

CONTENTS

■ LETTERS TO THE EDITOR AND RESPONSES

Reply To: MRI Resolution Enhancement: How Useful are Shifted Images Obtained by Changing the Demodulation Frequency?, M. Uecker, T. J. Sumpf, and J. Frahm..... 1511
Published online 25 August 2011

MRI Demodulation Frequency Changes Provide Different Information, Quang M. Tieng, Gary J. Cowin, David C. Reutens, Graham J. Galloway, and Viktor Vegh..... 1513
Published online 23 August 2011

Comments on "Ensuring Safety of Implanted Devices Under MRI Using Reversed Polarization", Yigitcan Eryaman, Sinan Hersek, and Ergin Atalar..... 1515
Published online 24 October 2011

Response to Comments on "Ensuring Safety of Implanted Devices Under MRI Using Reversed RF Polarization", William R. Overall, John M. Pauly, Pascal P. Stang, and Greig C. Scott..... 1517
Published online 24 October 2011

■ SPECTROSCOPIC METHODOLOGY

Full Paper

Fast Three-Dimensional Proton Spectroscopic Imaging of the Human Brain at 3 T by Combining Spectroscopic Missing Pulse Steady-State Free Precession and Echo Planar Spectroscopic Imaging, Wolfgang Dreher, Peter Erhard, and Dieter Leibfritz..... 1518
Published online 13 May 2011

Note

$^2\text{H}_2\text{O}$ Incorporation Into Hepatic Acetyl-CoA and De novo Lipogenesis as Measured by Krebs Cycle-Mediated ^2H -Enrichment of Glutamate and Glutamine, Ana Maria Silva, Fatima Martins, John G. Jones, and Rui Carvalho..... 1526
Published online 23 May 2011

■ PRECLINICAL AND CLINICAL SPECTROSCOPY

Full Paper

Study on Metabonomic Characteristics of Human Lung Cancer Using High Resolution Magic-angle Spinning ^1H NMR Spectroscopy and Multivariate Data Analysis, Wenxue Chen, Yukun Zu, Qi Huang,

Fener Chen, Guifang Wang, Wenxian Lan, Chunxue Bai, Shaohua Lu, Yong Yue, and Feng Deng..... 1531
Published online 26 April 2011

■ IMAGING METHODOLOGY

Full Papers

Nonrigid Retrospective Respiratory Motion Correction in Whole-Heart Coronary MRA, Johannes F. M. Schmidt, Martin Buehrer, Peter Boesiger, and Sebastian Kozerke..... 1541
Published online 20 May 2011

Quantitative Imaging of eXtraction of Oxygen and Tissue Consumption (QUIXOTIC) Using Venular-Targeted Velocity-Selective Spin Labeling, D. S. Bolar, B. R. Rosen, A. G. Sorensen, and E. Adalsteinsson..... 1550
Published online 14 June 2011

Contributions of Chemical Exchange to $T_{1\rho}$ Dispersion in a Tissue Model, Jared G. Cobb, Jingping Xie, and John C. Gore..... 1563
Published online 16 May 2011

Contrast at High Field: Relaxation Times, Magnetization Transfer and Phase in the Rat Brain at 16.4 T, Rolf Pohmann, G. Shajan, and D. Z. Balla..... 1572
Published online 10 June 2011

MRI of Frozen Tissue Demonstrates a Phase Shift, Aiming Lu, Bruce L. Daniel, Elena Kaye, and Kim Butts Pauly..... 1582
Published online 31 May 2011

Sensitivity Calibration With a Uniform Magnetization Image to Improve Arterial Spin Labeling Perfusion Quantification, Weiyang Dai, Philip M. Robson, Ajit Shankaranarayanan, and David C. Alsop..... 1590
Published online 26 April 2011

Multi-contrast Reconstruction With Bayesian Compressed Sensing, Berkin Bilgic, Vivek K Goyal, and Elfar Adalsteinsson..... 1601
Published online 10 June 2011

Two-Dimensional Phase Correction Method for Single and Multi-Shot Echo Planar Imaging, Yuval Zur..... 1616
Published online 13 May 2011

CONTENTS

Assessment of Early Diastolic Strain-Velocity Temporal Relationships Using Spatial Modulation of Magnetization With Polarity Alternating Velocity Encoding (SPAMM-PAV), Ziheng Zhang, Donald P. Dione, Peter B. Brown, Erik M. Shapiro, Albert J. Sinusas, and Smita Sampath 1627
Published online 31 May 2011

Statistical Assessment of Non-Gaussian Diffusion Models, Anders Kristoffersen 1639
Published online 26 April 2011

The Feasibility of Endorectal MR Elastography for Prostate Cancer Localization, Arvin Arani, Donald Plewes, Axel Krieger, and Rajiv Chopra ... 1649
Published online 13 May 2011

Notes

Robust Fat Suppression at 3T in High-Resolution Diffusion-Weighted Single-Shot Echo-Planar Imaging of Human Brain, Joelle E. Sarlls, Carlo Pierpaoli, S. Lalith Talagala, and Wen-Ming Luh 1658
Published online 20 May 2011

Use of Respiratory Biofeedback and CLAWS for Increased Navigator Efficiency for Imaging the Thoracic Aorta, P. Jhooti, T. Haas, N. Kawel, J. Bremerich, J. Keegan, and K. Scheffler 1666
Published online 26 April 2011

Compressed-Sensing Motion Compensation (CosMo): A Joint Prospective-Retrospective Respiratory Navigator for Coronary MRI, Mehdi H. Moghari, Mehmet Akçakaya, Alan O'Connor, Tamer A. Basha, Michele Casanova, Douglas Stanton, Lois Goepfert, Kraig V. Kissinger, Beth Goddu, Michael L. Chuang, Vahid Tarokh, Warren J. Manning, and Reza Nezafat 1674
Published online 10 June 2011

Improved Temporal Resolution in Cardiac Imaging Using Through-Time Spiral GRAPPA, Nicole Seiberlich, Gregory Lee, Philipp Ehse, Jeffrey L. Duerk, Robert Gilkeson, and Mark Griswold 1682
Published online 26 April 2011

■ PRECLINICAL AND CLINICAL IMAGING

Communication

Integration of Diffusion-Weighted MRI Data and a Simple Mathematical Model to Predict Breast Tumor Cellularity During Neoadjuvant Chemotherapy, Nkiruka C. Atuegwu, Lori R. Arlinghaus, Xia Li, E. Brian Welch, Bapsi A. Chakravarthy, John C. Gore, and Thomas E. Yankeelov 1689
Published online 28 September 2011

Full Papers

T₂ Exchange Agents: a New Class of Paramagnetic MRI Contrast Agent That Shortens Water T₂ by Chemical Exchange Rather Than Relaxation, Todd C. Soesbe, Matthew E. Merritt,

Kayla N. Green, Federico A. Rojas-Quijano, and A. Dean Sherry 1697
Published online 23 May 2011

14.1 T Whole Body MRI for Detection of Mesoangioblast Stem Cells in a Murine Model of Duchenne Muscular Dystrophy, Boris Odintsov, Ju Lan Chun, James A. Mulligan, and Suzanne E. Berry 1704
Published online 23 August 2011

Magnetic and Relaxation Properties of Multifunctional Polymer-Based Nanostructured Bioferrofluids as MRI Contrast Agents, Houshang Amiri, Rodney Bustamante, Angel Millán, Nuno J.O. Silva, Rafael Piñol, Lierni Gabilondo, Fernando Palacio, Paolo Arosio, Maurizio Corti, and Alessandro Lascialfari 1715
Published online 13 May 2011

Quantitative Tissue Oxygen Measurement in Multiple Organs Using ¹⁹F MRI in a Rat Model, Siyuan Liu, Sameer J. Shah, Lisa J. Wilmes, John Feiner, Vikram D. Kodibagkar, Michael F. Wendland, Ralph P. Mason, Nola Hylton, Harriet W. Hopf, and Mark D. Rollins 1722
Published online 17 June 2011

Myocardial First-Pass Perfusion: Influence of Spatial Resolution and Heart Rate on the Dark Rim Artifact, Antonella Meloni, Nidal Al-Saadi, Geir Torheim, Nadja Hoebel, H. Glenn Reynolds, Daniele De Marchi, Vincenzo Positano, Silvia Burchielli, and Massimo Lombardi 1731
Published online 23 June 2011

Note

Myocardial BOLD Imaging at 3 T Using Quantitative T₂: Application in a Myocardial Infarct Model, Nilesh R. Ghugre, Venkat Ramanan, Mihaela Pop, Yuesong Yang, Jennifer Barry, Beiping Qiang, Kim A. Connelly, Alexander J. Dick, and Graham A. Wright 1739
Published online 31 May 2011

■ BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Full Papers

Mechanisms of Proton Spin Dephasing in a System of Magnetic Particles, Hendrick W. de Haan 1748
Published online 19 May 2011

Enhancement and Degradation of the R₂ Relaxation Rate Resulting from the Encapsulation of Magnetic Particles with Hydrophilic Coatings, Hendrick W. de Haan and Chantal Paquet 1759
Published online 24 June 2011

Toward Individualized SAR Models and In Vivo Validation, H. Homann, P. Börner, H. Eggers, K. Nehrke, O. Dössel, and I. Graesslin 1767
Published online 31 May 2011

CONTENTS

■ HARDWARE AND INSTRUMENTATION

Full Papers

Size-optimized 32-Channel Brain Arrays for 3 T Pediatric Imaging, Boris Keil, Vijay Alagappan, Azma Mareyam, Jennifer A. McNab, Kyoko Fujimoto, Veneta Tountcheva, Christina Triantafyllou, Daniel D. Dilks, Nancy Kanwisher, Weili Lin, P. Ellen Grant, and Lawrence L. Wald..... 1777
Published online 7 June 2011

A Flexible 32-channel Receive Array Combined With a Homogeneous Transmit Coil for Human Lung Imaging With Hyperpolarized ^3He at 1.5 T, Martin H. Deppe, Juan Parra-Robles, Helen Marshall, Titus Lanz, and Jim M. Wild..... 1788
Published online 13 May 2011

Results for Diffusion-Weighted Imaging With a Fourth-Channel Gradient Insert, Rebecca E. Feldman, Timothy J Scholl, Jamu K. Alford, William B. Handler, Chad T. Harris, and Blaine A. Chronik..... 1798
Published online 20 May 2011

■ ERRATUM

Erratum to: Morita, et al., Enhancement Effects of Hepatic Dynamic MR Imaging at 3.0 T and 1.5 T Using Gadoteric Acid in a Phantom Study: Comparison with Gadopentetate Dimeglumine, 1809
Published online 9 November 2011