

CONTENTS

■ SPECTROSCOPIC METHODOLOGY

Full Paper

- Measurement of Transverse Relaxation Times of J-Coupled Metabolites in the Human Visual Cortex at 4 T**, Dinesh Kumar Deelchand, Pierre-Gilles Henry, Kâmil Uğurbil, and Małgorzata Marjańska 891
Published online 11 July 2011

■ PRECLINICAL AND CLINICAL SPECTROSCOPY

Note

- Comparison of Measuring Energy Metabolism by Different ³¹P-Magnetic Resonance Spectroscopy Techniques in Resting, Ischemic, and Exercising Muscle**, Albrecht I. Schmid, Vera B. Schrauwen-Hinderling, Martin Andreas, Michael Wolzt, Ewald Moser, and Michael Roden 898
Published online 12 August 2011

■ IMAGING METHODOLOGY

Communications

- Using Frequency-Labeled Exchange Transfer to Separate Out Conventional Magnetization Transfer Effects from Exchange Transfer Effects When Detecting ParaCEST Agents**, Chien-Yuan Lin, Nirbhay N. Yadav, Joshua I. Friedman, James Ratnakar, A. Dean Sherry, and Peter C. M. van Zijl 906
Published online 27 January 2012

- Simulations of High Permittivity Materials for 7 T Neuroimaging and Evaluation of a New Barium Titanate-Based Dielectric**, W. M. Teeuwisse, W. M. Brink, K. N. Haines, and A. G. Webb 912
Published online 27 January 2012

- Vibration-Synchronized Magnetic Resonance Imaging for the Detection of Myocardial Elasticity Changes**, Thomas Elgeti, Heiko Tzschätzsch, Sebastian Hirsch, Dagmar Krefting, Dieter Klatt, Thoralf Niendorf, Jürgen Braun, and Ingolf Sack.... 919
Published online 31 January 2012

Full Papers

- Role of the Lead Structure in MRI-Induced Heating: In Vitro Measurements on 30 Commercial Pacemaker/Defibrillator Leads**, Eugenio Mattei, Giovanni Calcagnini, Federica Censi, Michele Triventi, and Pietro Bartolini..... 925
Published online 11 July 2011

- Simplified Quantification of Labile Proton Concentration-Weighted Chemical Exchange Rate (k_{ws}) with RF Saturation Time Dependent Ratiometric Analysis (QUESTRA): Normalization of Relaxation and RF Irradiation Spillover Effects for Improved Quantitative Chemical Exchange Saturation Transfer (CEST) MRI**, Phillip Zhe Sun 936
Published online 12 August 2011

- Multiple-Exchange-Time Xenon Polarization Transfer Contrast (MXTC) MRI: Initial Results in Animals and Healthy Volunteers**, Isabel Dregely, Lulian C. Ruset, Jaime F. Mata, Jeffrey Ketel, Steve Ketel, Jan Distelbrink, Talissa A. Altes, John P. Mugler III, G. Wilson Miller, F. William Hersman, and Kai Ruppert..... 943
Published online 28 December 2011

- Comparison Between Eight- and Sixteen-Channel TEM Transceive Arrays for Body Imaging at 7 T**, C. J. Snyder, L. DelaBarre, S. Moeller, J. Tian, C. Akgun, P.-F. Van de Moortele, P. J. Bolan, K. Ugurbil, J. T. Vaughan, and G. J. Metzger..... 954
Published online 18 November 2011

- Parallel Traveling-Wave MRI: A Feasibility Study**, Yong Pang, Daniel B. Vigneron, and Xiaoliang Zhang..... 965
Published online 19 August 2011

- Understanding Quantitative Pulsed CEST in the Presence of MT**, Kimberly L. Desmond and Greg J. Stanisz..... 979
Published online 19 August 2011

- Investigations of the Origin of Phase Differences Seen with Ultrashort TE Imaging of Short T2 Meniscal Tissue**, Michael Carl and Jing-Tzyh Alan Chiang 991
Published online 2 September 2011

- Simultaneous Fat Suppression and Band Reduction with Large-Angle Multiple-Acquisition Balanced Steady-State Free Precession**, Brady Quist, Brian A. Hargreaves, Tolga Cukur, Glen R. Morrell, Garry E. Gold, and Neal K. Bangerter..... 1004
Published online 28 October 2011

- Virtual Dye Angiography: Flow Visualization for MRI-Guided Interventions**, Ashvin K. George, Anthony Z. Faranesh, Kanishka Ratnayaka, J. Andrew Derbyshire, Robert J. Lederman, and Michael S. Hansen 1013
Published online 19 August 2011

CONTENTS

Sparsity and Low-Contrast Object

Detectability, Joshua D. Trzasko, Zhonghao Bao, Armando Manduca, Kieran P. McGee, and Matt A. Bernstein 1022
Published online 25 August 2011

Time-Interleaved Acquisition of Modes: An Analysis of SAR and Image Contrast

Implications, S. Orzada, S. Maderwald, B. A. Poser, S. Johst, S. Kannengiesser, M. E. Ladd, and A. K. Bitz 1033
Published online 19 August 2011

Improving GRAPPA Using Cross-Sampled Autocalibration Data

, Haifeng Wang, Dong Liang, Kevin F. King, Gajanan Nagarsekar, Yuchou Chang, and Leslie Ying 1042
Published online 23 August 2011

Accelerated Phase-Contrast Cine MRI Using *k-t* SPARSE-SENSE

, Daniel Kim, Hadrien A. Dvorne, Ricardo Otazo, Li Feng, Daniel K. Sodickson, and Vivian S. Lee 1054
Published online 14 November 2011

Robust Multipoint Water-Fat Separation Using Fat Likelihood Analysis

, Huanzhou Yu, Scott B. Reeder, Ann Shimakawa, Charles A. McKenzie, and Jean H. Brittain 1065
Published online 12 August 2011

Self-Refocused Adiabatic Pulse for Spin Echo Imaging at 7 T

, Priti Balchandani, Mohammad Mehdi Khalighi, Gary Glover, John Pauly, and Daniel Spielman 1077
Published online 27 September 2011

Simultaneous Estimation of T_2 and Apparent Diffusion Coefficient in Human Articular Cartilage In Vivo with a Modified Three-Dimensional Double Echo Steady State (DESS) Sequence at 3 T

, Ernesto Staroswiecki, Kristin L. Granlund, Marcus T. Alley, Garry E. Gold, and Brian A. Hargreaves 1086
Published online 16 December 2011

High Temporal Resolution Retrospective Motion Correction with Radial Parallel Imaging

, Wei Lin, Feng Huang, George R. Duensing, and Arne Reykowski 1097
Published online 12 August 2011

In Vivo Multicolor Molecular MR Imaging Using Diamagnetic Chemical Exchange Saturation

Transfer Liposomes, Guanshu Liu, Matthew Moake, Yah-el Har-el, Chris M. Long, Kannie W.Y. Chan, Amanda Cardona, Muksit Jamil, Piotr Walczak, Assaf A. Gilad, George Sgouros, Peter C.M. van Zijl, Jeff W.M. Bulte, and Michael T. McMahon 1106
Published online 23 August 2011

Notes

Parallel Magnetic Resonance Imaging Using Localized Receive Arrays With Sinc Interpolation (PILARS), Shuo Feng and Jim Ji 1114
Published online 19 August 2011

Spin Dephasing Under Nonlinear Gradients: Implications for Imaging and Field Mapping

, Gigi Galiana, Jason P. Stockmann, Leo Tam, and R. Todd Constable 1120
Published online 14 July 2011

QUIPSS II with Window-Sliding Saturation Sequence (Q2WISE)

, Ruitian Song, Ralf B. Loeffler, and Claudia M. Hillenbrand 1127
Published online 27 September 2011

Adiabatic Pulse Preparation for Imaging Iron Oxide Nanoparticles

, Steven S. Harris, Hui Mao, and Xiaoping P. Hu 1133
Published online 28 December 2011

PRECLINICAL AND CLINICAL IMAGING

Communication

Measurements of T_1 -Relaxation in Ex Vivo Prostate Tissue at 132 μ T, Sarah Busch, Michael Hatridge, Michael Mößle, Whittier Myers, Travis Wong, Michael Mück, Kevin Chew, Kyle Kuchinsky, Jeffrey Simko, and John Clarke 1138
Published online 31 January 2012

Full Paper

Mapping of ^3He Apparent Diffusion Coefficient Anisotropy at Sub-millisecond Diffusion Times in an Elastase-Instilled Rat Model of Emphysema, Xiaojun Xu, Mathieu Boudreau, Alexei Ouriadov, and Giles E. Santyr 1146
Published online 23 August 2011

Note

3D Magnetic Resonance Microscopy of the Ex Vivo Retina, Bryan H. De La Garza, Eric R. Muir, Yen-Yu I. Shih, and Timothy Q. Duong 1154
Published online 18 October 2011

BIOPHYSICS AND BASIC BIOMEDICAL RESEARCH

Full Paper

In Vivo Magnetic Resonance Imaging of Sodium and Diffusion in Rat Glioma at 21.1 T, Victor D. Schepkin, Fabian Calixto Bejarano, Thomas Morgan, Shannon Gower-Winter, Manuel Ozambela Jr., and Cathy W. Levenson 1159
Published online 11 July 2011

COMPUTER PROCESSING AND MODELING

Note

A 3D Wavelet Fusion Approach for the Reconstruction of Isotropic-Resolution MR Images From Orthogonal Anisotropic-Resolution Scans, Iman Aganj, Christophe Lenglet, Essa Yacoub, Guillermo Sapiro, and Noam Harel 1167
Published online 14 July 2011

CONTENTS

■ HARDWARE AND INSTRUMENTATION

Full Paper

Coaxial Waveguide MRI, Stefan Alt, Marco Müller, Reiner Umathum, Armin Bolz, Peter Bachert, Wolfhard Semmler, and Michael Bock 1173

Published online 21 October 2011

Whole Body Traveling Wave Magnetic Resonance Imaging at High Field Strength: Homogeneity, Efficiency, and Energy Deposition as Compared With Traditional Excitation Mechanisms,

Bei Zhang, Daniel K. Sodickson, Riccardo Lattanzi, Qi Duan, Bernd Stoeckel, and

Graham C. Wiggins 1183

Published online 12 August 2011