of transcranial focused ultrasound beam propagation at low frequency. *Physics in Medicine and Biology*, **2005**, 50, 1821-36	3.8	76
164	Noninvasive and targeted delivery of therapeutics to the brain using focused ultrasound. *Neuropharmacology*, **2017**, 120, 20-37	5.5	75
163	Ultrasound-Responsive Cavitation Nuclei for Therapy and Drug Delivery. *Ultrasound in Medicine and Biology*, **2020**, 46, 1296-1325	3.5	75
162	Three-dimensional transcranial microbubble imaging for guiding volumetric ultrasound-mediated blood-brain barrier opening. *Theranostics*, **2018**, 8, 2909-2926	12.1	75
161	Calibration of water proton chemical shift with temperature for noninvasive temperature imaging during focused ultrasound surgery. *Journal of Magnetic Resonance Imaging*, **1998**, 8, 175-81	5.6	74
160	Early treatment of HER2-amplified brain tumors with targeted NK-92 cells and focused ultrasound improves survival. *Neuro-Oncology*, **2016**, 18, 974-81	1	73
159	An MRI-compatible system for focused ultrasound experiments in small animal models. *Medical Physics*, **2009**, 36, 1867-74	4.4	71
158	A magnetic resonance imaging-compatible, large-scale array for trans-skull ultrasound surgery and therapy. *Journal of Ultrasound in Medicine*, **2005**, 24, 1117-25	2.9	71
157	Temperature monitoring in fat with MRI. *Magnetic Resonance in Medicine*, **2000**, 43, 901-4	4.4	68

156	Acute effects of focused ultrasound-induced increases in blood-brain barrier permeability on rat microvascular transcriptome. *Scientific Reports*, **2017**, 7, 45657	4.9	67
155	Transcranial passive acoustic mapping with hemispherical sparse arrays using CT-based skull-specific aberration corrections: a simulation study. *Physics in Medicine and Biology*, **2013**, 58, 4981-5005	3.8	67
154	Hyperthermia-mediated doxorubicin release from thermosensitive liposomes using MR-HIFU: therapeutic effect in rabbit Vx2 tumours. *International Journal of Hyperthermia*, **2015**, 31, 118-33	3.7	66
153	Image-guided ultrasound phased arrays are a disruptive technology for non-invasive therapy. *Physics in Medicine and Biology*, **2016**, 61, R206-48	3.8	65
152	Opening the Blood-Brain Barrier with MR Imaging-guided Focused Ultrasound: Preclinical Testing on a Trans-Human Skull Porcine Model. *Radiology*, **2017**, 282, 123-130	20.5	65
151	Focused ultrasound delivery of Raman nanoparticles across the blood-brain barrier: potential for targeting experimental brain tumors. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2014**, 10, 1075-87	6	64
150	Ultrasound insertion loss of rat parietal bone appears to be proportional to animal mass at submegahertz frequencies. *Ultrasound in Medicine and Biology*, **2011**, 37, 1930-7	3.5	63
149	Influence of exposure time and pressure amplitude on blood-brain-barrier opening using transcranial ultrasound exposures. *ACS Chemical Neuroscience*, **2010**, 1, 391-398	5.7	63
148	Apoptosis in ultrasound-produced threshold lesions in the rabbit brain. *Ultrasound in Medicine and Biology*, **2001**, 27, 111-7	3.5	63
147	High-intensity focused ultrasound (HIFU) for dissolution of clots in a rabbit model of embolic stroke. *PLoS ONE*, **2012**, 7, e42311	3.7	62
146	MRI monitoring of the thermal ablation of tissue: effects of long exposure times. *Journal of Magnetic Resonance Imaging*, **2001**, 13, 421-7	5.6	62
145	MR monitoring of focused ultrasonic surgery of renal cortex: experimental and simulation studies. *Journal of Magnetic Resonance Imaging*, **1995**, 5, 259-66	5.6	61
144	Field characterization of therapeutic ultrasound phased arrays through forward and backward planar projection. *Journal of the Acoustical Society of America*, **2000**, 108, 441-6	2.2	60
143	The usefulness of a contrast agent and gradient-recalled acquisition in a steady-state imaging sequence for magnetic resonance imaging-guided noninvasive ultrasound surgery. *Investigative Radiology*, **1994**, 29, 897-903	10.1	59
142	Enhanced drug delivery in rabbit VX2 tumours using thermosensitive liposomes and MRI-controlled focused ultrasound hyperthermia. *International Journal of Hyperthermia*, **2012**, 28, 776-87	3.7	58
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140	Focused ultrasound-mediated bbb disruption is associated with an increase in activation of AKT: experimental study in rats. *BMC Neurology*, **2010**, 10, 114	3.1	57
139	Simulations of the thermo-acoustic lens effect during focused ultrasound surgery. *Journal of the Acoustical Society of America*, **2001**, 109, 2245-53	2.2	57

138	Mechanism of porphyrin-induced sonodynamic effect: possible role of hyperthermia. *Radiation Research*, **2006**, 165, 299-306	3.1	56
137	Glymphatics Visualization after Focused Ultrasound-Induced Blood-Brain Barrier Opening in Humans. *Annals of Neurology*, **2019**, 86, 975-980	9.4	55
136	Drug delivery across the blood-brain barrier using focused ultrasound. *Expert Opinion on Drug Delivery*, **2014**, 11, 711-21	8	55
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134	Analysis of focused ultrasound-induced blood-brain barrier permeability in a mouse model of Alzheimer's disease using two-photon microscopy. *Journal of Controlled Release*, **2014**, 192, 243-8	11.7	54
133	MRIgHIFU: a tool for image-guided therapeutics. *Journal of Magnetic Resonance Imaging*, **2011**, 34, 482-93	3.6	54
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131	Thermal effects of focused ultrasound energy on bone tissue. *Ultrasound in Medicine and Biology*, **2001**, 27, 1427-33	3.5	53
130	Investigation of standing-wave formation in a human skull for a clinical prototype of a large-aperture, transcranial MR-guided focused ultrasound (MRgFUS) phased array: an experimental and simulation study. *IEEE Transactions on Biomedical Engineering*, **2012**, 59, 435-44	5	51
129	Ultrasound enhanced drug delivery to the brain and central nervous system. *International Journal of Hyperthermia*, **2012**, 28, 386-96	3.7	51
128	Simulations and measurements of transcranial low-frequency ultrasound therapy: skull-base heating and effective area of treatment. *Physics in Medicine and Biology*, **2011**, 56, 4661-83	3.8	51
127	Applications of focused ultrasound in the brain: from thermoablation to drug delivery. *Nature Reviews Neurology*, **2021**, 17, 7-22	15	49
126	A PVDF receiver for ultrasound monitoring of transcranial focused ultrasound therapy. *IEEE Transactions on Biomedical Engineering*, **2010**, 57, 2286-94	5	48
125	Focal beam distortion and treatment planning in abdominal focused ultrasound surgery. *Medical Physics*, **2005**, 32, 1270-80	4.4	48
124	Focused Ultrasound Hyperthermia Mediated Drug Delivery Using Thermosensitive Liposomes and Visualized With Two-Photon Microscopy. *Theranostics*, **2017**, 7, 2718-2731	12.1	46
123	Experimental demonstration of passive acoustic imaging in the human skull cavity using CT-based aberration corrections. *Medical Physics*, **2015**, 42, 4385-400	4.4	45
122	Investigation of the Safety of Focused Ultrasound-Induced Blood-Brain Barrier Opening in a Natural Canine Model of Aging. *Theranostics*, **2017**, 7, 3573-3584	12.1	44
121	Brain edema development after MRI-guided focused ultrasound treatment. *Journal of Magnetic Resonance Imaging*, **1998**, 8, 136-42	5.6	44

120	Blood-Brain Barrier Closure Time After Controlled Ultrasound-Induced Opening Is Independent of Opening Volume. *Journal of Ultrasound in Medicine*, **2017**, 36, 475-483	2.9	43
119	A multi-frequency sparse hemispherical ultrasound phased array for microbubble-mediated transcranial therapy and simultaneous cavitation mapping. *Physics in Medicine and Biology*, **2016**, 61, 8476-8501	3.8	43
118	Intracranial applications of magnetic resonance-guided focused ultrasound. *Neurotherapeutics*, **2014**, 11, 593-605	6.4	43
117	In vivo monitoring of focused ultrasound surgery using local harmonic motion. *Ultrasound in Medicine and Biology*, **2009**, 35, 65-78	3.5	41
116	Safety and efficacy of focused ultrasound induced blood-brain barrier opening, an integrative review of animal and human studies. *Journal of Controlled Release*, **2019**, 309, 25-36	11.7	40
115	Focused Ultrasound-Induced Neurogenesis Requires an Increase in Blood-Brain Barrier Permeability. *PLoS ONE*, **2016**, 11, e0159892	3.7	40
114	Contrast agent kinetics in the rabbit brain during exposure to therapeutic ultrasound. *Ultrasound in Medicine and Biology*, **2010**, 36, 916-24	3.5	39
113	Feasibility of using lateral mode coupling method for a large scale ultrasound phased array for noninvasive transcranial therapy. *IEEE Transactions on Biomedical Engineering*, **2010**, 57, 124-33	5	38
112	A parametric study of the concentric-ring transducer design for MRI guided ultrasound surgery. *Journal of the Acoustical Society of America*, **1996**, 100, 1220-30	2.2	38
111	Noninvasive delivery of an □synuclein gene silencing vector with magnetic resonance-guided focused ultrasound. *Movement Disorders*, **2018**, 33, 1567-1579	7	37
110	High-intensity focused ultrasound sonothrombolysis: the use of perfluorocarbon droplets to achieve clot lysis at reduced acoustic power. *Ultrasound in Medicine and Biology*, **2014**, 40, 2151-61	3.5	36
109	Microbubbles and blood-brain barrier opening: a numerical study on acoustic emissions and wall stress predictions. *IEEE Transactions on Biomedical Engineering*, **2015**, 62, 1293-304	5	36
108	The relevance of skull density ratio in selecting candidates for transcranial MR-guided focused ultrasound. *Journal of Neurosurgery*, **2019**, 132, 1785-1791	3.2	36
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106	Microbubble-Assisted Ultrasound for Drug Delivery in the Brain and Central Nervous System. *Advances in Experimental Medicine and Biology*, **2016**, 880, 293-308	3.6	32
105	Temperature monitoring with line scan echo planar spectroscopic imaging. *Medical Physics*, **2001**, 28, 346-55	4.4	32
104	Design and experimental verification of thin acoustic lenses for the coagulation of large tissue volumes. *Physics in Medicine and Biology*, **1997**, 42, 2341-54	3.8	30
103	Resting state functional connectivity changes after MR-guided focused ultrasound mediated blood-brain barrier opening in patients with Alzheimer's disease. *NeuroImage*, **2019**, 200, 275-280	7.9	29

102	Time course of focused ultrasound effects on β-amyloid plaque pathology in the TgCRND8 mouse model of Alzheimer's disease. *Scientific Reports*, **2018**, 8, 14061	4.9	29
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100	MRI-guided ultrasonic heating allows spatial control of exogenous luciferase in canine prostate. *Ultrasound in Medicine and Biology*, **2005**, 31, 965-70	3.5	27
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98	The role of internal reflection in transskull phase distortion. *Ultrasonics*, **2001**, 39, 109-13	3.5	26
97	The reduction in treatment efficiency at high acoustic powers during MR-guided transcranial focused ultrasound thalamotomy for Essential Tremor. *Medical Physics*, **2018**, 45, 2925-2936	4.4	26
96	Investigating the effects of dexamethasone on blood-brain barrier permeability and inflammatory response following focused ultrasound and microbubble exposure. *Theranostics*, **2020**, 10, 1604-1618	12.1	21
95	Investigating the efficacy of a combination Aβ-targeted treatment in a mouse model of Alzheimer's disease. *Brain Research*, **2018**, 1678, 138-145	3.7	21
94	MR-guided Focused Ultrasound Facilitates Sonodynamic Therapy with 5-Aminolevulinic Acid in a Rat Glioma Model. *Scientific Reports*, **2019**, 9, 10465	4.9	21
93	Noninvasive transesophageal cardiac thermal ablation using a 2-D focused, ultrasound phased array: a simulation study. *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, **2006**, 53, 1138-49	3.2	21
92	Focused Ultrasound and Microbubbles-Mediated Drug Delivery to Brain Tumor. *Pharmaceutics*, **2020**, 13,	6.4	21
91	Reply to Kovacs .: Concerning acute inflammatory response following focused ultrasound and microbubbles in the brain. *Theranostics*, **2018**, 8, 2249-2250	12.1	21
90	MRI-Guided Focused Ultrasound for Targeted Delivery of rAAV to the Brain. *Methods in Molecular Biology*, **2019**, 1950, 177-197	1.4	20
89	Angiogenic response of rat hippocampal vasculature to focused ultrasound-mediated increases in blood-brain barrier permeability. *Scientific Reports*, **2018**, 8, 12178	4.9	20
88	Creating brain lesions with low-intensity focused ultrasound with microbubbles: a rat study at half a megahertz. *Ultrasound in Medicine and Biology*, **2013**, 39, 1420-8	3.5	20
87	Preliminary Investigation of Focused Ultrasound-Facilitated Drug Delivery for the Treatment of Leptomeningeal Metastases. *Scientific Reports*, **2018**, 8, 9013	4.9	20
86	Focused ultrasound as a novel strategy for Alzheimer disease therapeutics. *Annals of Neurology*, **2017**, 81, 611-617	9.4	19
85	MR acoustic radiation force imaging: in vivo comparison to ultrasound motion tracking. *Medical Physics*, **2009**, 36, 2016-20	4.4	19

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83	MR-guided focused ultrasound for brain ablation and blood-brain barrier disruption. *Methods in Molecular Biology*, **2011**, 711, 579-93	1.4	19
82	Advances in acoustic monitoring and control of focused ultrasound-mediated increases in blood-brain barrier permeability. *British Journal of Radiology*, **2019**, 92, 20180601	3.4	19
81	Magnetic Resonance-Guided High-Intensity-Focused Ultrasound for Palliation of Painful Skeletal Metastases: A Pilot Study. *Technology in Cancer Research and Treatment*, **2017**, 16, 570-576	2.7	17
80	Simulation study of the effects of near- and far-field heating during focused ultrasound uterine fibroid ablation using an electronically focused phased array: A theoretical analysis of patient safety. *Medical Physics*, **2014**, 41, 072902	4.4	17
79	Clinically approved IVIg delivered to the hippocampus with focused ultrasound promotes neurogenesis in a model of Alzheimer's disease. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 32691-32700	11.5	17
78	Design of patient-specific focused ultrasound arrays for non-invasive brain therapy with increased trans-skull transmission and steering range. *Physics in Medicine and Biology*, **2017**, 62, L9-L19	3.8	16
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76	Temperature monitoring of ultrasonically heated muscle with RARE chemical shift imaging. *Medical Physics*, **1997**, 24, 1899-906	4.4	16
75	Tractography-based targeting of the ventral intermediate nucleus: accuracy and clinical utility in MRgFUS thalamotomy. *Journal of Neurosurgery*, **2019**, 1-8	3.2	16
74	Simultaneous Intravital Optical and Acoustic Monitoring of Ultrasound-Triggered Nanobubble Generation and Extravasation. *Nano Letters*, **2020**, 20, 4512-4519	11.5	14
73	A non-surgical model of cervical spinal cord injury induced with focused ultrasound and microbubbles. *Journal of Neuroscience Methods*, **2014**, 235, 92-100	3	14
72	Neutrophil recruitment and leukocyte response following focused ultrasound and microbubble mediated blood-brain barrier treatments. *Theranostics*, **2021**, 11, 1655-1671	12.1	14
71	Antidepressant effects of focused ultrasound induced blood-brain-barrier opening. *Behavioural Brain Research*, **2018**, 342, 57-61	3.4	13
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