

BULLETIN DU GROUPEMENT

d'informations mutuelles

AMPERE

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Secretariat and administration:

ETH Zürich

Laboratory of Physical Chemistry, c/o Prof. B. H. Meier

ETH-Hönggerberg, HCI

CH-8093 Zürich, Switzerland

<http://www.ampere.ethz.ch>

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Associate Members of the AMPERE Group:

Bruker AG, Industriestrasse 26, CH-8117 Fällanden, Switzerland

Varian Deutschland GmbH, Postfach 11 14 35, D-64229 Darmstadt, Germany

Magnetic Resonance Group, Institute Jozef Stefan, Jamova 39,
SI-61111 Ljubljana, Slovenia

Final report

Specialized Colloque AMPERE 2003 NMR and EPR of Broad-Line Solids

Bernardin–Portoroz, Slovenia, September 8 – 12, 2003

*Dedicated to **Professor Robert Blinc** on the occasion of his 70th birthday*



The specialized Colloque AMPERE on NMR and EPR of broad-line solids was held at the Convention center of Grand Hotel Emona in the Bernardin Hotel complex at Portoroz, Slovenia, from 8th to 12th September 2003. The Colloque was organized in recognition of the scientific work of Professor Robert Blinc on the occasion of his 70th birthday. Robert Blinc is one of the most active members of the Groupement AMPERE, being its president in the period 1988 – 1994. Altogether this was the sixteenth meeting in the series of Specialized Colloques AMPERE.

The Conference was organized by the members of the Solid State Physics department at the Jozef Stefan Institute, Ljubljana. Janez Dolinsek was the Chairman of the Organizing Committee, whereas the members were (in alphabetical order) Tomaz Apih, Joze Gasperic, Peter Jeglic, Martin Klanjsek, Gojmir Lahajnar, Urska Mikac, Milan

Rozmarin, Ana Sepe, Janez Slak, Zora Skraba (secretary), Bostjan Zalar and Aleksander Zidansek. Robert Blinc was the Honorary Chairman.

The meeting attracted 125 registered participants from 21 countries with the following structure: Austria (1), Belgium (3), Czech Republic (1), France (2), Greece (3), Croatia (5), Italy (2), Israel (4), Japan (3), Korea (2), Hungary (3), Germany (18), Netherlands (1), Poland (6), Romania (3), Russia (18), Slovenia (26), Switzerland (10), Ukraine (1), United Kingdom (2), USA (11). The distribution between West European and East European countries was well balanced. Emphasis was put to attract young scientists by organizing a special Young Scientists session.

The scientific program was dedicated to broad-line NMR and EPR spectroscopy of solid materials, where resonance lines are too broad to be detected by conventional pulsed techniques and standard spectrometers. As this scope was rather narrow (which is a tradition of Specialized Colloques AMPERE), there were also other contributions presented at the meeting, reporting new techniques and applications of magnetic resonances to new materials. Altogether 46 invited talks of 30 minutes durations and 13 contributed talks of 20 minutes were presented. Thursday (Sept. 11) afternoon session was dedicated to Young Scientists presentation (young scientists who just finished PhD or are close to finish it) with 8 papers of 15 minutes durations. Two poster sessions were also organized with 56 posters presented. The Specialized Colloque AMPERE was followed by a Satellite Workshop "Phase Transitions in Complex Systems: from Liquid Crystals to Nanotubes" on Friday, Sept. 12, in the afternoon. This Workshop was organized by the same Organizing Committee under the Chairmanship of Bostjan Zalar, with 12 oral presentations of 15 minutes duration.

The scientific contributions of the meeting are collected in the Book of Abstracts, delivered to the participants upon registration and also accessible on-line (.pdf format) on the Conference web page (<http://ampere2003.ijs.si>). Full papers will be published in the Proceedings, to appear as a special issue of the journal *Applied Magnetic Resonance*.

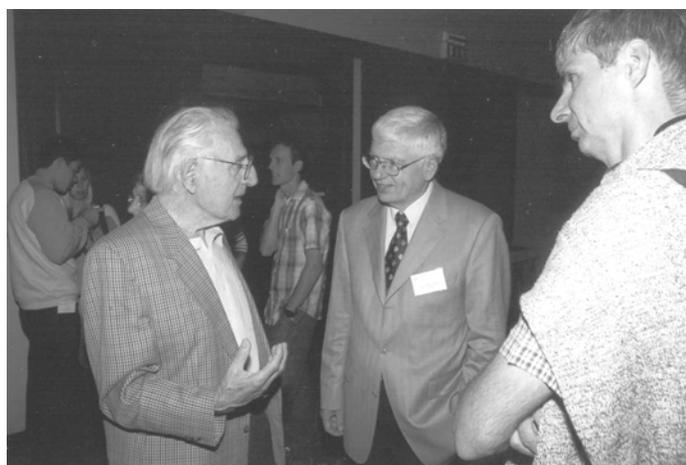
On Sunday, Sept. 7, the Conference was opened by a get-together party. The official opening ceremony was held on Monday morning (Sept. 8) by the welcome speeches of Dr. Zoran Stancic, the State Secretary at the Slovenian Ministry of Education, Science and Sports and by Professor Hans. W. Spiess, the president of the Bureau AMPERE. The scientific part of the meeting was opened by the lectures of J. Jeener and E. L. Hahn. Apart from its scientific contents, the meeting was also an opportunity to gather the scientists involved in NMR and EPR since the early days of these techniques, so that participants could enjoy the lectures of C. P. Slichter, J. S. Waugh, M. Mehring, R. Kind, J. L. Bjorkstam and D. Brinkmann, among others.

Tuesday (Sept. 9) morning session was dedicated to the recognition of scientific work of Robert Blinc, who was the last speaker of that session. The session was followed by a social event, where a number of participants congratulated R. Blinc for his forthcoming anniversary and recognized his outstanding contribution to the development and application of NMR.

Wednesday afternoon was a traditional half-day excursion event. Participants were offered two destinations – the Cave of Postojna and the Lipica stud farm with Lipizaner horses. Both groups then merged together for a Conference dinner at the countryside restaurant Hudicevec.



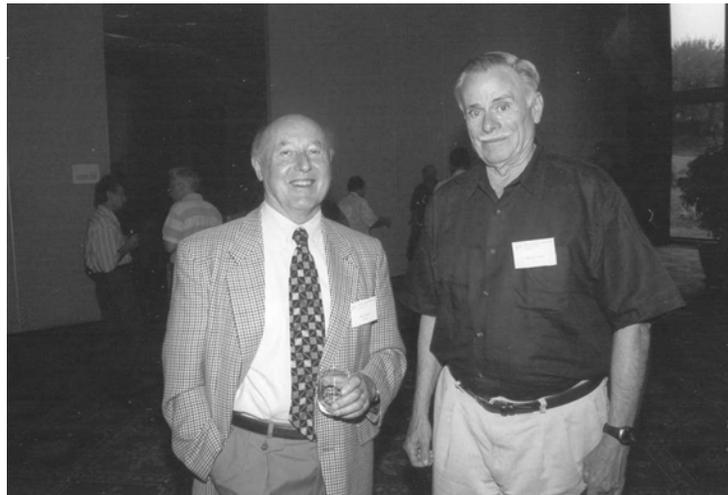
Robert Blinc with Hans Wolfgang Spiess, the AMPERE president



Erwin L. Hahn, Hans W. Spiess and Beat H. Meier



"Erwin, that echo..., did you really mean it?"



Otmar Kanert and John S. Waugh



"Who said that KDP story is over?"



Robert Blinc and Michael Mehring



The Laureate and the Chairperson of the Colloque AMPERE 2003
(Robert Blinc and Janez Dolinsek)

The organizers would again like to thank the speakers, the session chairs and the poster presenters, who all made the conference successful and memorable. Last but not least, I should like to express my deep gratitude to the members of the Organizing Committee and other technical staff for their efficient assistance that was essential to the organization of the conference. Finally, let me be allowed at this occasion that, in the name of participants of the Colloque AMPERE 2003, as well as in the name of the AMPERE Groupement members, I congratulate Robert Blinc for his 70th birthday, wish him a lot of health and a fruitful continuation of his scientific career.

Janez Dolinsek

Final Report

7th INTERNATIONAL CONFERENCE ON MAGNETIC RESONANCE MICROSCOPY (ICMRM)

“The Heidelberg Conference”

The 7th ICMRM was organized under the auspices of the Division of Spatially Resolved Magnetic Resonance of the Groupement AMPERE and was held in Snowbird, Utah over the period Sept. 20– 25, 2003. It was organized into two parts – an Educational Program (Sept. 20-21) followed by the General Conference (Sept. 22-25). The ICMRM was attended by approximately 184 scientists of which 78 registered for both the Educational Program and the General Conference. The conference received external support in the form of contributions from a number of industrial companies and a grant from the Petroleum Research Fund of the American Chemical Society.

The Educational Program consisted of 7 lectures, starting in the morning of Sept. 20 and ending at noon on Sept. 21. The General Conference was preceded by a reception in the evening of Sept. 21, with the scientific program starting in the morning of Sept. 22. The meeting was highlighted by the Keynote Lecture, given by Prof. Alex Pines, and the MR Technology Lecture, given by Paul Callaghan. The General Conference consisted of 24 invited plenary lectures, 43 contributed oral talks, and 97 contributed poster papers presented in 2 poster sessions. Areas of magnetic resonance and imaging represented at the ICMRM included novel techniques, diffusion/flow, NMR hardware/industrial applications, gases, hyperpolarized nuclei, porous media, materials, solid-state physics, chemistry, biology, and medicine. In addition there was a Young Investigator’s Program and a special Symposium on Non-Clinical Functional Magnetic Resonance.

Speakers in the Educational Program were

Bernhard Blümich (Aachen, Germany)

Paul Callaghan (Wellington, New Zealand)

Mark Conradi (St. Louis, Missouri, USA)

Axel Haase (Würzburg, Germany)

Joseph Seymour (Bozeman, Montana, USA)

Steven Wright (College Station, Texas, USA)

Yang Xia (Rochester, Michigan, USA)

Invited speakers in the General Conference included

Sean Barrett (New Haven, Connecticut, USA)

Angelo Bifone (Verona, Italy)
Robert Blinc (Ljubljana, Slovenia)
Bernhard Blümich (Aachen, Germany)
Paul Callaghan (Wellington, New Zealand)
Mark Conradi (St. Louis, Missouri, USA)
Jeff Dunn (Hanover, New Hampshire, USA)
Tomoyuki Haishi (Tsukuba, Japan)
Mark Henkelman (Toronto, Canada)
Edward Hsu (Durham, North Carolina, USA)
Russell Jacobs (Pasadena, California, USA)
G. Allan Johnson (Durham, North Carolina, USA)
Rainer Kimmich (Ulm, Germany)
Periannan Kuppusamy (Columbus, Ohio, USA)
Gil Navon (Tel Aviv, Israel)
Charles Pennington (Columbus, Ohio, USA)
Alexander Pines (Berkeley, California, USA)
Michael Romalis (Princeton, New Jersey, USA)
Koji Saito (Futtsu City, Japan)
Steven Sinton (Palo Alto, California, USA)
Yi-Qiao Song (Ridgefield, Connecticut, USA)
Bryan Suits (Houghton, Michigan, USA)
Robert Weisskoff (Cambridge, Massachusetts, USA)
Robert Wind (Richland, Washington, USA)

Fifteen abstracts were submitted for the Young Investigators' Program, of which 4 finalists were selected for presentation of their work in the Young Investigators Session. All finalists had their registration fees waived and received citations and the winner (Elke Kossel) also received an engraved plaque and a cash prize. The four finalists were

Song-I Han (Berkeley, California, USA)
Sascha Köhler (Würzburg, Germany)
Elke Kossel (Ulm, Germany) – **Winner**
Juan Perlo (Aachen, Germany)

The Conference Excursion involved travel in the scenic Wasatch Mountains East of Salt Lake, and included driving up the canyon of the Provo River with views of Bridal Veil Falls, Mt.

Timpanogos, Deer Creek Reservoir, and Jordanelle Reservoir. It also included visits to the Sundance Film Institute at the Sundance Ski Resort and Park City (sight of the annual Sundance Film Festival). Other recreational activities included “Octoberfest” held at Snowbird Plaza, tram rides to the top of Hidden Peak (opposite Snowbird), as well as many scenic hiking opportunities. The Conference Banquet (in the evening of Sept. 25), was accompanied by music of the Andes, performed by a special instrumental group from Peru.

The Executive Steering Committee for the 7th ICMRM consisted of David Ailion (Chair), Robert Botto (Co-Chair), Eiichi Fukushima, Axel Haase, and Peter J. McDonald. The Local Organizing Committee consisted of David Ailion, Karen Anderson, Pat Burrus, Gernot Laicher, Dennis Parker, Ronald Pugmire, Kimberlee Potter, Brian Saam, and Robert Wind.

There will be no published “Proceedings” of the 7th ICMRM. However, an additional copy or a CD of the Book of Abstracts can be purchased for \$50 US each. Interested purchasers should contact David Ailion.

The 8th ICMRM is scheduled for September 4-8, 2005, and will be held in Kyoto, Japan. Katsumi Kose and Yoshiteru Seo are co-chairs. The website for the 8th ICMRM is <http://mrlab.bk.tsukuba.ac.jp/nmrmicro/8thicrm/8thicrm.html>.

David C. Ailion, Chair of 7th ICMRM

Physics Department, Univ. of Utah, 115 South 1400 East, Salt Lake City, Utah 84112, USA

Email: ailion@physics.utah.edu

Telephone: (801) 581-6973

Fax: (801) 581-4801

Final Report

3rd Alpine Conference on Solid-State NMR

Chamonix-Mont Blanc, France, 14 – 18th September 2003

The 3rd Alpine Conference on Solid-State NMR was held in Chamonix, Mont-Blanc, from 15th to 18th September 2003.

The scientific committee (Lucio Frydman, chair, Rob Tycko and Dieter Michel) put together an exciting selection of speakers (see program below) from various areas of solid state NMR: methods, chemistry, structural biology, physics, materials sciences...

The scientific committee chose to organize the program in a non-topical fashion, a choice which proved to serve extremely well our goal of cross-fertilization between SSNMR practitioners.

Again, Chamonix was the theater of some breath-taking technological novelties, such as fast and cold MAS (well below liquid nitrogen), presented by Ago Samoson or Magic Angle Magnet Rotation by Dimitriou Sakellariou, as well as several remarkable presentations relating to protein NMR in solids.

An outstanding contribution was provided by the public, in the form of animated scientific discussions.

The participation was limited, as usual, to about 200 people, representing the various areas of applicability of the methods. To our regret, the physics community is the only one which was underrepresented. From the 120 posters and 30 talks, only three came from this area, and they were all in the talk sessions (one promoted from submissions). We hope this trend will change in future editions, as we believe the conference could gain enormously this way. In fact, a very warm welcome (about 45 minutes of post-talk questioning) was awarded by the audience to the invited special lecture of this year, Serge Haroche, from the Ecole Normale Supérieure of Paris.

For the organizing committee

Stefano CALDARELLI, Lyndon Emsley

The Regitze R. Vold Memorial poster prize was awarded to Luminita Duma, for her contribution :

Resolution Enhancement In Solid-State NMR Of Proteins Using Spin-State-Selective Techniques

Sabine Hediger, Luminita Duma, Bernhard Brutscher, Anja Böckmann, Anne Lesage, And Lyndon Emsley

Program:

Monday 15th September

8:30am-12:00 Session I (**R. Tycko, Chair**)

Amyloid and Membrane Protein Structure Determination with Dipolar Recoupling and Dynamic Nuclear Polarization

C.P. Jaroniec, V. Ladizhansky, M. Rosay, V. Bajaj, M.K. Hornstein, M. McMahon, R.J. Temkin, and R. G. Griffin

Improving MQMAS Resolution and Sensitivity

Z. Gan

Merging Concepts From Solid-State and Solution-State NMR Investigations of Supramolecular Systems

I. Schnell, A. Rapp, I. Fischbach, D. Sebastiani, H. W. Spiess

Symmetry-Based Recoupling Sequences: Some Techniques and Applications

M. Carravetta, O. G. Johannessen, N. Ivchenko, W. C. Lai, X. Zhao, J. van Beek, M. Verhoeven, S. Kiihne, H. J. M. de Groot, J. Lugtenburg, P. H. M. Bovee-Geurts, W. J. de Grip, P.-E. Kristiansen, J. Schmedt auf der Günne, A. Böckmann, M. Levitt

Heteronuclear Correlations Involving Quadrupolar Nuclei, A Through Bond Approach Using J-Couplings

D. Massiot, F. Fayon, B. Alonso, V. Montouillout, C. Fernandez, C. Morais, J. Rocha

^{13}C - ^{13}C Distance Geometry in Uniformly ^{13}C -Labeled Molecules by Solid NMR

K. Takegoshi

2:30pm-4:10 Session II (**J.S. Waugh, Chair**)

Special External Lecture

Quantum Information with Atoms and Photons in a Cavity

S. Haroche, Collège de France

Laser-Assisted NMR

D. Suter

Tuesday 16th September

8:30am-12:00 Session III (**L. Frydman, Chair**)

New Schemes for Heteronuclear Decoupling in Solid-State NMR: Transverse Dephasing Optimised Spectroscopy

G. De Paëpe, P. Hodgkinson, B. Eléna, N. Giraud, A. Böckmann, A. Lesage, and L. Emsley

Structural and Dynamical Changes of the Bindin B18 Peptide Upon Binding to Lipid Membranes Revealed by Solid-State NMR

P. Barré, O. Zschörnig, and D. Huster

Structural Constraints for Inorganic Polymers from Double-Quantum NMR

J. Schmedt auf der Günne, W. Hoffbauer, P. Krieger, J. Beck

Determination of Orientation-Strain Relationships of Polymethylmethacrylate (PMMA) Using Solid-State NMR

M. E. Wendlandt, J. D. van Beek, B. H. Meier, T. Tervoort and U. W. Suter

^{14}N and ^{31}P MAS NMR: New Tools to Study Electrostatic Association of Proteins at Charged Membrane Surfaces

F. Lindström, M. Bokvist, G. Gröbner

NMR in Rotating Magnetic Fields: Magic Angle Field Spinning

D. Sakellariou, C. A. Meriles, R. W. Martin, A. Moule, M. Goldman and A. Pines

6:00pm-7:20 Session IV (**S. Vega, Chair**)

The Solid-State MAS-NMR Structure of the 62-Residue A-Spectrin SH3 Domain and the Potential of NMR for the Investigation of Membrane Proteins

F. Castellani, B. van Rossum, A. Diehl, K. Rehbein, C. Weise, F. Hucho, L. Krabben, J. Pauli, M. Baldus, A. van Gammeren, J. Hollander, H. J. M. de Groot and H. Oschkinat

Using Quadrupolar Couplings to Measure Two-Dimensional Distance-Angle Distributions in Amorphous Solids

P. J. Grandinetti, T. M. Clark, P. Florian, J. F. Stebbins, J. L. Yarger

Wednesday 17th September

8:30am-12:00 Session V (**K. Zilm, Chair**)

NMR Methods to Study Molecular Structure and Protein Folding in the Solid State

O. Andronesi, B. Angerstein, A. Böckmann, M. Etzkorn, R. Grisshammer, H. Heise, C.A. Hughes, A., Lange, S. Luca, K. Seidel, L. Sonnenberg and M. Baldus

11B NMR Studies on Dodecaborate Clusters

I. Tiritiris, T. Schleid and Klaus Mueller

Determination of CSA Tensors in Isotropic Solution Through Cross-Correlated Relaxation Effects

F. Cisnetti, P. Pelupessy, K. Loth and G. Bodenhausen

¹H and ¹³C MAS NMR Evidence for Pronounced Ligand-Protein Interactions Involving the Ionine Ring of the Retinylidene Chromophore in Rhodopsin

A. F. L. Creemers, S. Kiihne, P. H. M. Bovee-Geurts, W. J. DeGrip, J. Lugtenburg and H. J. M. de Groot

Nanomechanical Laser: Amplification of Mechanical Oscillations by Stimulated NMR Transitions

I. Bargatin and M.L. Roukes

Advances in Sample Spinning Technology

A. Samoson

2:30pm-4:00 Session VI (**R. K. Harris, Chair**)

Dipolar NMR Strategies for Multispin Systems Involving Quadrupolar Nuclei in Disordered Inorganic Materials

H. Eckert

Investigations of the HET-S Prion Protein Fragment 218-289 by Solid-State NMR Spectroscopy

A. Siemer, A. Detken, M. Ernst, C. Ritter, R. Riek and B. H. Meier

Probing Order Parameter Distributions in Polymer Networks by Proton Multiple-Quantum NMR

K. Saalwächter, J.-U. Sommer, A. Vidal, B. Haidar, P. Ziegler, O. Spycykerelle

Thursday 18th September

8:30am-12:00 Session VII (**D. Michel, Chair**)

NMR Studies of Motion and Structure in Disordered Solids: Battery Materials and Ionic Conductors

N. Kim, S. Chaudhuri, N. Dupre, W. Yoon, Y. Paik and C. P. Grey

The Alignment of Smectic A Liquid Crystalline Phases by Magnetic Fields Studied by NMR and X-Ray Methods

J.W. Emsley

Structural and Orientational Constraints on Bacteriorhodopsin in Purple Membranes Determined by Oriented-Sample Solid-State NMR Spectroscopy

T. Vosegaard, M. Kamihira, J. A. Mason, S. K. Straus, A. Watts, and N. C. Nielsen

Multinuclear MAS NMR Studies of Perovskite Relaxor Ferroelectrics

D. Zhou, G. L. Hoatson, W. J. Brouwer, and R. L. Vold

Solid-State ^{19}F -NMR of Polypeptides in Oriented Membranes

S. Afonin, P. Wadhvani, U. Dürr, M. Berditchevskaia, R. Glaser, C. Sachse, E. Strandberg, A. S. Ulrich

Let the electrons do the work: NMR in semiconductors

G. Denninger

Report on the 17th Hertzian Optics and Dielectrics (HOD) Meeting

Calais, 3-5 September 2003

The Congress was organized by Jean-Claude Carru, Professor at the head of a local organizing committee with ten members from the LEMCEL (Laboratory of Materials and Components for Electronics). It was located in Calais in the new buildings of the Littoral-Côte d'Opale University. It was held under the patronage of the "Groupement AMPERE" and the support of URSI and the french section of IEEE.

The scientific themes were the usual one of this meeting :

- electromagnetic waves (theoretical and numerical studies, applications),
- interaction of radiation with matter
- hertzian optics and spectroscopy
- electron paramagnetic resonance
- dielectrics, materials and devices for microwave and optic communication.

Five plenary sessions were devoted to five invited papers on : Metamaterials, Photonic crystals, Fractals in electromagnetism, Terahertz radiation and applications, Biological effects of microwaves.

59 communications were presented in sixteen oral sessions and 29 posters were presented in a poster session.

So in total, 93 communications were presented during the three day meeting. Social events had also been organized. First of all an official reception of the participants by the Town Council of Calais at the end of the first day meeting. A tour was organized at the end of the afternoon of the second day along the North Coast of France which was followed by a Gala Dinner in the "Nausicaa Sea Center" in Boulogne sur Mer.

A meeting of the HOD International Committee had been made in the evening of September 3. A final confirmation was given of the fact that the 18th HOD Congress will be held in Tunisia in September 2005 and organized by Professor A. Bouallègue. He has already organized HOD in Hammamet (Tunisia) in 1991.

Jean-Claude Carru, Professor
Chairman of HOD 2003

The Annual Zavoisky Award

The 2003 Zavoisky Award in Electron Paramagnetic Resonance Spectroscopy was awarded to

Professor **Wayne L. Hubbell**
University of California, Los Angeles

in a ceremony marking his outstanding contribution to the development and applications of the site-directed spin-label method.

The ceremony was preceded by the Thirteenth Annual Workshop "Modern Development of Magnetic Resonance", 17–19 September 2003. The program of the Workshop was as follows:

- I. Eremin (Kazan State University, Kazan, Russia; Free University Berlin, Berlin, Germany), D. Manske, and K.H. Bennemann (Free University, Berlin, Germany)
"Normal state spin dynamics in triplet superconductor Sr_2RuO_4 : anisotropy due to spin-orbit coupling"
- D. A. Tikhonov, I. A. Garifullin, N. N. Garifianov, M. Z. Fattakhov (Kazan Physical-Technical Institute, Kazan, Russia), K. Theis-Bröhl, K. Westerholt, H. Zabel (Institute für Experimentalphysik/Festkörperphysik, Ruhr-Universität Bochum, Bochum, Germany)
"Possible reconstruction of the ferromagnetic state under the influence of superconductivity in epitaxial $\text{V}/\text{Pd}_{1-x}\text{Fe}_x$ bilayers"
- K. I. Gerasimov, M. L. Falin, V. A. Latipov (Kazan Physical-Technical Institute, Kazan, Russia), A. M. Leushin (Kazan State University, Kazan, Russia)
"Magnetic resonance and optical spectroscopy of Yb^{3+} ions in fluorite-type crystals"
- V. V. Semashko (Kazan State University, Kazan, Russia)
"Reverses of fortune in search of new UV/VUV solid-state active media: role of photodynamic processes"
- Yu. E. Kandrashkin (Kazan Physical-Technical Institute, Kazan, Russia)
"Light-induced electron spin polarization in strongly coupled triplet-doublet system"
- A. E. Mambetov, O.I. Gnezdilov, A.A. Obynochny, K.M. Salikhov (Kazan Physical-Technical Institute, Kazan, Russia)
"Time-resolved EPR study of electron spin polarization and spin-exchange in mixed porphyrin triplet-stable free radical solution"

R. T. Galeev, K. M. Salikhov, V. K. Voronkova (Kazan Physical-Technical Institute, Kazan, Russia)
"Peculiar spectroscopic manifestations of the exchange interaction of paramagnetic centers with fast relaxing partners"

W. L. Hubbell (University of California Los Angeles, Los Angeles, USA) "A nitroxide's view of protein structure and functional dynamics"

M. I. Ibragimova, V. Yu. Petukhov, E. P. Zheglov, G. V. Konjukhov, R. N. Nizamov (Kazan Physical-Technical Institute, Kazan, Russia), N. Khan, H. Hou, H. M. Swartz (EPR Center for the Study of Viable Systems, Dartmouth Medical School, Hanover, USA)
"Plant radiotoxin induced metabolic changes in animals: an ex vivo and in vivo EPR investigation"

R. M. Eremina (Kazan Physical-Technical Institute, Kazan, Russia), M. V. Eremin (Kazan State University, Kazan, Russia), V. M. Glazkov, H.-A. Krug von Nidda, A. Loidl (Institute für Physik, Universität Augsburg, Augsburg, Germany)
"Anisotropic exchange interactions in CuGeO_3 probed by EPR"

In the afternoon of September 17, a reception of Professor Wayne L. Hubbell by the Prime Minister of the Republic of Tatarstan, R. Minnikhanov, took place.

The Zavoisky Award was presented on September 19, 2003 in Kazan, the capital city of the Republic of Tatarstan. It was there that academician E. K. Zavoisky discovered EPR in 1944. The Zavoisky Award consists of a Diploma, a Medal and one thousand US dollars.

The Zavoisky Award was established by the Zavoisky Physical-Technical Institute of the Russian Academy of Sciences with support from the Kazan State University, the Springer-Verlag Publishing House, the Republic of Tatarstan, the Tatarstan Academy of Sciences, the AMPERE Society and the International EPR Society. The Award Selection Committee consisted of well-known experts in EPR: Professors B. Bleaney (Oxford), G. Feher (La Jolla), K. Möbius (Berlin), A. Schweiger (Zurich), Yu. D. Tsvetkov (Novosibirsk), and the Chairman, K. M. Salikhov (Kazan). The selection of the Awardee was made after consultations with the Advisory Award Committee which comprises C. A. Hutchison Jr. (Chicago) and Yu. N. Molin (Novosibirsk).

Previous winners of the Zavoisky Award were: W. B. Mims (1991), B. Bleaney (1992), A. Schweiger (1993), J. R. Norris, Ya. S. Lebedev and K. Möbius (1994), J. S. Hyde (1995), G. Feher (1996), K. A. Valiev (1997), J. H. Freed (1998), J. H. van der Waals (1999), H. M. McConnell and Bruker Analytik GmbH (2000), K. A. McLauchlan (2001) and W. Lubitz (2002).

The selection of Professor Wayne L. Hubbell was made from many nominations

solicited from international experts in EPR.

The Award Ceremony starting in the afternoon of September 19 was attended by about 200 people, among them were the scientists who had participated in the preceding Workshop.

The ceremony was chaired by Professor K. M. Salikhov. He, as the Chairman of the Award Committee, announced the decision of the Zavoisky Award Committee. The presentation was made by the Deputy Prime Minister of the Republic of Tatarstan Z. R. Valeeva. The Rector of the Kazan State University, Professor M. Kh. Salakhov, the Chairman of the Presidium of the Kazan Scientific Center of the Russian Academy of Sciences, Professor A. I. Konovalov, and the Vice-President of the Tatarstan Academy of Sciences, Professor Sh. M. Chabdarov warmly congratulated the laureate. Letters of congratulations from Professor H. W. Spiess, President of the AMPERE Society, Professor Yu. D. Tsvetkov, President of the International EPR Society, and Professor M. Mehring, President of ISMAR, were handed to Professor Wayne L. Hubbell.

W.L. Hubbell gave his Zavoisky Award lecture in which he discussed problems of applications of the site-directed spin-labeling for the study of protein structure and dynamics. A concert by a string quartet preceded and followed the ceremony. The event was concluded with a Banquet in honor of Professor W.L. Hubbell and his outstanding contributions to EPR. During their stay in Kazan the laureate and his spouse visited the museum of history of the Kazan State University, the places of historical and cultural interest in Kazan, and the Raifa monastery.

The Organizing Committee owes special thanks to the Ministry of Industry, Science and Technology of the Russian Federation, and the NIOKR Fund of the Republic of Tatarstan.

Nominations Open for the Zavoisky Award 2004

The Zavoisky Award 2004 will be presented at the annual Workshop

“Modern Development of Magnetic Resonance”

dedicated to the 60th anniversary of the discovery of EPR by E. K. Zavoisky.

This prestigious award is given in recognition of an outstanding contribution to the development of electron paramagnetic resonance. It is presented by the Kazan Zavoisky Physical-Technical Institute of the Russian Academy of Sciences, Kazan State University, the Tatarstan Academy of Sciences, and Springer-Verlag Wien New York. The lecture of the award-winner will be published in the journal “Applied Magnetic Resonance”.

Nominations are being sought from the EPR community worldwide. A brief presentation of the applicant covering 1–2 pages is expected. The final decision is made by the Award Selection Committee which comprises: G. Feher (La Jolla), D. Gatteschi (Florence), H.M. McConnell (Stanford), K. Möbius (Berlin), A. Schweiger (Zurich), and the Chairman, K. M. Salikhov (Kazan). The selection of the Awardee is made after consultations with the Advisory Award Committee which comprises B. Bleaney (Oxford), C. A. Hutchison Jr. (Chicago), Yu. N. Molin (Novosibirsk), and Yu. D. Tsvetkov (Novosibirsk),.

Nominations should be submitted to

Dr. Laila V. Mosina

Executive Secretary of the Zavoisky Award Committee

Kazan Zavoisky Physical-Technical Institute

of the Russian Academy of Sciences

Sibirsky trakt, 10/7

Kazan, 420029

Russian Federation

E-mail: mosina@kfti.knc.ru

Fax: 7-8432-725075

The deadline for submission of nominations is April 1, 2004.

First Circular

AMPERE XII NMR SCHOOL Zakopane (Poland), June 6 - 11, 2004.

GENERAL INFORMATION ABOUT THE SCHOOL

The AMPERE XII Nuclear Magnetic Resonance School (about 80 participants) is organized by the Radiospectroscopy Division of the Institute of Physics, Jagellonian University, Cracow, Poland, under the auspices of the GROUPEMENT AMPERE and the Jagellonian University. The School takes place in Zakopane (Tatra Mountains) - about 100 km. south of Cracow.

INTERNATIONAL ADVISORY COMMITTEE

Hans W. Spiess (Mainz) - President of the Groupement AMPERE,
Stefan Jurga (Poznan) - Vice President of the Groupement AMPERE,
Myer Bloom (Vancouver),
Bernhard Bluemich (Aachen),
Paul T. Callaghan (Palmerston North),
Daniel Canet (Nancy),
Jacek W. Hennel (Cracow),
Rainer Kimmich (Ulm),
Jacek Klinowski (Cambridge),
Olga Lapina (Novosibirsk),
Bruno Maraviglia (Rome),
Fanny Milia (Athens),
Peter G. Morris (Nottingham),
Alex Pines (Berkeley),
Narcyz Pislewski (Poznan)

LOCAL ORGANIZERS

Jerzy S. Blicharski - Chairman
Barbara Blicharska
Hubert Haranczyk
Waldemar Nosel

LIST OF INVITED SPEAKERS

The following speakers have confirmed their participation:

Jean-Paul Amoureux (Lille, France),
Silvia Capuani (Rome, Italy),
Vladimir I. Chizhik (St. Petersburg, Russia),
Jacques Fraissard (Paris, France),
Hubert Haranczyk (Cracow, Poland),
Karol Jackowski (Warsaw, Poland),
Andrzej Jasinski (Cracow, Poland),
Stefan Jurga (Poznan, Poland),
Joerg Kaerger (Leipzig, Germany),
Jean-Pierre Korb (Saclay, France),
Olga B. Lapina (Novosibirsk, Russia),
Mariusz Mackowiak (Poznan, Poland),
Ann McDermott (New York, USA),
Peter McDonald (Surrey, United Kingdom),
Hartwig Peemoeller (Waterloo, Canada),
Charles H. Pennington (Columbus, USA),
Marek Pruski (Ames, USA),
Joseph D. Puglisi (Stanford, USA),
Claudia Schmidt (Paderborn, Germany),
Wlad T. Sobol (Birmingham, USA),
Slawomir Szymanski (Warsaw, Poland),
Takehiko Terao (Kyoto, Japan),
Marija Vilfan (Ljubljana, Slovenia),
Jan Wasicki (Poznan, Poland)

ACCOMMODATION AND FEE

The accommodation takes place at the University Conference Centre "Pod Berlami", address: ul. Grunwaldzka 9, 34-500 Zakopane, phone/fax (++48-18)-201-3221 or (018)-201-3221 in Poland, at Pension "Carlton" ul. Grunwaldzka 11, phone/fax (018)-201-4415 and at the University house "Lada", ul. Szymanowskiego 3, phone (018)-201-2783.

The lectures will be held at the Conference Centre "Pod Berlami" ("Under Sceptres"). Meals will be served at the Pension "Carlton" and the Centre "Pod Berlami". The conference fee will be about 900 Polish zloty (about 230 Euro). It should be paid at the conference office just after arrival to Zakopane. The fee includes the accommodation and meals during the School as well as conference materials (Proceedings).

SCHOOL DETAILS

The participants of the School are asked to arrive Zakopane on Sunday, June 6. The conference office in Zakopane will be open on June 6, since 1 p.m. at the Centre "Pod Berlami". The School will start on Sunday, June 6, at 4.00 p.m. There will be two scientific sessions in the first day and three sessions in the next working days, i.e. two sessions with plenary lectures in the morning and one session in the evening. At the evening sessions on Monday, June 7, and Wednesday, June 9, there will be presentations of posters. During the afternoon breaks we are planning common walks to beautiful valleys of Tatra Mountains.

The participants, who want to present a poster, should send one-page abstract to the organizers as Word for Windows file, by e-mail till April 16. For sending the abstracts please use the e-mail address:

nmr@netmail.if.uj.edu.pl

TRAVEL

There are nonstop flights from Chicago, Frankfurt, London, Paris, Rome, Tel Aviv, Vienna and Warsaw to Cracow, frequent connections by bus and train from Cracow to Zakopane and direct trains from Poznan and Warsaw to Zakopane. A special bus for invited speakers and other guests (on e-mail request) will be organized on Sunday, June 6, at 1 p.m. from the Institute of Physics of the Jagellonian University in Cracow at Reymonta street 4.

REGISTRATION

The deadline for the registration at the School is April 16, 2004. All participants (except the speakers and those who were registered earlier) should send by e-mail or fax to the organizers a short registration form, which is enclosed below. A chronological order of the applications will be taken into account. The next circular of the School will be sent by e-mail in March 2004.

Current updated information about the AMPERE XII NMR SCHOOL will be available at <http://users.uj.edu.pl/~ufjblich/xiinmr.htm>

REGISTRATION FORM

AMPERE XII NMR SCHOOL in Zakopane on June 6 - 11, 2004.

First name and surname:

.....

Scientific degree:

Postal address:

.....

.....

E-mail address:

.....

Title and authors of the poster:

.....

.....

.....

Date:

Address of the organizers:

Jerzy S. Blicharski

Institute of Physics, Jagellonian University

ul. Reymonta 4, 30-059 Krakow, Poland.

E-mail: jsb@netmail.if.uj.edu.pl

fax: +48-12-6337086, phone: +48-12-6324888 # 5543

First Announcement

17th EENC/32nd AMPERE – Lille (France), September 2004

The joint conference will be held in Lille from **September 6th** (Monday morning) through **September 11th** (Saturday noon), **2004**.

The Lille 2 campus possesses all the facilities required for the organization of a scientific meeting with many participants. It can be reached within ten minutes from the city center (by underground).

Lille is less than an hour's train ride from Paris, London and Brussels, and is close to beautiful Flemish towns (Bruges, Ghent,...).

The conference will be co-chaired by:

- **Jean-Paul Amoureux** (Université de Lille 1) and
- **Daniel Canet** (Université Henri Poincaré, Nancy 1).

Program (preliminary)

Plenary sessions will take place every morning (September 7-11, 2004) whereas available afternoons (September 7, 8, 10, 2004) will be devoted to **parallel sessions** and **poster sessions**.

Parallel sessions on the following topics will be held:

- 1) New liquid-state NMR experiments for biological applications
- 2) New solid-state NMR experiments for biological applications
- 3) New methodologies in solid-state NMR
- 4) Materials as studied by magnetic resonances
- 5) Magnetic resonance imaging, and transport phenomena
- 6) EPR
- 7) Calculation of NMR/EPR parameters
- 8) NMR in biomedicine
- 9) Broad line NMR/EPR
- 10) Spin relaxation

- 11) Analytical applications of NMR
- 12) Paramagnetic systems
- 13) Emerging techniques
- 14) Others

The following scientists have already accepted to deliver a **plenary lecture** (incomplete list):

- Ad Bax (Bethesda)
- Iain Campbell (Oxford)
- Lucio Frydman (Rehovot)
- Daniela Goldfarb (Rehovot)
- Gunnar Jeschke (Mainz)
- Arno Kentgens (Nijmegen)
- Dominique Massiot (Orléans)
- Chrit Moonen (Bordeaux)
- Jeremy Nicholson (London)
- Alex Pines (San Francisco)
- Kurt Wüthrich (Zurich)

The Scientific Committee for this conference is as follows:

- Richard Ernst (Zürich), chair
- Ivano Bertini (Florence)
- Geoffrey Bodenhausen (Paris)
- Christian Griesinger (Göttingen)
- Katalin Köver (Debrecen)
- Jozef Kowalewski (Stockholm)
- Malcom Levitt (Southampton)
- Michael Mehring (Stuttgart)
- Arthur Schweiger (Zürich)
- Hans Wolfgang Spiess (Mainz)
- John Strange (Canterbury)
- Shimon Vega (Rehovot)

The **Program Committee** is as follows:

- Jean-Paul Amoureux (Lille, co-chair)
- Stefano Caldarelli (Marseilles)
- Daniel Canet (Nancy, co-chair)
- Eric Guittet (Gif)
- Guy Lippens (Lille)
- Hervé Vezin (Lille)

The Website is available at www.nmr2004.com

Tentative Program

Monday 6th	Tuesday 7th	Wednesday 8th	Thursday 9th	Friday 10th	Saturday 11th
10h-12h REGISTRATION & vendors pres.	8h30-10h LECTURES	8h30-11h LECTURES	8h30-10h LECTURES	8h30-10h LECTURES	8h30-11h LECTURES
12h-14h LUNCH	10h-14h POSTER I		10h30-12h LECTURES	10h30-12h LECTURES	
	12h-14h LUNCH		12h-14h LUNCH	12h-14h LUNCH	
14h-16h30 REGISTRATION & vendors presentations	14h-16h30 PARALLEL SESSIONS	Social events Excursions	14h-16h30 PARALLEL SESSIONS	14h-16h30 PARALLEL SESSIONS	
17h-19h30 INTRO + PLENARY + VARIAN prize	16h30-19h POSTER I		17h-19h POSTER II	17h-19h POSTER II	
welcome mixer					
20h30-23h VENDORS' hospitality	19h-23h VENDORS' hospitality	19h-23h VENDORS' hospitality	19h-23h VENDORS' hospitality	19h-23h BANQUET	

First Circular

European School on Solid State NMR, Valencia, Spain

September 13 – 17, 2004 – Basic Level

an AMPERE event

Program chair: **Malcolm H. Levitt**

Organizers: Teresa Blasco, Stefano Caldarelli

THE PROGRAM

Tutors

Malcolm Levitt, University of Southampton, UK.

Angelika Sebald, University of Exeter, UK.

Matthias Bechmann, University of Bayreuth, Germany

Andreas Brinkmann, University of Nijmegen, Holland

Thomas Vosegaard, University of Aarhus, Denmark

Alexej Jerschow, New York University, USA

Topics

Nuclear Spin Interactions in solids. What they are and how they are described mathematically.

The SIMPSON simulation environment. How to use it.

Spins-1/2. Single crystals and powders. The chemical shift anisotropy. Magic-angle spinning.

Dipole-dipole couplings. Rotational resonance and recoupling. Multiple-pulse sequences and homonuclear decoupling.

Heteronuclear interactions. Cross-polarization, heteronuclear decoupling, and heteronuclear recoupling.

Quadrupolar nuclei. First-order and second-order lineshapes. Double-rotation, dynamic-angle spinning, and multiple-quantum magic-angle spinning.

Practical issues

All topics will be supported by hands-on computer simulations by the workshop participants.

PRACTICAL INFORMATION

What is all this about?

The school is a tool to help promoting solid-state NMR at all levels. This year's edition focusses on the basics.

Who should attend?

Young scientists with a strong interest in the area; established researchers working in solid-state chemistry, physics or structural studies; NMR spectroscopists at ease with liquid-state techniques and theory are few of the possible categories of attendees. Researchers from either academia or industry are welcome. Researchers from non-European countries are encouraged to apply. NO STRONG BACKGROUND IN MATHS OR PHYSICS IS REQUIRED.

When can I register?

We shall be opening the registration in March.

How do I register?

Registration will be done on-line through our web page <http://www.ssnmr-school.org>

How many students will you accept?

The size of the class will be of about 25 maximum. The selection will be made by the committee on the basis of a short motivation letter, to be included with the registration form.

Future Conferences

AMPERE Events

2004

AMPERE XII NMR School	Zakopane (Poland)	June 6-11, 2004
7th International Conference on Magnetic Resonance in Porous Media	Palaiseau (20' from Paris) (France)	July 4-8, 2004
Congress AMPERE/EENC The first EENC/AMPERE joint meeting	Lille (France)	September 6-11, 2004
European School on Solid State NMR	Valencia (Spain)	September 13-17, 2004

2005

AMPERE XIII NMR School	Zakopane (Poland)	June 5-10, 2005
8 th International Conference on Magnetic Resonance Microscopy	Kyoto (Japan)	September 4-8, 2005

2006

Joint NMRDG/AMPERE Meeting	York (U.K.)	July 17 - 21, 2006
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OTHER EVENTS

2004

NMRDG Spring Meeting 2004 Advances in NMR on Small Amounts of Material AstraZeneca R&D Charnwood For information please contact Richard Lewis, AstraZeneca	Loughborough (U.K.)	February 26, 2004
Igler Symposium on NMR Spectroscopy Information: Ms. A. Weber, Innsbruck University (fax	Igls (Innsbruck), (Austria)	February 26-27, 2004

+43.512.5072940)		
1 st International Meeting on NMR and Quantitative Analysis	Stockholm (Sweden)	March 1-2, 2004
45 th ENC	Asilomar, Pacific Grove, California, (USA)	April 18-23, 2004
13 th ISMRM Meeting, Section for MR Technologists	Kyoto, Japan	May 14-16, 2004
12th ISMRM Meeting	Kyoto, (Japan)	May 15-21, 2004
26 th Finnish NMR Symposium	Hotel Keuruselkä, (Finland)	June 9-11, 2004
46 th Rocky Mountain Conference on Analytical Chemistry	Denver, Colorado, USA	August 1-5, 2004
21 st Meeting of the ESMRMB	Copenhagen, (Denmark)	September 9-12, 2004
SMASH 2004	Breckenridge, Colorado, (USA)	September 12-15, 2004
7 th International Workshop on Magnetic Resonance	Rostov-on-Don, (Russia)	September 13-18, 2004
Recent Advances and Applications of Solid-State NMR From Superconducting Physics to Molecular Biology	Warwick University, (U.K.)	September 14-15, 2004
43 rd Eastern Analytical Symposium (EAS)	Somerset, New Jersey (USA)	November 8-12, 2004

2005

21 st ICMRBS	Hyderabad (India)	January 16-21, 2005
46 th ENC	Providence, Rhode Island, (USA)	April 10-15, 2003
13th ISMRM Meeting	Miami Beach, Florida	May 7-13, 2005

	(USA)	
22 nd Meeting of the ESMRMB	Basel, (Switzerland)	September 15-18, 2005

2006

14th ISMRM Meeting	Seattle, Washington (USA)	May 6-12, 2006
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2007

15 th ISMRM Meeting	Barcelona, (Spain)	May 12-18, 2007
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2008

16 th ISMRM Meeting	Toronto, Ontario, (Canada)	May 3-9, 2008
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2009

17 th ISMRM Meeting	Honolulu, Hawai'i, (USA)	April 18-24, 2009
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