10th Bologna Conference on Magnetic Resonance in Porous Media

Programme

12th - 16th September 2010
in Leipzig, Germany
We gratefully acknowledge support by:

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Fonds der Chemischen Industrie

University of Bologna

University of Leipzig

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Bruker BioSpin GmbH

W. R. Grace & Co.-Conn.

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Welcome

We welcome you to the 10th Bologna Conference on Magnetic Resonance in Porous Media (MRPM10) in Leipzig. We are glad and honoured to host the conference for its 10th anniversary, and we hope that you will enjoy your stay in Leipzig, the scientific programme and the abundant and fruitful discussions which we are sure will follow.

It is exciting for us to see this conference happen in a place where NMR signals have been received for the first time in Central Europe, in a building that was largely in ruins. Scientists were motivated by the exploratory spirit re-emerging in those days, and we trust that it is still this spirit which will guide us today and during the five days of the conference.

Conference Chairs

Petrik Galvosas  
Jörg Kärger
Programme

Sunday

12:00 Open registration desk

Tutorial session
Chair: Eiichi Fukushima
13:30 - 14:10 [T1] NMR Relaxation and Petrophysical Properties
Marc Fleury
14:10 - 14:50 [T2] NMR Diffusion Measurements of Porous Systems and the Influence of Internal Magnetic Gradients - a Tutorial Overview
Bill W.S. Price
14:50-15:30 [T3] Perspectives on Porous Media MR in Clinical MRI
Eric Sigmund

15:30 - 16:00 Coffee break

16:00 - 16:15 Welcome / Opening
Dean of Faculty

Plenary talks
Chair: Jörg Kärger
16:15-17:00 [I2] Restricted Diffusion of Hyperpolarized Helium-3 to Probe Lung Structure
Mark Conradi
17:00-17:45 [I1] 2D NMR Studies of Local Order, Disorder, and Dynamics in Zeolites and Layered Silicates
Bradley Chmelka

18:00 Welcome reception

Monday

Micro- and Nanostructured Materials
Chair: Paola Fantazzini

9:00-9:30 [I6] Intracellular Confinement of Magnetic Nanoparticles by Living Cells: Impact for Imaging and Therapeutic Applications
Florence Gazeau

Iain Hitchcock

9:50-10:10 [O8] Loading-Dependent Transport Properties of Zeolitic Imidazolate Frameworks Probed by In-Situ PFG NMR
Pavel Kortunov
# Programme

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<td>10:10-10:30</td>
<td>[O9] Micro- and Nanostructure of Polyelectrolyte Multilayers as Visualized by Water Spin Relaxation and PFG Diffusion <em>Christina Wende</em></td>
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<tr>
<td>10:30-11:00</td>
<td><strong>Coffee break</strong></td>
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<td></td>
<td><strong>Novel Techniques, Pulse Sequences, and Spin Dynamics I</strong></td>
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<td><em>Chair: Denis Grebenkov</em></td>
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<td>11:00-11:30</td>
<td>[I13] Detecting Fleeting MRI Signals with Frequency-Modulated Radio Waves <em>Michael Garwood</em></td>
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<td>11:50-12:10</td>
<td>[O23] Strafi Micro-Profiling of Fast Relaxing Slow Moving Species - From Cement to Confined Polymers <em>Bruno Bresson</em></td>
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<td>12:10-12:30</td>
<td>[O25] MR Imaging inside Metallic Vessels <em>Hui Han</em></td>
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<td>12:30-14:00</td>
<td><strong>Lunch break</strong></td>
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<td>Meeting of the Steering Committee</td>
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<td>14:00-15:30</td>
<td><strong>Poster session I</strong></td>
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<td>15:30-16:00</td>
<td><strong>Coffee break</strong></td>
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<td><strong>Porous Media in Renewable Resources and Food Science</strong></td>
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<td><em>Chair: Gert-Jan Goudappel</em></td>
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<td>16:00-16:30</td>
<td>[I17] Characterization of Heterogeneous Systems by PFG-NMR <em>Geir Sørland</em></td>
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<tr>
<td>16:30-17:00</td>
<td>[I16] High-Throughput Low Resolution NMR Methods to Analysis of Agri-Food Products <em>Luiz A. Colnago</em></td>
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<tr>
<td>17:00-17:20</td>
<td>[O36] Pulsed-Gradient Spin-Echo Monitoring of Restricted Diffusion in Multilayered Structures <em>Denis Grebenkov</em></td>
</tr>
</tbody>
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Programme

Tuesday

**Porous Media in Environmental Science**
*Chair: Sabina Haber-Pohlmeier*

9:00-9:30  [15] Linking Soil Science with NMR Relaxometry: Potential and New Challenges  
*Gabriele Schaumann*

*Paméla Faure*

9:50-10:10  [O34] Water Flow Investigation on Quartz Sand with 13-Interval Stimulated Echo Multi Slice Imaging  
*Natascha Spindler*

*Laura-Roxana Stingaciu*

10:30-11:00  **Coffee break**

**Porous Media in Medicine**
*Chair: Silvia Capuani*

11:00-11:30  [14] Diffusion in White Matter  
*Farida Grinberg*

*Dmitry Novikov*

11:50-12:10  [O30] Effective Medium Theory of Diffusion and Transverse Relaxation in Heterogeneous Media  
*Valerij G. Kiselev*

*Micah Komlosh*

12:30-14:00  **Lunch break**

**Connected Porous Systems and Multidimensional NMR Approaches I**
*Chair: Dimitri Bytschenkoff*

14:00-14:30  [I4] Relaxation Analysis of Porous Media at High Magnetic Field Strengths: The Influence of Internal Gradients  
*Jonathan Mitchell*

14:30-14:50  [O4] Using Multi-Frequency NMR Relaxation For Probing Wettability in Multimodal Porous Rocks  
*Jean-Pierre Korb*
Programme

   Kausik Ravinath
   Saturated Porous Media
   Martin Hürlimann

15:30-16:00 Coffee break

Fluids in Porous Media I
   Chair: Martin Hürlimann
16:00-16:30 [I8] Phase State and Dynamics of Fluids in Mesoporous Solids
   Rustem Valiullin
   Lithium Batteries
   Dominique Petit
16:50-17:10 [O11] Memory Effects in Confined Fluids
   Sergej Naumov
17:10-17:30 [O10] Determination of the Spatial Location of Coke in Catalysts by a Novel
   NMR Approach
   Navin Gopinathan

19:00 Conference dinner

Wednesday

Novel Techniques, Pulse Sequences, and Spin Dynamics II
   Chair: Giuseppe Maddinelli

9:00-9:20 [O26] Measurement of Oscillatory Motion in Fluids
   Igor Mastikhin
9:20-9:40 [O28] Improving Estimates of Nuclear-Spin Relaxation Time (T1) in Surface-
   NMR Experiments
   Jan Walbrecker
9:40-10:00 [O27] Observing Diffusion-Diffraction Patterns in Heterogeneous Specimens
   Using the Double-PFG NMR Methodology
   Noam Shemesh
10:00-10:20 [O29] NMRDD and DISCORD: Novel Techniques to Study Relaxation
   Dispersion of Complex and Heterogeneous Fluids
   Lukasz Zielinski

10:20-11:00 Coffee break

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Programme

Connected Porous Systems and Multidimensional NMR Approaches II
Chair: Jean-Pierre Korb

11:00-11:30  [I5] The Use of Internal Magnetic Field to Characterize Porous Media
Yi-Qiao Song

11:30-11:50  [O6] Spatially Varying Surface-Relaxivity and Diffusion-Controlled Magnetic Relaxation in Complex Porous Media
Seungoh Ryu

11:50-12:10  [O1] Propagator-Resolved 2D Exchange in Porous Media in the Inhomogeneous Magnetic Field
Lauren Burcaw

12:10-12:30  [O5] NMR Relaxometry of Cement Pastes
Peter McDonald

12:30-14:00  Lunch break
Meeting of the International Scientific Advisory Committee

14:00-15:30  Poster session II

15:40  Excursion (Guided tours in strip mining museum)

[I3] Signals in Post-War Ruins, Five Orders of Magnitude and Pore Spaces Explored by Diffusion Measurement
Jörg Kärger

Light dinner

Thursday

CMMR 10 I
Chair: Bernhard Blümich

9:00-9:30  [I10] Halbach Arrays for NMR and MRI
Juan Perlo

Cedric Hugon

9:50-10:10  [O18] NMR Halbach Permanent Magnet System for Antarctica
Achim Gädke

Ernesto Danieli

10:30-11:00  Coffee break
Programme

CMMR 10 II
Chair: Achim Gädke
11:00-11:30 [I9] Experience of Large-Scale NMR Measurements in Porous Media
Anatoly Legchenko
11:30-11:50 [O20] Polymers Under Mechanical Stress - an NMR Investigation
Ulrich Scheler
Maxime van Landeghem
Robin Dykstra
12:30-14:00 Lunch break

Fluids in Porous media II
Chair: Rustem Valiullin
14:00-14:30 [I7] Magnetic Resonance Imaging for Petroleum Reservoir Core Analysis
Bruce Balcom
14:30-14:50 [O12] MRI of Contrast Agents in Porous Media
Jeffrey Paulsen
14:50-15:10 [O15] Transport and High-Pressure Phase Equilibria in Mesopores
Philipp Zeigernann
Konstantin Romanenko
15:30-16:00 Coffee break

Hyper-Polarization
Chair: Mark Conradi
16:00-16:30 [I11] Application of Hyperpolarized Xenon-129 NMR to Single File Diffusion and Exchange Dynamics in Nanoporous Materials
Clifford Bowers
16:30-17:00 [I12] Pulmonary Physiology with Hyperpolarized \(^{129}\)Xe
Samuel Patz
17:00-17:20 [O22] Real-time Detection of Polymerization Reactions with Hyperpolarized Xenon at Low Magnetic Fields
Stefan Glöggler
17:20-17:45 Poster Prize, Giulio Cesare Borgia award and general MRPM assembly Closing remarks
General Information

Talks
Talks will be given in the large auditory. Please ensure that your presentation works properly and hand it to Stefan Schlayer preferably on day before your session (one session ahead of your session the latest).
You may contact Stefan via e-mail (s.schlayer@physik.uni-leipzig.de) or ask for him at the conference desk.

Poster sessions
Poster sessions will be held on Monday (odd poster numbers) and Wednesday (even poster numbers) after the lunch break. We kindly ask the presenters of the posters to be at their poster(s) for discussions during the allocated time. Posters are spread out in the basement and first floor.

Conference desk
The conference desk will open on Sunday 12:00 a.m. and is located in the seminar room 224 near the aula. Please check in at the conference desk on Sunday (or as soon as you arrive).

W-Lan
You may use W-Lan during the conference:
Network name: UniLeipzig-Event
Password(PSK): GAL-2010
Encryption: WPA

Please receive a IP automatically (use dhcp). After setting up the network details as provided above open your favorite web browser. Before you can use the Internet please accept the terms and conditions displayed in your browser window (you only need to accept once a day). Please note that the PSK key is case sensitive. Please also note that only the following protocols are supported: http(s), pop3(s), imap(s), vpn and ssh. You should be able to connect to the internet in most places of the physics building, in particular in the aula and the large auditory.
General Information

Breakfast (conference venue)
Breakfast will be provided every morning from 8:00 - 9:00 a.m. in the aula. The "Student Breakfast Table" will be held on Tuesday.

Lunch (Bayerischer Bahnhof)
Lunch will be offered in the restaurant "Bayerischer Bahnhof". The restaurant can easily be reached by foot (15 min walk) or by tram (Bayrischer Platz).

Conference dinner (Moritzbastei)
The Dinner will take place on Tuesday at 7:00 p.m. in the old bastion "Moritzbastei". The price is included into the conference fee and covers the meal as well as drinks. It is not included in the accompanying persons base fee, but may be booked as an option.

Excursion
The excursion is planed for Wednesday to a former strip mining site, at which the museum "Ferropolis" for mining equipment is now located. Busses will leave at 3:40 p.m. at the main entrance (Aula/Linnéstraße). After guided tours around and on top of the heavy mining equipment Jörg Kärger will give a talk on "Signals in postwar ruins, five orders of magnitude and pore spaces explored by diffusion measurement". The excursion will close with a light dinner at the museum's site. Please make sure to wear footwear which enables you to walk on the mining equipment without the risk of being injured.

Meetings
- Steering comittee at "Bayerischer Bahnhof" during lunch time on Monday
- International scientific advisory comittee in room 215 during lunch time on Wednesday
- General MRPM assembly in the large auditory on Thursday at 5:20 p.m.
General Information

LVB ticket

Together with your conference name badge you will receive a ticket for the public transport valid on all trams and buses in the zone 110 (which is covering the whole inner city of Leipzig, and should be sufficient for most of the trips you plan to do. Please refer to the maps displayed at all tram and bus stops, if in doubt). The ticket (in conjunction with your name badge) is valid during the time of the conference.

Map of the conference venue
Poster Presentations

Connected Porous Systems and Multidimensional NMR Approaches

[P1] A T2D TDNMR Study of Skin
Julian Bent, Joanna Lee, Nikki Carpenter, Tim Benson

[P2] Structure of the Two-Dimensional NMR Relaxation Spectra of Porous Materials
Dimitri Bytchenkoff, Stephane Rodts

[P3] Solid-State 1H and 13C MAS NMR Investigations of European Coals
Fu Chen, Eva Schieferstein, Jörg Matysik

[P4] 1H T2 - T2 Exchange Measurements in Low Field NMR
Marcel d’Eurydice, Paul Callaghan, Petrik Galvosas, Tito J. Bonagamba

Marijke Antonia Fagan, Michael Johns

[P6] Drying of Starch, Gelatin and Paint: A Comparative Study
Sushanta Ghoshal, Carlos Mattea, Stephan Kruber, Paul Denner, Siegfried Stapf

Low-Field NMR Relaxometry
Sushanta Ghoshal, Carlos Mattea, Paul Denner, Siegfried Stapf

[P8] Effect of Crystallization Inhibitors on Drying Behavior of Porous Building Materials
Sonia Gupta, Leo Pel, Alison Sawdy

[P9] Two dimensional Exchange Experiments of Natural Porous Media with Portable
Halbach-Magnets
Agnes Haber, Sabina Haber-Pohlmeier, Federico Casanova, Bernhard Blümich

[P10] Feasibility Study of NMR and X-Ray CT Based Pore Space Characterisation of Drill
Cuttings
Wiete Hübner, Thomas Wonik

[P11] Freezing and Melting Behaviour of Fluids in Random Mesopores
Daria Kondrashova, Rustem Valiullin

[P12] Pulsed NMR Measurements of the Water Adsorption on Chitosan Samples Dried in
Different Conditions
Olga Krasilnikova, Elena Khozina, Natalya Serebryakova, Olya Solovtsova, Sergey
Shinkarev, Tatyana Grankina

[P13] NMR Diffusion Correlation and Exchange Spectroscopy in Inhomogeneous Fields
Oliver Neudert, Carlos Mattea, Siegfried Stapf
Poster Presentations

[P14] How to Quantify Spatial Ordering of Permeable Membranes Using Time-Dependent Diffusion MR
Dmitry Novikov, Els Fieremans, Jens H Jensen, Joseph A. Helpern

[P15] Imaging of Water and Water Vapor Uptake in Thin Nylon Films
Nico Reuvers, Henk Huinink, Hartmut Fischer, Olaf Adan, Klaas Koplinga

[P16] Dynamic Correlations Between Susceptibility Gradients and $T_2$ -Relaxation as a Probe for Wettability Properties of Liquid Saturated Rock Cores
John Georg Seland, Tina Pavlin

[P17] 2-D Relaxation and Diffusion Measurements of Biofouled Porous Media
Sarah Vogt, Sarah Codd, Joseph Seymour

[P18] MRI Analysis of the Interactions Between Moisture Transfers and Hydration Occurring During the Repair Procedure of an Aging Concrete
Biyun Wang, Pamela Faure, Mickaël Thiery, Véronique Baroghel-Bouncy

[P19] Anisotropic Self-Diffusion of CO$_2$ and CH$_4$ in the Microporous Imidazolate MOF IMOF-1
Markus Wehring, Tino Viertel, Franziska Debatin, Frank Stallmach

Micro- and Nanostructured Materials

[P20] Rheo-NMR Investigations on Polymer Melts and Polymer Clay Nanocomposite
Ute Böhme, Bo Xu, Johannes Leisen, Haskell Beckham, Ulrich Scheler

[P21] Following a Low-Mobility/High-Confinement Liquid FID Component During the Hydration of White Portland Cement
William Bortolotti, Robert James Sidford Brown, Paola Fantazzini, Mirko Gombia

[P22] A Study of Silver Species on Silver-Exchanged Chabazite, ETS-10 and Mordenite by XRD, SEM and Solid-State $^{109}$Ag/$^{28}$Si/$^{27}$Al NMR Spectroscopy
Fu Chen, Yan Liu

[P23] Obtaining Pore Size Distribution of Industrial Particulate Filters via the NMR-MOUSE
Martin Dabrowski, Oscar Sucre, Mauermann Peter, Michael Wittler, Bernhard Blümich

[P24] Characterization of Porous Media at 17.6 Tesla - Preliminary Results
Johannes Domblut, Thomas Kampf, Peter M. Jakob, Volker C. Behr

[P25] NMR Diffusometry and MAS NMR Spectroscopy of Functionalized Mesoporous Proton Conductors
Dieter Freude, Monir Sharifi, Michael Wark, Jürgen Haase
Poster Presentations

[P26] Calcium Silicate Hydrate Gel Evolution of Mineral Endodontic Cements Studied by TD-NMR
  Mirko Gombia, Viliam Bortolotti, Sebastiano Andreana, Boris De Carlo, Silvano Zanna,
  Giuseppe Pitzolu, Romano Mongiorgi, Paola Fantazzini

[P27] Calibrating d-PFG Filtered MRI Using a Novel Anisotropic Diffusion Phantom
  Michal Komlosh, Evren Ozarslan, Martin Lizak, Ferenc Horkay, Peter Basser

[P28] Physical State of Model Drugs in Mesoporous Confinement
  Gregor Mali, Tina Ukmar, Aljaz Godec, Venčeslav Kaučič, Miran Gabersček

[P29] Frequency Dependent NMR Relaxation of Polymeric Nanocapsules
  Ruben Emanuel Nechifor, Carlos Mattea, M. Bogdan, Siegfried Stapf, Ioan Ardelean

[P30] Pulsed NMR Study of Carbon Adsorbents with Homogeneous Porosity Synthesized with
  Aluminum Oxide as a Template
  A.S. Pogosjan, Olga Krasilnikova, Vladimir D. Skirda, Ruslan Arkhipov, Anatoly Ivanov,
  Elena Khozina

[P31] NMR Reveals the Local Structure and the Chemical Properties of the Inner Surfaces of
  Mesoporous Materials
  Ilya G. Shenderovich, Daniel Mauder, Dilek Akcakayiran, Hans-Heinrich Limbach, Gerd
  Buntkowsky, Gerhard H. Findenegg

[P32] Permeability of Modified Polyelectrolyte Capsules Studied by PFG NMR
  Nora Sporenberg, Jessica Guddorf, Monika Schönhoff

[P33] NMR Studies of the Mobility of Carbon Dioxide and Hydrocarbons in Nanoporous
  Coordination Polymers
  Frank Stallmach, Steffen Beckert, Stefan Hertel, Carsten Horch, Anne-Kristin Pusch,
  Markus Wehring

[P34] Characterization of Polyl-Stabilized CaF₂ Nanoparticles and Structural Investigations by
  Nuclear Magnetic Resonance Spectroscopy
  Raiker Witter, Marcus Roming, Ago Samoson, Claus Feldmann, Anne S. Ulrich

**Fluids in Porous Media (Including Supercritical and Complex Fluids)**

[P35] Chemical Composition Measurements in Trickle Bed Reactors Using ¹³C-DEPT NMR
  and Partial Least Squares Regression
  Fernando Abegao, Andrew Sederman, Daniel Holland, Lynn Gladden

[P36] 3D MRI of Cavitation in Pipe Flow
  Alex Adair, Igor Mastikhin, Benedict Newling
Poster Presentations

[P37] Relaxation of Polar and Nonpolar Molecules Confined Inside Partially Saturated Porous Media with Ferromagnetic Impurities
Ioan Ardelean, Marius Simina, Sergiu Muncaci

[P38] Nuclear Magnetic Resonance Logging While Drilling: From an Experiment to a Day-to-Day Service for the Oil Industry
Martin Blanz, Thomas Kruspe, Holger Frank Them, Gerhard Alfons Kurz

Houria Chemmi, Dominique Petit, Pierre Levitz, Jean-Pierre Korb, Corine Tourné-Péteilh, Jean-Marie Devoisselle

[P40] Molecular Transport on Surfaces - Access to Surface Heterogeneity
Muslim Dvoyashkin, Jörg Kärger, Rustem Valiullin

[P41] Low-Field High-Pressure NMR Porosimetry
Carsten Horch, Anne-Kristin Pusch, Pim A. J. Donkers, Frank Stallmach

[P42] Water Migration in Multi-Layered Coatings
Henk Huinink, Viktor Baukh, Bart Erich, Olaf Adan, Leo Ven, Klaas Kopinga

[P43] Using NMR Propagator Measurements to Probe CO₂ Entrapment in Porous Media
Rehan Hussain, Thomas Pintelon, Jonathan Mitchell, Michael Johns

[P44] Fluid Dynamics on Undisturbed Soil Sample Investigated by NMR
Vladimíra Jelínková, Michal Snehota, Dagmar van Dusschoten, Andreas Pohlmeier, Milena Cislerová

[P45] Rapid Imaging of the Hydration of Surfactant Formulations
Iain Lingwood, Michael Johns

[P46] Induced Surface Modifications on Core Plugs Followed by NMR Relaxometry
Giuseppe Maddinelli, Lucilla del Gaudio, Iole Moroni, Franco Masserano

[P47] Diffusion and Advection Effects on 3D Tracer Distributions in Heterogeneous Porous Media
Florea Marica, Sergio Andrés Bea Jofré, Ulrich Mayer, Bruce Balcom, Tom Al

[P48] MRI Measurement of the Void Fraction and Velocity Field in an Acoustically Cavitated Liquid
Igor Mastikhin, Aidin Arbabi, Benedict Newling, Alex Adair, Abdelhaq Hamza

[P49] Dynamics of Ionic Liquids in Porous Media Studied by NMR
Carlos Mattea, Siegfried Stapf
Poster Presentations

[P50] Imaging Fluid Displacement in Porous Media Using $T_2$ Mapping SE-SPI
Colleen Muir, Geir Erslund, Oleg Petrov, Arne Graue, Bruce Balcom

[P51] Diffusion of Ionic Fluids in Porous Media Studied by Unconventional Diffusion NMR Techniques
Oliver Neudert, Carlos Mattea, Siegfried Stapf

[P52] NMR Relaxometry and Imaging of Polymer/Cement Dispersions
Alexandra M. Olaru, Bernhard Blümich, Alina Adams

[P53] The Behaviour of Gypsum and Concrete Under Fire Conditions as Studied by NMR: The First Direct Proof of Moisture Clogging
Leo Pel, Gijs van der Heijden, Henk Huinink

[P54] NMR Imaging of Water Flow in Packed Beds
Wassim Salameh, Sebastien Leclerc, Didier Stemmelen, Jean-Marie Escanye

[P55] Ionic Liquids as Solvent Probes for NMR Cryoporometry
Peter Schulz

[P56] NMR Studies of Fluid Flow within Fractured Porous Media
Ether Sham, Michael Johns

[P57] Imaging of Undisturbed Soil Samples by Three Non-Invasive Methods
Michal Snehota, Vladimira Jelinkova, Martina Sobotkova, Peter Vontobel, Andreas Pohlmeier, Milena Cislerova

[P58] Nanoscopically Thin Polymer Films Adsorbed in Porous Metal Oxide Materials: Crossover from Bulk to 2D Dynamics
Siegfried Stapf, Santhosh Ayalur-Karunakaran

[P59] Reaction Monitoring Inside and Outside of Metal-Doped Active Catalyst Pellets by Relaxation and Diffusion Measurements
Siegfried Stapf, Lisandro Buljubasich, Bernhard Blümich, Thomas Oehmichen, Leonid Datsevich, Andreas Jess

CMMR 10

[P60] Measurement of Compressed Wooden Platelets
Bernhard Blümich, Max Blümich, Agnes Haber

[P61] Simple Single-Sided Mobile NMR Apparatus with a Relatively Homogeneous $B_0$ Distribution
Wei-Hao Chang, Chau-Yi Chung, Jyh-Horng Chen, Lian-Pin Hwang
Poster Presentations

[P62] Mobile MRI for In-Line Inspection: Geometry of Rubber Profiles with Sub-Pixel Resolution
  Ernesto Danieli, Klaus Berdel, Juan Perlo, Walter Michaeli, Ullrich Masberg, Bernhard Blümich, Federico Casanova

[P63] A Unilateral Magnet with an Extended Constant Magnetic Field Gradient
  Juan Carlos García Naranjo, Igor Mastikhin, Bruce G. Colpitts, Bruce Balcom

[P64] Unilateral Mobile MR: Novel Magnet Design with a Large Field of View and Adjustability from Homogeneous Field to a Linear Gradient of up to 2 T/m
  Fabian Gutjahr, Stefan Wintzheimer, Toni Driessle, Ralf Kartäuscher, Michael Ledwig, Daniel Gensler, Peter Jakob, Florian Fidler

[P65] A Simple, Compact, and Efficient NMR-Magnet
  Edme Hardy

[P66] Towards Online Rheo-TD-NMR of Batch Polymerization Processes
  Heike Herold, Edme Hardy, Karl-Heinz Wassmer, Nikolaus Nestle

[P67] Method of Subtraction of the Regular Noise Realized in Hydroscope Device
  Evgeny Kalneus, Vladimir Novoselov, Mikhail Bizin

  Simon K. Küster, Ernesto Danieli, Bernhard Blümich, Federico Casanova

[P69] Characterization of Complex Products by a Single Sided NMR Instrument
  Giuseppe Maddinelli, Roberto Riva

[P70] Measuring High Resolution Skin Profiles with Optimum Contrast by Portable One-Sided NMR
  Jörg Mauler, Felix Schrader, Federico Casanova, Bernhard Blümich

[P71] Ultra-Compact MRI
  Andrew McDowell, Amanda McChesney, Judith Thorn

[P72] Unilateral NMR Study of Fat Stains on Textiles During Simulated Washing Processes
  Nikolaus Nestle, Bernhard von Vacano, Roland Ettl

[P73] Morphology of Polyethylene Pipes Across the Wall: A Combined Low and High Field NMR Study
  Ning Sun, Bernhard Blümich, Alina Adams

[P74] Low Field Portable NMR Studies of Wilting Leaves
  Elena Talnishnikh, Henk van As

[P75] Low Noise RF-Frontend with Flexible Microcoils for Mobile NMR Applications
  Jan Watzlaw, Dennis Ellersiek, Uwe Schnakenberg

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Poster Presentations

Hyperpolarization

[P76] Capillary Blood-Flow Analysis by Continuously Dissolved Hyperpolarized $^{129}$Xe and $^1$H Velocity MRI
Nadia Amor, Lavinia Utiu, Kathrin Hamilton, Markus Küppers, Ulrich Steinseifer, Thomas Schmitz-Rode, Stephan Appelt, Bernhard Blümich

[P77] A Complete Platform for PHIP Method
Gianni Ferrante, Francesca Reineri, Salvatore Bubici, Silvio Aime, Simona Baroni

[P78] Nuclear Magnetization as a Field
Stanislav Sykora

Novel Techniques, Pulse Sequences, and Spin Dynamics

[P79] Entangled and Liquid-Like Chain Discrimination on Model Polymer Networks Studied by Double Quantum - CPMG Based Sequences
Rodolfo H. Acosta, Maria Belén Franzoni, Gustavo Monti

[P80] Performance of Two-Sequence, Two-Inversion Pulse PERFIDI Filters to Suppress and/or Quantify Relaxation Time Components in Multicomponent Systems
William Bortolotti, Paola Fantazzini, Mirko Gombia, Danilo Greco, Giuseppe Rinaldin, Stanislav Sykora

[P81] Recovery of Noise-Corrupted NMR Data Acquired and Accumulated in Unstable Magnetic Field
Gianni Ferrante, Giuseppe Martini

[P82] A Fast Algorithm for Computing the Pulsed-Gradient Spin-Echo Signal in Multiscale Porous Media
Denis Grebenkov

[P83] Rapid Gradient Switching for MR/MRI
Hui Han, Bruce Balcom

[P84] Low Gradient Diffusion Editing
Timothy Hopper, Martin Hurlimann, Awni Hannun, Ralf Heidler, Yi-Qiao Song

Pavel Kortunov, Duncan Mardon, Robert Nielsen, Hans Thomann

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Renaud Nicolas, Xavier Franceries, Jérémie Pariente, Florent Aubry, Nicolas Chauveau, François Chollet, Pierre Celsis

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