

Nikolai I Avdievich

List of Publications by Year in descending order

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60
papers

1,230
citations

394421

19
h-index

434195

31
g-index

61
all docs

61
docs citations

61
times ranked

905
citing authors

#	ARTICLE	IF	CITATIONS
1	Safety testing and operational procedures for self-developed radiofrequency coils. NMR in Biomedicine, 2016, 29, 1131-1144.	2.8	91
2	RF shimming for spectroscopic localization in the human brain at 7 T. Magnetic Resonance in Medicine, 2010, 63, 9-19.	3.0	82
3	Transceiver-Phased Arrays for Human Brain Studies at 7 T. Applied Magnetic Resonance, 2011, 41, 483-506.	1.2	80
4	Resonant inductive decoupling (RID) for transceiver arrays to compensate for both reactive and resistive components of the mutual impedance. NMR in Biomedicine, 2013, 26, 1547-1554.	2.8	58
5	Examination of the Exchange Interaction through Micellar Size. 3. Stimulated Nuclear Polarization and Time Resolved Electron Spin Resonance Spectra from the Photolysis of Methyldeoxybenzoin in Alkyl Sulfate Micelles of Different Sizes. Journal of the American Chemical Society, 1995, 117, 110-118.	13.7	52
6	Influence of Molecular Structure on the Rate of Intersystem Crossing in Flexible Biradicals. Journal of Physical Chemistry A, 1997, 101, 8809-8816.	2.5	45
7	4T Actively detuneable double-tuned ¹ H/ ³¹ P head volume coil and four-channel ³¹ P phased array for human brain spectroscopy. Journal of Magnetic Resonance, 2007, 186, 341-346.	2.1	40
8	Metabolite-cycled STEAM and semi-LASER localization for MR spectroscopy of the human brain at 9.4T. Magnetic Resonance in Medicine, 2018, 79, 1841-1850.	3.0	38
9	Investigation of the influence of macromolecules and spline baseline in the fitting model of human brain spectra at 9.4T. Magnetic Resonance in Medicine, 2019, 81, 746-758.	3.0	35
10	Evaluation of transmit efficiency and SAR for a tight fit transceiver human head phased array at 9.4T. NMR in Biomedicine, 2017, 30, e3680.	2.8	34
11	Deuterium metabolic imaging in the human brain at 9.4 Tesla with high spatial and temporal resolution. NeuroImage, 2021, 244, 118639.	4.2	34
12	Compressed sensing for high-resolution nonlipid suppressed ¹ H FID MRSI of the human brain at 9.4T. Magnetic Resonance in Medicine, 2018, 80, 2311-2325.	3.0	30
13	Combination of surface and vertical loop elements improves receive performance of a human head transceiver array at 9.4T. NMR in Biomedicine, 2018, 31, e3878.	2.8	28
14	Dynamic B ₀ shimming of the human brain at 9.4 T with a 16-channel multi-coil shim setup. Magnetic Resonance in Medicine, 2018, 80, 1714-1725.	3.0	27
15	Double-row 18-loop transceiver 32-loop receive tight-fit array provides for whole-brain coverage, high transmit performance, and SNR improvement near the brain center at 9.4T. Magnetic Resonance in Medicine, 2019, 81, 3392-3405.	3.0	27
16	Characterization of macromolecular baseline of human brain using metabolite cycled semi-LASER at 9.4T. Magnetic Resonance in Medicine, 2018, 80, 462-473.	3.0	26
17	Decoupling of a tight-fit transceiver phased array for human brain imaging at 9.4T: Loop overlapping rediscovered. Magnetic Resonance in Medicine, 2018, 79, 1200-1211.	3.0	26
18	Open half-volume quadrature transverse electromagnetic coil for high-field magnetic resonance imaging. Magnetic Resonance in Medicine, 2005, 53, 937-943.	3.0	21

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19	Bent folded dipole head array for ultrahigh field MRI turns dielectric resonance from an enemy to a friend. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 3453-3467.	3.0	21
20	Double-tuned ³¹ P/ ¹ H human head array with high performance at both frequencies for spectroscopic imaging at 9.4T. <i>Magnetic Resonance in Medicine</i> , 2020, 84, 1076-1089.	3.0	21
21	7T head volume coils: Improvements for rostral brain imaging. <i>Journal of Magnetic Resonance Imaging</i> , 2009, 29, 461-465.	3.4	19
22	In vivo characterization of the downfield part of ¹ H MR spectra of human brain at 9.4 T: Magnetization exchange with water and relation to conventionally determined metabolite content. <i>Magnetic Resonance in Medicine</i> , 2018, 79, 2863-2873.	3.0	19
23	In Search of Through-Solvent Electronic Coupling in Flexible Biradicals. <i>Journal of the American Chemical Society</i> , 1996, 118, 4707-4708.	13.7	18
24	4 T actively detunable transmit/receive transverse electromagnetic coil and 4-channel receive-only phased array for ¹ H human brain studies. <i>Magnetic Resonance in Medicine</i> , 2004, 52, 1459-1464.	3.0	18
25	Selective homonuclear polarization transfer for spectroscopic imaging of GABA at 7T. <i>Magnetic Resonance in Medicine</i> , 2013, 69, 310-316.	3.0	18
26	Time-Resolved EPR Study of a 1,9-Flexible Biradical Dissolved in Liquid Carbon Dioxide. Observation of a New Spin-Relaxation Phenomenon: An Alternating Intensities in Spin-Correlated Radical Pair Spectra. <i>Journal of Physical Chemistry A</i> , 1997, 101, 617-621.	2.5	17
27	Improved homogeneity of the transmit field by simultaneous transmission with phased array and volume coil. <i>Journal of Magnetic Resonance Imaging</i> , 2010, 32, 476-481.	3.4	16
28	Evaluation of short folded dipole antennas as receive elements of ultrahigh field human head array. <i>Magnetic Resonance in Medicine</i> , 2019, 82, 811-824.	3.0	16
29	Decoupling of folded dipole antenna elements of a 9.4 T human head array using an RF shield. <i>NMR in Biomedicine</i> , 2020, 33, e4351.	2.8	16
30	Decoupling of a double-row 16-element tight-fit transceiver phased array for human whole-brain imaging at 9.4 T. <i>NMR in Biomedicine</i> , 2018, 31, e3964.	2.8	15
31	TREPR spectra of micelle-confined spin correlated radical pairs: I. Molecular motion and simulations. <i>Photochemical and Photobiological Sciences</i> , 2014, 13, 439-453.	2.9	14
32	Non-water-suppressed ¹ H FID-MRSI at 3T and 9.4T. <i>Magnetic Resonance in Medicine</i> , 2018, 80, 442-451.	3.0	14
33	A novel method to measure T ₁ relaxation times of macromolecules and quantification of the macromolecular resonances. <i>Magnetic Resonance in Medicine</i> , 2021, 85, 601-614.	3.0	14
34	Modified perturbation method for transverse electromagnetic (TEM) coil tuning and evaluation. <i>Magnetic Resonance in Medicine</i> , 2003, 50, 13-18.	3.0	13
35	Unshielded bent folded dipole 9.4 T human head transceiver array decoupled using modified passive dipoles. <i>Magnetic Resonance in Medicine</i> , 2021, 86, 581-597.	3.0	13
36	Analytical modeling provides new insight into complex mutual coupling between surface loops at ultrahigh fields. <i>NMR in Biomedicine</i> , 2017, 30, e3759.	2.8	12

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37	Accurate determination of brain metabolite concentrations using ERETIC as external reference. NMR in Biomedicine, 2017, 30, e3731.	2.8	12
38	A 32-element loop/dipole hybrid array for human head imaging at 7T. Magnetic Resonance in Medicine, 2022, 88, 1912-1926.	3.0	12
39	Investigation of Micellized Radical Pairs in the Photolysis of Ketones by Time-Resolved Stimulated Nuclear Polarization*. Zeitschrift Fur Physikalische Chemie, 1993, 182, 107-117.	2.8	11
40	Folded-end dipole transceiver array for human whole-brain imaging at 7T. NMR in Biomedicine, 2021, 34, e4541.	2.8	11
41	Comparison of four 31P single-voxel MRS sequences in the human brain at 9.4 T. Magnetic Resonance in Medicine, 2021, 85, 3010-3026.	3.0	10
42	3D ³¹ P MRSI of the human brain at 9.4 Tesla: Optimization and quantitative analysis of metabolic images. Magnetic Resonance in Medicine, 2021, 86, 2368-2383.	3.0	10
43	Relaxation-corrected macromolecular model enables determination of ¹ H longitudinal T ₁ -relaxation times and concentrations of human brain metabolites at 9.4T. Magnetic Resonance in Medicine, 2022, 87, 33-49.	3.0	10
44	Unusual Dynamics of Micellized Radical Pairs Generated from Photochemically Active Amphiphiles. Journal of the American Chemical Society, 1996, 118, 10652-10653.	13.7	9
45	9.4T double-tuned ¹³ C/ ¹ H human head array using a combination of surface loops and dipole antennas. NMR in Biomedicine, 2021, 34, e4577.	2.8	9
46	Feasibility of deuterium magnetic resonance spectroscopy of 3-O-Methylglucose at 7 Tesla. PLoS ONE, 2021, 16, e0252935.	2.5	9
47	Flexible Biradicals in Liquid and Supercritical Carbon Dioxide: The Exchange Interaction, the Chain Dynamics, and a Comparison with Conventional Solvents. Journal of Physical Chemistry A, 2006, 110, 1767-1774.	2.5	7
48	High-field actively detuneable transverse electromagnetic (TEM) coil with low-bias voltage for high-power RF transmission. Magnetic Resonance in Medicine, 2007, 57, 1190-1195.	3.0	6
49	Simultaneous detection of metabolite concentration changes, water BOLD signal and pH changes during visual stimulation in the human brain at 9.4T. Journal of Cerebral Blood Flow and Metabolism, 2022, , 0271678X2210758.	4.3	6
50	Double-row dipole/loop combined array for human whole brain imaging at 7T. NMR in Biomedicine, 2022, 35, e4773.	2.8	6
51	Ultrahigh-resolution quantitative spinal cord MRI at 9.4T. Magnetic Resonance in Medicine, 2021, 85, 1013-1027.	3.0	5
52	SENSE imaging with a quadrature half-volume transverse electromagnetic (TEM) coil at 4T. Journal of Magnetic Resonance Imaging, 2006, 24, 934-938.	3.4	4
53	4T split TEM volume head and knee coils for improved sensitivity and patient accessibility. Journal of Magnetic Resonance, 2007, 187, 234-241.	2.1	4
54	Novel splittable N _A TX/2N _A CRx transceiver phased array to optimize both signal-to-noise ratio and transmit efficiency at 9.4T. Magnetic Resonance in Medicine, 2016, 76, 1621-1628.	3.0	4

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55	Measurement of glucose metabolism in the occipital lobe and frontal cortex after oral administration of [1-13C]glucose at 9.4 T. Journal of Cerebral Blood Flow and Metabolism, 2022, 42, 1890-1904.	4.3	4
56	Sensitivity enhancement and compensation of RF penetration artifact with planar actively detunable quadrature surface coil. Magnetic Resonance Imaging, 2006, 24, 81-87.	1.8	3
57	Electromagnetic simulation of a 16-channel head transceiver at 7 T using circuit-spatial optimization. Magnetic Resonance in Medicine, 2021, 85, 3463-3478.	3.0	3
58	Accelerated MRI at 9.4 T with electronically modulated time-varying receive sensitivities. Magnetic Resonance in Medicine, 2022, 88, 742-756.	3.0	3
59	Open birdcage coil for head imaging at 7T. Magnetic Resonance in Medicine, 2021, 86, 2290-2300.	3.0	2
60	Three-dimensional high-inductance birdcage coil for NQR applications. Solid State Nuclear Magnetic Resonance, 2006, 30, 75-80.	2.3	0