

GENERAL CONTENTS

Preface	V
Sponsors	VII
Officers of the AMPERE Group	VII
International Advisory Committee	VII
International Organizing Committee	VII
Detailed Contents	X
Invited Papers	1 - 83
Contributed Papers	85 - 587
Author Index	589 - 601
List of Scientific Participants	602 - 606

DETAILED CONTENTS

INVITED PAPERS

NMR of Phase Transitions in Liquid Crystals <i>R. Blinc</i>	3
The Ruby Raser: Its Nonequilibrium Phase Transition and Superradiant Self-organization <i>P. Döbiger, E. Brun and D. Meier</i>	7
New Aspects of Solid State High Resolution NMR of Protons <i>U. Haeblerlen</i>	11
Application of Two-Dimensional Spectroscopy to Problems of Physical, Chemical and Biological Relevance <i>R.R. Ernst, W.P. Aue, P. Bachmann, A. Höhener, M. Linder, B. Meier, L. Müller, A. Wokaun, K. Nagayama, K. Wüthrich and J. Jeener</i>	15
Applications of 2DFT NMR Spectroscopy to the Study of Biological Macromolecules <i>O. Jardetzky, W.W. Conover, G.R. Sullivan and V.J. Basus</i>	19
Locally Static Spin Interaction in Rotating Samples <i>J.S. Waugh, M. Maricq, R. Cantor and W. Rothwell</i>	23
The Enhanced Longitudinal Susceptibility Effect (ELSE) and Its Application in Magnetic Resonance <i>V.A. Atsarkin, G.A. Vasneva and O.A. Ryabushkin</i>	27
Magnetic Resonance in Van Vleck Paramagnets <i>M.A. Teplov</i>	31
The Structure of X-Traps in Organic Molecular Crystals <i>D. Schmid and H. Dörner</i>	35
Fourier Transform Multiple Quantum NMR <i>A. Pines</i>	39
A CIDNP Approach to Signal Enhancement in Magnetic Resonance <i>J. Bargon</i>	41
The Reaction Yield Detected Magnetic Resonance of Intermediate Complexes <i>E.L. Frankevich, V.I. Lesin and A.I. Priestupa</i>	45
Magnetic and Spin Effects in Radical Reactions <i>Yu.N. Molin, R.Z. Sagdeev, T.V. Leshina, A.V. Podopletov, A.V. Dushkin, Yu.A. Grishin and L.M. Weiner</i>	49
NMR Imaging in Medicine and Biology <i>E.R. Andrew, P.A. Bottomley, W.S. Hinshaw, G.N. Holland, W.S. Moore, C. Simarof and B.S. Worthington</i>	53
Application of ^1H -NMR with Magic-Angle Rotation (MAR-NMR) <i>B. Schneider, D. Doskočilová and J. Jakeš</i>	57
New Optical Phenomena due to Nuclear Quadrupole Interaction, NMR and "Feedback" in Light-Oriented Electron-Nuclear System of a Semiconductor <i>V.G. Fleisher, V.A. Novikov and B.P. Zakharchenya</i>	61
Spin Dynamics of Low-Dimensional Systems <i>N.J. Poulis, L.S.J.M. Henkens, J.P. Groen, K.M. Diederix and T.O. Klaassen</i>	65
The Spin-Lattice Relaxation of Methyl Groups in Solids <i>R.J. Baarda, S. Emd, J. Kupers, D. Ligthelm, J.F.J.M. Pourquié, J. Smidt and R.A. Wind</i>	69
NMR Experiments on the Superfluid Phases of ^3He <i>T. Haavasoja</i>	73
The Progress in Solid State NMR - A Source of New Problems in Liquid Crystals <i>A. Lösch</i>	77
NMR of Chiral Molecules <i>E.I. Fedin</i>	81

CONTRIBUTED PAPERS

<u>Session A</u>	High Resolution NMR in Solids; Broad Line NMR; NMR in Diamagnetic Solids; Multi-Quantum Coherence; Tunneling Processes; Optical Nuclear Polarization, ODMR; Optical Polarization in Semiconductors; Chemical Polarization; Triplet States and CIDNP; Free Radicals; NQR	
High Resolution ^{13}C NMR of Polycrystalline TTF-TCNQ <i>E. Lippmaa, M. Alla, H. Raude, R. Teeäär, I. Heinmaa and E. Kundla</i>		87
Direct Observation and Investigation of NMR in the Rotating Frame <i>A.E. Mefed and M.I. Rodak</i>		88
High Resolution Nitrogen NMR in Solids <i>R.E. Stark, R. Osredkar, R.A. Haberkorn and R.G. Griffin</i>		89
Demonstration of Spinor Character in a Spin $I = 1$ System <i>E.K. Wolff, M.E. Stoll and M. Mehring</i>		90
High Resolution Proton NMR in Solids by Deuteron Spin-Decoupling <i>D. Suwelaak and M. Mehring</i>		91
Line Splittings through Dipole-Dipole Interaction with Quadrupole Nuclei in High Resolution NMR Powder Spectra <i>E. Kundla and M. Alla</i>		92
Double Nuclear Magnetic Resonance Investigation of the Diamagnetic Impurities in CaF_2 and NaF <i>V.D. Shohepkin, D.I. Vainshtein, V.A. Safin, R.A. Dautov and V.M. Vinokurov</i>		93
Investigation of the Polymer Structure Using the High-Resolution ^{13}C -NMR in Solids <i>H. Schneider and G. Hempel</i>		94
Narrowing Pulse Sequences Acting on a Slowly Rotating Two-Spin System <i>T.N. Khasanovich</i>		95
Determination of Dipolar Interaction from NMR High Resolution Powder Spectra <i>E. Tammet and E. Kundla</i>		96
Multiple Pulse Spin-Locking in Heteronuclear Spin Systems <i>V.E. Zobov, Yu.N. Moskvich, A.V. Ponomarenko, G.I. Dotsenko and A.M. Polyakov</i>		97
Magic Angle Spinning without the Magic and Natural Abundance Matrix Isolation ^{13}C NMR <i>K.W. Zilm and D.M. Grant</i>		98
Magic Angle Spinning in High Resolution NMR Spectrometry of Solids <i>E. Lippmaa, M. Alla, T. Tuherm and A. Salumäe</i>		99
High Resolution Proton Magnetic Resonance Investigation in GASH <i>N. Piślewski, S. Idziak and J. Stankowski</i>		100
Determination of ^{77}Se Shielding Tensor in Single Crystal of Selenious Acid <i>A.A. Sukhovskiy, Yu.N. Moskvich and A.G. Lundin</i>		101
Resonance Effects in the Multi-pulse Experiments <i>E.B. Fel'dman, Ju.N. Ivanov and B.N. Provotorov</i>		102
Investigation of Relaxation Processes in the Multi-pulse NMR Experiments <i>L.N. Erofeev, B.A. Shumm and G.B. Manelis</i>		103
Multiple Pulse NMR of Solid Polymers: Dynamics of Polytetrafluoroethylene <i>A.D. English and A.J. Vega</i>		104
Proton Chemical Shift and Dipolar Spectra of Cluster Hydrides <i>A.T. Nicol and R.W. Vaughan</i>		105
Investigations on the Type of OH-Groups in Some Crystalline Silicates by High Resolution NMR-Spectroscopy in Solids <i>H. Rosenberger, A.-R. Grimmer, U. Haubenreißer and B. Schnabel</i>		106

Broadband Spectrometer for Rare Isotopes and Possibilities of Their Investigation <i>A.G. Lundin, S.P. Prozorov and A.A. Sukhovsky</i>	107
H^1-N^{15} Double Resonance Cross Relaxation in Solids NH_4NO_3 and $(NH_4)_2SO_4$ <i>R. Grosescu, M. Velter and P. Drăghicescu</i>	108
Theory of Spin-Spin Relaxation in Magnetically Diluted Systems <i>V.P. Sakun</i>	109
Influence of Quadrupole-Coupled Nuclei on the NMR Spectra of Nuclei with Spin $I = 1/2$ <i>N.A. Sergeev, O.V. Falaleev and A.G. Lundin</i>	110
On the Orientation Dependence of NMR Relaxation Times in Dipolar Solids <i>B. Berglund, R. Sjöblom and J. Tegenfeldt</i>	111
Relaxation Time and Moisture Effects in the Superionic Conductor Sodium β'' -Alumina <i>C.E. Hayes and D.C. Ailion</i>	112
Effect of Paramagnetic Impurities on NMR in Superionic Conductors <i>D.M. Follstaedt and P.M. Richards</i>	113
Study of Ion Dynamics in a Single Crystal of the Superionic Conductor Li_3N <i>P. Brinkmann, W. Freudenreich, J. Roos and U. von Alpen</i>	114
New Structural Aspects in the Superionic Conductor $RbAg_4I_5$ Obtained from an NMR Study <i>P. Brinkmann, W. Freudenreich, H. Arend and J. Roos</i>	115
Theory of the Influence of Exciton Motion on Proton Relaxation in Organic Solids <i>E. Schwarzer and H. Haken</i>	116
Nuclear Magnetic Relaxation in Transition Metal Hydrides <i>R.S.-H. Kashaev and A.N. Gilmanov</i>	117
Analysis of Pulsed NMR Experiment in Solid Polyethylene <i>V.D. Fedotov and N.A. Abdrashitova</i>	118
Nuclear Spin Relaxation Study of Impurity Diffusion and Heat of Solution in fcc La <i>A.L. Kerlin and J.A. McNeil</i>	119
Nuclear Magnetic Relaxation of the Adsorbed Water Protons on Silicate Surfaces <i>G.R. Enikeyeva, M.R. Zaripov, N.K. Andreev, A.G. Bratunetz and Yu.V. Shulepov</i>	120
^{19}F NMR Studies of Rare Earth Elpasolites <i>F.R. McGarvey and A. Reuveni</i>	121
Internal Motion in Hexafluosilicates of Alkali Metals at High Hydrostatic Pressure <i>S.A. Seryshev, Yu.N. Moskvich and B.I. Cherkasov</i>	122
Orientation Dependence of Motion-Induced Spin-Lattice Relaxation in Single Crystals <i>Yu.N. Moskvich and N.A. Sergeev</i>	123
NMR Correlation Effects in Impurity Diffusion <i>K.D. Becker</i>	124
Proton and Fluorine Spin-Lattice Relaxation in $FeSiF_6 \cdot 6H_2O$ <i>K.-D. Jannek and H. Rager</i>	125
NMR Study of F-H...F Hydrogen Bond <i>A.M. Panich, N.K. Moroz and S.P. Gabuda</i>	126
Spin-Lattice Relaxation Study of Molecular Motion in Solid Boron Trifluoride-Dimethylsulphoxide Complex <i>K. Jurga, S. Jurga, J. Depireux and Z. Pajak</i>	127
180° -Flip of a Linear HF_2^- -Ion in Crystals <i>Yu.G. Kriger, N.K. Moroz and S.P. Gabuda</i>	128
The Application of NMR Method for Hydrocarbon Adsorption Investigation <i>V.V. Volynets, O.P. Yablonski and A.L. Buchachenko</i>	129

²⁹ Si NMR Investigations on the System CaO-SiO ₂ in the Solid State <i>E. Fechner, A.R. Grimmer and W. Wieker</i>	130
Spin-Lattice Relaxation Time of Deuterium in Palladium Deuteride <i>M. Bogdan, V. Simăceanu and D. Lupu</i>	131
Spin Relaxation due to Current Carriers in Semiconductors in the Presence of Quantizing Magnetic Fields <i>M.F. Deigen, E.I. Neimark, V.S. Vikhnin and B.E. Vugmeister</i>	132
NMR Studies of the Hyperfine Field in a Sr Doped EuS Single Crystal <i>H.G. Bohn, K.J. Fischer and H. Lütgemeier</i>	133
Unusual NMR Phenomena in CFC1 ₂ -CFC1 ₂ <i>H.T. Stokes, D.C. Ailion and C.H. Wang</i>	134
The State of Water Adsorbed in Small Pores of Microscopic Diameter <i>H. Pfeifer and W. Gründer</i>	135
The Nature of the Phase Transitions in Hexammine Metal /II/ Complexes <i>J. Stankowski and A.R. Bates</i>	136
Coherence Phenomena and Phase Relations in Three Level Systems <i>M. Mehring, M.E. Stoll and E.K. Wolff</i>	137
Double Resonance Interferometric Schemes for Solid State NMR: Two-Dimensional Quadrupolar Spectra of ²³ Na <i>R.W. Vaughan, M. Polak and A.J. High</i>	138
Theory of Coherent Multi-Quantum NMR in Multilevel Spin System <i>J. Stepišnik</i>	139
Competing Models for the Relaxation of Tunneling and Paramagnetic Defects <i>M. Wagner</i>	140
Librational Energy Levels of the NH ₄ ⁺ -Ions in (NH ₄) ₂ SnCl ₆ by NMR <i>M. Punkkinen, E.E. Ylinen and L.P. Ingman</i>	141
On the Theory of the Low-Temperature Spin-Lattice Relaxation due to Methyl Group Tunneling <i>V.M. Zatspein and T.N. Khazanovich</i>	142
Tunnelling and Spin-Lattice Relaxation in Ammonium Salts at Low Temperature <i>I. Svare</i>	143
Spin-Lattice Relaxation and Tunnelling in Ammonium Hexachlorides <i>I. Svare</i>	144
Spin-Lattice Relaxation of Tunneling Impurities <i>V.S. Vikhnin</i>	145
On the Theory of Deuteron NMR Lineshape for ND ₄ ⁺ Ions Undergoing Tunnelling Motions <i>J.S. Blicharski, Z.T. Lalowicz and W. Sobol</i>	146
Proton and Deuteron NMR Spectra of Tunneling Ammonium Ions <i>Z.T. Lalowicz</i>	147
Laser Photo-CIDNP in Proteins: The Effect of Dipolar Cross-Relaxation <i>R. Kaptein and H.T. Edzes</i>	148
Investigation of Hyperfine Structure and Relaxation in Aromatic Triplet State Complexes by Optical Nuclear Polarization <i>V. Macho and D. Stehlik</i>	149
ODMR of Phanes and Charge Transfer Phanes <i>D. Schweitzer, W. Goldacker, K.H. Haussner and H.A. Staab</i>	150
Phosphorescence Site Selection Spectroscopy of Organic Molecules in Shpolskii Matrices <i>K.P. Dinse and C.J. Winscom</i>	151
Spin Relaxation of Conduction Electrons due to Their Exchange Interaction with Holes in p-Type Semiconductors <i>A.G. Aronov, G.E. Pikus, V.I. Safarov, V.I. Sakharov and A.N. Titkov</i>	152
NMR ²⁹ Si and Dynamic Nuclear Polarization Induced by Optical Pumping in Compensated Silicon <i>L.S. Vlasenko, N.T. Bagraev and R.A. Zhitnikov</i>	153

Electron Spin Relaxation due to Electron-Hole Exchange Interaction as a Mechanism of Non-Equilibrium Orientation of Electrons in Electron-Hole Drops (EHD) in Silicon in Magnetic Field <i>P.D. Altukhov, G.E. Pikus and A.A. Rogachev</i>	154
CIDNP and CIDEP in Low Magnetic Fields <i>K.M. Salikhov</i>	155
CIDEP and CIDNP in Radiation Chemistry. Polarization Transfer between Electron and Nuclear Spin Systems <i>A.D. Trifunac</i>	156
Magnetic Isotope Enrichment as a Result of Magnetic Interaction in Radical Pairs <i>A.D. Pershin and A.L. Buchachenko</i>	157
The Influence of Electron Relaxation of the Chemically Induced Dynamic Nuclear Polarization <i>Yu.A. Grishin, A.V. Dushkin, T.V. Leshina, Yu.N. Molin, R.Z. Sagdeev and R. Kaptein</i>	158
Triplet Exciton Dynamics on TCB by Proton Spin Relaxation <i>J.U. von Schütz, W. Auch, W. Güttler and H.C. Wolf</i>	159
Optically Detected Magnetic Resonance of the Triplet State of Pheophytins <i>T.J. Schaafsma, S.J. van der Bent and R.P.H. Kooyman</i>	160
Fluorescence-Detected Microwave Resonance Spectra of Chlorophyll and Protochlorophyll under Laser Excitation <i>R. Avarmaa and A. Suisalu</i>	161
Photoconductivity Detected Magnetic Resonance of Short-Lived Intermediate CT-States in Molecular Crystals <i>M.M. Tribel, I.A. Sokolik, A.I. Pristupa and E.L. Frankevich</i>	162
ESR Line Shape of Triplet Excitons in Molecule Pairs <i>P. Reineker</i>	163
Construction of Spin-Hamiltonian and Evaluation of its Parameters <i>M. Nестechkin, G. Whyman, G. Klimko and V. Poltavets</i>	164
Spin-Lattice Relaxation in Excited Triplet State of Crystalline Benzyl <i>A.A. Avdeenko, V.A. Karachevtsev and S.N. Pakulov</i>	165
Nuclear Polarization of ^{13}C and ^1H in Photoreactions of Porphyrins with p-Benzoquinone <i>A.G. Zhuravlev, A.M. Shulga and G.P. Gurinovich</i>	166
^1H -, ^2D - and ^{13}C -CIDNP Investigation of Photoinitiators and Photoinduced Polymerization <i>A. Borer, R. Kirchmayr and G.H. Rist</i>	167
Luminescence Quenching and Spin Lattice Relaxation in Alkali Halides at Very Low Temperatures <i>G. Litdja and T. Soovik</i>	168
ESR - Spectroscopic Study of Stationary Cool Flames of Diethyl Ether <i>Z.A. Mansurov, L.N. Zhukova and G.I. Kсандopulo</i>	169
EPR Study of the Pentafluoro-Cyclopentadienyl Radical and the Cyclopentadienyl Radical <i>T. Chen (Dschen) and Hs.H. Günthard</i>	170
Electron Spin-Lattice Relaxation in Radicals via Vibrational Excited States <i>V. Muromtsev, V. Volkov and K. Pukhov</i>	171
ESR-Study of Quantum Parameters of Intermolecular Electron Tunneling <i>A.I. Mikhailov and V.A. Anikolenko</i>	172
ESR Study of the Interaction of Hydrogen Atoms with Polysaccharides in Frozen Aqueous Solutions of Sulphuric Acid <i>G.V. Abaghian</i>	173
The Free Radical Tautomerism <i>S.P. Solodovnikov, A.I. Prokof'ev, N.N. Bubnov, N.A. Malisheva, I.S. Belostozkaya, V.V. Ershov and M.I. Kabachnik</i>	174

Interpretation of the ESR Spectra of Nitroxide Biradicals in Liquid and Solid Solutions <i>A. Kokorin and V. Parmon</i>	175
Hyperfine Interaction in New Phosphorous Iminoxy Radicals <i>A.V. Il'yasov, A.Sh. Muhtarov and A.A. Barlev</i>	176
Line Width Alternating in the $\dot{\text{C}}\text{H}_2\text{CH}_2\text{COOH}$ ESR Spectra <i>S.Z. Shulga and V.A. Onishahuk</i>	177
EPR and Thermoluminescence Investigations of Lucigenine Products of Cathodic Deposition <i>D. Balcerowicz, K. Balcerowicz and J. Kuriata</i>	178
Polarization of Halogen Nuclei in Organic Molecules during an Optical Pumping Cycle Followed by Optically Detected Nuclear Quadrupole Resonance <i>E. Boroske and C. v. Borczykowski</i>	179
High Resolution NQR ^{14}N in Solid Complexes <i>V. Grechishkin, E. Asisov and T. Balicheva</i>	180
NQR Study of Solid Solutions Crystals <i>G.K. Semin, I.M. Alymov and T.L. Khotsyanova</i>	181
Quadrupolar Interaction Constants in Some Diamagnetic Garnets <i>M. Wójcik and W. Zbieranowski</i>	182
Use of NQR Data for Analysis of the Dynamical Model of the 1,1,1,3-Tetrachloropropane Crystal Structure <i>A. Danilov, Yu. Gachegov and I. Izmet'ev</i>	183
Intensities of the Lines in Double NQR-NMR Resonance <i>V. Grechishkin and N. Sinyavskii</i>	184
A NQR Study of Molecular Structure and Tautomerism of Halogen-Substituted Diazoaminobenzenes <i>A.N. Nesmeyanov, D.N. Kravtsov, A.P. Zhukov and L.S. Golovchenko</i>	185
Concentration Dependence of Nuclear Quadrupole Relaxation in Liquid Indium Alloys <i>E. Wehreter, M. v. Hartrott, J. Höhne, D. Quitmann, J. Roßbach and F. Willeke</i>	186
EFG Tensor at the V^{51} Nucleus in Solid Vanadium Compounds <i>N.I. Lazukova and V.A. Gubanov</i>	187
Electric Field Effects in NQR Spectroscopy <i>G.K. Semin and E.V. Bryukhova</i>	188
Chlorine-35 NQR Studies on Pentachlorophenolamines Hydrogen Bonded Adducts <i>E. Grech, J. Kalenik and L. Sobczyk</i>	189
^{23}Na and ^{2}D Quadrupole Interaction in Single Crystal of Sodium Biselenite <i>I.S. Vinogradova and A.I. Roslyakov</i>	190
Electron-Nuclear Quadrupole Coupling Induced by Exchange Interaction. Nuclear Quadrupole Resonance in Clusters of Transition Metal Ions <i>B.S. Tsukerblat, V.E. Fainzil'berg, M.I. Belinskii and A.V. Ablov</i>	191
^{27}Al Nuclear Magnetic Resonance in Yttrium Aluminate <i>T. Grochulski and W. Zbieranowski</i>	192
On Application of NQR to Investigations of Phase Transitions <i>D.F. Batsa, A.V. Bondar, A.Ja. Gordon and S.V. Maltsev</i>	193
Two-Frequency Method of Investigation of Multi-Level Quadrupole Spin Systems <i>A. Kim and N. Ainbinder</i>	194
^{19}F NMR and ^{35}Cl NQR Studies of Molecular Fragment Dynamics in $\text{Cl}_3\text{P} = \text{NC}(\text{CF}_3)_n\text{Cl}_{3-n}$ Crystals <i>I. Kjuntsel, Yu. Rosenberg, G. Soifer, N. Ainbinder, G. Volgina, G. Kibrik and V. Mokeeva</i>	195
On the Calculation of the Electron Densities of the Elements of V-th Group Based on the NQR Data <i>I.A. Safin and D.Ya. Osokin</i>	196

Temperature Dependence of ^{187}Re NQR Frequencies in LiReO_4 , $\text{LiReO}_4 \cdot 2\text{H}_2\text{O}$ and $\text{Y}(\text{ReO}_4)_3 \cdot 4\text{H}_2\text{O}$ <i>S.K. Sherbakova and A.A. Boguslavskij</i>	197
Effect of Impurity Atoms on the ^{93}Nb NQR Spectrum in Nb_3Al <i>V. Matukhin, I. Safin and V. Shamray</i>	198
NQR-Investigation of the Incommensurate Phase in Rb_2ZnCl_4 <i>A.K. Moskalev, I.A. Belobrova, I.P. Aleksandrova, Sh. Sawada and Y. Shiroyshi</i>	199
New Method of Dividing Chemical Shift and Quadrupole Interaction Effects in NMR Monocrystal Spectra <i>V. Proshko, A. Litovchenko and I. Matyash</i>	200
Cis-Trans Thermoisomerization and Lattice Dynamics of Platinum(II) Complexes by ^{127}I NQR <i>E. Kravchenko, M. Gel'fman and E. Shubochkina</i>	201
 Session B EPR; Electron Spin Echo and Double Resonance; ENDOR and ELDOR; Acoustic Resonance; Mössbauer Spectroscopy; Cyclotron Resonance; Jahn-Teller Ions; Jahn-Teller Systems; Paramagnetic Centers; Paramagnetic Ions; Rare Earths	
The Paramagnetic Chromium Centre in Ferroelectric Triglycine Sulphate Crystals: A Molecular Orbital Theory Study <i>S. Wartewig</i>	202
Investigation of the Dipole-Dipole Interactions in Diluted Paramagnet at $kT < g\beta H$ <i>S.A. Altshuler, I.N. Kurkin and V.I. Shlyonkin</i>	203
Calculation of Electric Field Constants for Tetragonal Cr^{3+} Centres in KMeF_3 ($\text{Me} = \text{Mg}, \text{Zn}$) <i>A.L. Larionov</i>	204
ESR of Gd^{3+} in Distorted Sites by Charge Compensation in AMF_3 Crystals <i>J.Y. Buzaré, J.J. Rousseau and J.C. Fayet</i>	205
The Effect of a Near-Resonant Intermediate Level on the Double-Quantum Transitions in a Three-Level Spin System <i>R. Boscaino and A. Tripo</i>	206
Resonant Second Harmonic Emission by Crystal Field Modulation in Magnetic Crystals <i>I. Ciccarello, M. Li Vigni and G. Vetri</i>	207
The Influence of EPR Saturation on Magneto-optical Effects with Allowance for the Dipole-Dipole Reservoir of Electron Spins <i>T.Sh. Abesadze and L.L. Butskvili</i>	208
Exchange Narrowing of Paramagnetic Resonance Line in Superconductor <i>B.I. Kochelaev, N.G. Koloskova and A.A. Kosov</i>	209
EPR and Spin-Relaxation Peculiarities in Layer Crystals <i>S.S. Ishchenko, V.I. Konovalov, S.M. Okulov and M.F. Deigen</i>	210
The Effect of the Saturation on the Time Dependence of the DQ Transitions in Two-Level Spin Systems <i>R. Boscaino and F.M. Gelardi</i>	211
Investigation of Short Range Order in Solid Solutions by Means of EPR <i>E.K. Henner and I.G. Shaposhnikov</i>	212
The Meaning of the Degree of Hybridization in Paramagnetic Clusters <i>M. Moreno</i>	213
On Effects of the Dipolar Reservoir in Radiofrequency Discrete Saturation (RFDS) <i>T.A. Abramovskaya and M.D. Zviadadze</i>	214
Nuclear-Nuclear Double Resonance <i>J. van Houten, W.Th. Wenckebach and N.J. Poulis</i>	215
Excitation of Acoustic and Spin Waves by Motion of Domain Wall in Magnetically Ordered Crystals <i>M. Farztdinov</i>	216
Instantaneous Diffusion in Electron Spin Echo <i>A.M. Raitsimring, K.M. Salikhov and Yu.D. Tsvetkov</i>	217

Effects of Instantaneous Spectral Diffusion and Spectral Diffusion in Electron Spin Echo Spectra of Macroradicals <i>V.K. Milinchuk, D.G. Gilyazitdinov and E.R. Klinshpont</i>	218
Deuterium, Lithium and Sodium ENDOR Study of Frozen Solutions <i>V.V. Troitsky, V.I. Muromtsev, G.A. Valkova and D.N. Shigorin</i>	219
Weak Hyperfine Interactions in VO^{2+} -Water, Methanol Complexes Studied by the Electron Spin Echo Method in Frozen Glassy Solutions <i>S.A. Dikanov, V.F. Yudanov and Yu.D. Tsvetkov</i>	220
Test of Improved Matrix ENDOR Lineshape Model Based on Single Crystal Data <i>L. Kevan, P.A. Narayana, K. Toriyama and M. Iwasaki</i>	221
ELDOR Spectra Calculation <i>L. Antsiferova, A. Ivanova, T. Kulagina and N. Piven</i>	222
Electric Field Gradient at the ^{157}Gd Nucleus in $\text{CaF}_2:\text{Gd}^{3+}\text{M}^+$ <i>D. van Ormondt, J. Andriessen, J. Dam, H.W. den Hartog and E.J. Bijvank</i>	223
Structure Determination of Two Mn^{2+} Paramagnetic Centers in $\alpha\text{-LiJO}_3$ by the RFDS and ENDOR Methods <i>D.M. Daraselia, A. Bräuer and R. Böttcher</i>	224
Experimental Investigation of the Role of the Dipole-Dipole Reservoir in the Distant ENDOR in Ruby <i>I.M. Zaritskii, A.A. Konchite and B.D. Shanina</i>	225
Cooling of the Nuclear Dipole-Dipole Reservoir due to Microwave and Optical Pumping of the Paramagnetic Centers in Solids <i>V.V. Pomortsev</i>	226
Dynamic Nuclear Polarization of $^7\text{Li}^+$ in Solutions of Free Radicals <i>K. Meise-Gresch and W. Müller-Warmuth</i>	227
Resonance Splitting of EPR Line by Intensive Radiofrequency Field and His Display in ENDOR <i>V.G. Grachev</i>	228
Dynamic Nuclear Polarization in Liquid Solutions of Ti^{III} and Fe^{I} Compounds <i>V. Fedotov and B. Odintsov</i>	229
ENDOR of Yb^{3+} in Perovskite Type Crystals <i>M.L. Falin, V.P. Meiklyar and B.S. Elman</i>	230
Electron Spin Echo Studies of the Spatial Distribution of Radical-Paramagnetic Ion Pairs <i>S.A. Dzuba, A.M. Raitsimring and Yu.D. Tsvetkov</i>	231
Multiplet Structure in ENDOR Spectra as a Consequence of Noncrossing Energy Levels <i>M. Rudin, A. Schweiger and Hs.H. Günthard</i>	232
Effects of a Strong Microwave Field in the ENDOR <i>A. Brick, S. Ishchenko and I. Matyash</i>	233
Pulsed ENDOR in Diluted Copper Tutton Salts <i>J. Poot, W.Th. Wenckebach and N.J. Poulis</i>	234
Molecular Motions as Studied by Double Electron-Electron Resonance (ELDOR) <i>V.A. Benderskii, S.T. Kirillov and N.P. Piven</i>	235
Spin-System as Quantum Phonon Detector and Phonon Maser <i>V.A. Golenishchev-Kutuzov and S.A. Migachev</i>	236
Anomalous Nuclear Acoustic Resonance Lineshapes due to Intra-Spin Cross Relaxation <i>B. Ströbel, K. Läger and H.E. Bömmel</i>	237
Enhancement of Nonresonant Ultrasonic Absorption in Paramagnets due to the Non-Equilibrium State of Dipole-Dipole Reservoir <i>S.A. Al'tshuler, A.V. Duglav, B.I. Kochelavev and A.Kh. Khasanov</i>	238
Quantum Pseudospin Acoustics in Liquids <i>A.V. Alekseev and U.Kh. Kopvillem</i>	239

Incoherent Phonons at the Resonant Interaction of the Acoustic Waves with the Spin-System <i>V.A. Golenishchev-Kutuzov, I.I. Sadykov and E.P. Khaimovich</i>	240
Phonon Avalanche and Superradiance in Paramagnetic Relaxation <i>C. Leonardi</i>	241
Impurity Mechanism of Acoustical Nuclear Resonance in Solids <i>V.A. Shutilov, V.L. Komashnaja and E.V. Charnaja</i>	242
Acoustic Paramagnetic Resonance in Liquids (APRL) Having Low Conductivity <i>G.L. Antokolskii, V.S. Baranov, E.M. Iolin and V.V. Kozlov</i>	243
Interaction of Acoustic Pulse with Spin-System <i>E.P. Khaimovich</i>	244
The Effect of the Precession of Magnetization Vector on the Mössbauer Spectra <i>G. Belozerskii, S. Gorbachevskii and S. Simonyan</i>	245
Study of Magnetic Hysteresis of the Hyperfine Fields <i>P.V. Bogdanov, S.K. Godovikov, M.G. Kozin and V.S. Shpinel</i>	246
Mössbauer Spectrum of Optically Excited Semiconductors <i>Sh.Sh. Bashkirov, A.B. Liberman, V.V. Parfenov and V.I. Sinyavski</i>	247
Time-Resolved Mössbauer Spectroscopy of $\text{ZnS-}^{57}\text{Co}$ Crystal <i>E. Realo and R. Koch</i>	248
An Application of Mössbauer Spectroscopy on ^{57}Fe for the Investigation of Be <i>G.N. Belozerskii, V.N. Gittsovitch, S.V. Lubarskii, L.V. Kurashkin and Yu.P. Khimich</i>	249
Mössbauer Investigations of Nickel Ferrite and Ferric Oxide after Mechanical Grinding <i>Ju.T. Pavlukhin, V.V. Boldyrev, E.G. Avvakumov, G.N. Belozerskii and V.N. Gittsovich</i>	250
A Ferrimagnetic Resonance and Mössbauer Spectroscopic Study on the Superparamagnetism of Supported Iron Oxides <i>W. Gunsser, F. Schmidt, G.N. Belozerskii and M. Kasakov</i>	251
Paramagnetic Resonance and Mössbauer Effect Studies on $20\text{Fe}_2\text{O}_3\cdot 80[3\text{B}_2\text{O}_3(100-x)\text{PbO}\cdot x\text{GeO}_2]$ Glasses <i>E. Burzo, I. Ardelean and I. Bibicu</i>	252
J-125 Emission Gamma-Resonance Spectroscopy and J-127 Nuclear Quadrupole Resonance Study of Quadrupole Interactions in Iodobenzene Derivatives <i>L.G. Shtyrkov, V.V. Khrapov and T.A. Babushkina</i>	253
Unquenched Orbital Moment on Co and Hyperfine Fields on Fe in Dilute Pd(Fe,Co) Alloys <i>V.A. Andrianov, E.P. Kaminskaya, A.Yu. Fentin and V.S. Shpinel</i>	254
On the Theory of the NQR Spectra of Mixed-Valence Compounds <i>S.A. Borshoh</i>	255
Mössbauer Study of Interactions between Radiation Defects and Iron Impurity Atoms in Neutron Irradiated Molybdenum <i>A.K. Zhetbaev, Sh.Sh. Ibragimov and A.K. Shokanov</i>	256
Magnetic Transformation in Ferrite $\text{Ni}_{0.8}\text{Cd}_{0.2}\text{Fe}_2\text{O}_4$ <i>Kh.I. Amirkhanov, I.K. Kamilov, Sh.M. Aliev, L.K. Anokhina and Kh.K. Aliev</i>	257
Mössbauer Conversion Spectroscopy of High-Frequency Solid State Perturbation <i>A.V. Mitin and G.P. Chugunova</i>	258
Investigation of Amorphous Alloys $\text{Fe}_{40}\text{Ni}_{40}\text{B}_{20}$ by Mössbauer Spectroscopy <i>R.A. Manapov, A.V. Mitin and F.G. Vagizov</i>	259
About Features of Nuclear Spin-Echo Detection by Angular Correlations of Nuclear Radiation <i>L.N. Shakhmuratova</i>	260
Combined Resonance in Semiconductors <i>E.I. Rashba</i>	261
Resonance of Charge Carriers in Semiconductors in VHF Magnetic Fields <i>L.I. Kats</i>	262

Phase Transition in Two-Dimensional Electron-Hole Systems in High Magnetic Fields and Their Effect on Cyclotron Resonance Spectra <i>I.V. Lerner and Yu.E. Lozovik</i>	263
Cyclotron Resonance of Electrons in ZnTe (p-Type Semiconductor) <i>B. Clerjoud, A. Gelineau, D. Galland and K. Saminadayar</i>	264
The Dependence of Proton Affinities of Organic Compounds on Ionization Potentials and Structure <i>I. Koppel, R. Pikker and U. Milder</i>	265
The Jahn-Teller Effect for an Icosahedral T_2 Term in EPR Spectra <i>V.P. Khlopın, V.Z. Polinger and I.B. Bersuker</i>	266
Studies of E-Type Jahn-Teller Ions by Resonant Cross-Relaxation <i>A. Vasson, A.-M. Vasson and C.A. Bates</i>	267
The Nature and Dynamics of the Distortions of Jahn-Teller Centres under Low-Symmetry Perturbations <i>M.M. Zaripov, A.M. Ziatdinov and Yu.V. Yablokov</i>	268
Coexistence of Tetragonal and Orthorhombic Jahn-Teller Distortions in a $^2T_{2g}$ System: $SrTiO_3:Cr^{5+}$ <i>H.J. De Jong and M. Glasbeek</i>	269
The Influence of the Parameters of Lattice Structure on the Configuration of Jahn-Teller Centers <i>V.E. Petrashen, Yu.V. Yablokov and R.L. Davidovich</i>	270
The Multimode Jahn-Teller Coupling in the 2T_2 State <i>S.W. Biernacki</i>	271
Spin Lattice Relaxation in the Case of Dynamical Jahn-Teller Effect (Cr^0 and Mn^0 in Si) <i>A.A. Bugai, V.S. Vikhnin, V.E. Kustov and V.M. Maksimenko</i>	272
The Electron Paramagnetic Resonance (EPR) Spectra of γ -Irradiated Phosphate Glasses Doped with Rare Earth Impurities <i>B.I. Denker, V.V. Osiko, L.S. Kornienko, A.O. Rybaltovskiy and V.A. Tikhomirov</i>	273
$^2S_{1/2}$ States of Tin and Lead Ions in II-VI Cubic Compounds <i>V. Seeman and I. Jaek</i>	274
ESR of Silica Glasses Containing Silver <i>A. Silin, N. Cherenda, A. Shendrik and D. Yudin</i>	275
EPR of Atomic Silver Centres in Mixed Alkali Halide Crystals <i>I. Amanis, J. Kliava and J. Purāns</i>	276
EPR Measurements of Chromium Impurity Photoionization in II-VI Compounds <i>M. Godlewski</i>	277
EPR and Polarized Luminescence of Sn^{3+} Centres in $KCl:SnCl_2$ Crystals <i>V. Seeman, Zh. Egemberdiev, U. Haldre, T. Lehto, K. Realo, S. Reifman and S. Zazubovich</i>	278
Spin-Lattice Relaxation of the V_K -Center <i>G. Corradi, Yu.S. Gromovoi, V.S. Vikhnin and I.M. Zaritskii</i>	279
ESR of Nitrogen Type of Centers in Doped KCl <i>I. Ursu and S.V. Nistor</i>	280
On Variety of F-Centres in Yttria <i>V.S. Vainer, A.I. Veinger and Ju.A. Polonsky</i>	281
EPR of Li-Donors in Nonrandom Strain Near Silicon Surfaces <i>M. Höhne</i>	282
EPR Investigations of the Fe^0 -Centre in Silicon <i>W. Gehlhoff and K.H. Segsa</i>	283
Kinetics of Paramagnetic Center Formation in the Si-SiO ₂ Bonding Layer <i>D. Kropman, L. Pirn, A. Sügis and M. Vinnal</i>	284
Investigation of One-Dimensional Dislocation Spin System in Silicon Single Crystals <i>V.A. Grazhulis, V.V. Kveder and Yu.A. Ossipyan</i>	285

The ESR of Ions with an Uncoupled S-Electron in Crystals with Fluorite and Perovskite Structure <i>M.V. Eremin, V.F. Krutikov, N.I. Silkin and V.G. Stepanov</i>	286
Some Features of Spin-Lattice Relaxation in Crystals with Enhanced Concentration of Paramagnetic Centers <i>V.M. Shulga</i>	287
Optically Detected EPR in the Relaxed Excited State of Color Centers in Alkali Halides <i>P.G. Baranov, Yu.P. Veshchunov and N.G. Romanov</i>	288
Application of EPR Method for Investigation of the Energy Structure of Photosensitive Localized Defects in ZnO <i>M.M. Malov and V.D. Chernyi</i>	289
Hyperfine Structure in the EPR Spectra of F^{+} Centres <i>A. Ots and V. Seeman</i>	290
ESR and Optical Absorption of Radiation Defects in KCl-NO ₂ <i>L.A. Pung and A.Ch. Lushchik</i>	291
Investigation of Charge Transfer Processes in Phosphorocrystals by ESR Technique <i>M. Bulantiy, A. Kovalenko, A. Kushnir, S. Omelchenko, I. Shtambur, A. Yakunin and N. Yakunina</i>	292
EPR of Additively Coloured and Plastically Deformed ZnS <i>S. Bredikhin, K. Lott and J. Varvas</i>	293
EPR of U^{5+} in CaF ₂ <i>V. Lupet, A. Lupet and I. Ursu</i>	294
Zero-Field Splitting of the Ground State S Ion in Calcite Type Borates <i>A. Chlystov, S. Lukin, V. Rudenko, V. Seleznev and G. Tsintsadze</i>	295
The Line-Shape of Electron Paramagnetic Resonance of Trimeric Clusters in Polycrystalline Solids <i>M.P. Chobanu and B.S. Tsukerblat</i>	296
Some Features of the Phonon Heating in the Spin-Lattice Relaxation in Paramagnetic Crystals <i>V.D. Korolev and S.A. Peskovatskii</i>	297
Exchange Interaction of Mn^{2+} Ion Pairs in CsCdCl ₃ <i>G.A. Petrakovskii, E.A. Petrakovskaya, V.V. Velichko and S.N. Lukin</i>	298
The Dependence of Exchange Interaction on the Electron Structure of the Unfilled Shells of Paramagnetic Ions <i>M.V. Eremin</i>	299
ESR of Tl^{2+} Ions in KH ₂ PO ₄ and KD ₂ PO ₄ Crystals in Para- and Ferroelectric Phases <i>V.N. Yefimov, N.I. Silkin, V.G. Stepanov and L.A. Trofanchuk</i>	300
Isotropic Hyperfine Interaction and Covalent Bond of $^{2}B_2$ Ions (V^{+4}, Cr^{+}, Mn^{+2}) in Complex Molecules; ESR Study <i>B. Jeżowska-Trzebiatowska, J. Jezierska and A. Jezierski</i>	301
Analysis of the Spin-Hamiltonian Parameters in the Cubic and Tetragonal Phases of AMF ₃ :Mn ²⁺ Crystals <i>J.J. Rousseau, A. Leble and J.C. Fayet</i>	302
ESR of Trivalent Paramagnetic Impurity Associated with Two Vacancies (α -LiIO ₃ :Cr ³⁺) <i>E.G. Sharoyan, K.N. Kocharyan, A.A. Mirzakhanyan and V.Z. Harutunyan</i>	303
NMR, EPR Spectra and Thermostimulated Depolarisation Currents in Baltic Amber <i>R. Grechishkina, V. Grechishkin and A. Glumov</i>	304
EPR of Mn^{2+} in Some Pyrovanadates <i>V.A. Ioffe, S.I. Andronenko and Z.N. Zonn</i>	305
Study of the Effects of the Cluster Formation of the Transition Ions in the Oxide Glasses by Means of the Concentration Dependence of Their EPR Spectra <i>L.D. Bogomolova and E.K. Henner</i>	306
A New Paramagnetic Centre in Scapolite <i>L.C. Andersson</i>	307
The g-Shift of Tl^{2+} and Pb^{3+} Ions in Alkali Halides <i>M. Morono</i>	308

Spin Diffusion and Spin-Lattice Relaxation in Paramagnetic Crystals <i>B.E. Vugmeister</i>	309
EPR Study of Adsorption of Mn^{2+} Ions on Silicagel <i>V. Hronský, M. Rákoš, J. Belák, J. Juhár and D. Kazár</i>	310
Temperature-Dependent Effects of Nickel Impurity on Nitrogen Relaxation Processes in Diamond <i>V. Besobchuck, A. Brick, I. Matyash and Yu. Fedotov</i>	311
Conditions of Existence of Extra Absorption Peaks in EPR Spectra of Powders and Glasses <i>V.N. Konstantinov and I.V. Ovchinnikov</i>	312
Oriented Crystallized Solutions of Anisotropic Paramagnetic Molecules <i>I.V. Ovchinnikov and A.I. Philippov</i>	313
The Influence of the Temperature and the Hydrostatic Pressure on the EPR Spectra Cr^{3+} in $KMgF_3$ and $KZnF_3$ Crystals <i>R.Yu. Abdulsabirov, A.L. Larionov, V.G. Stepanov, S.N. Lukin and I.M. Krygin</i>	314
Nonadiabatic Single-Particle Mechanisms of Spin-Lattice Relaxation <i>L.K. Aminov</i>	315
Calculation of the Exact Axial EPR Resonance Fields for Spin $S = 2$ <i>J. Baranowski, T. Cukierda and B. Jeżowska-Trzebiatowska</i>	316
Theory of Low Symmetry Effects in Paramagnetic Resonance <i>A.M. Grekhov and A.B. Roitsin</i>	317
Spin-Lattice Coupling Constants and Spin-Lattice Relaxation of Cr^{3+} Ion in Beryl <i>R.M. Martirosyan, M.O. Manvelyan and V.G. Badalyan</i>	318
EPR of Cr^{3+} Exchange in Hydrated Crystals GASH <i>O. Gataullin, Yu. Ryzhamov and M. Zaripov</i>	319
Off-Center Impurity Ions in Crystals as Studied by EPR <i>L.S. Sochava, Yu.N. Tolparov and V.S. Vikhnin</i>	320
EPR of Mn^{2+} in $(La_2O_3)_{0.95}(CeO_2)_{0.05}$ <i>G. Bacquet, C. Bouysset and S.K. Misra</i>	321
EPR Study of Chromophorous Ions in Glazes <i>C.B. Azzoni and G.L. Del Nero</i>	322
EPR Spectroscopic Investigation of Tantalum (V) Doped $AgCl$ <i>L. Giurgiu and I. Ursu</i>	323
Electron Paramagnetic Resonance Study of Copper (II) Complexes with Tridentate Schiff Base <i>A. Rockenbauer, L. Casella, M. Gullotti and A. Pasini</i>	324
EPR of Cr^{3+} and Mn^{2+} Ions in Cubic Single Crystals $(ZrO_2)_{0.9}(Y_2O_3)_{0.1}$ <i>E.A. Zhilinskaya, V.N. Lazukin, I.V. Chepeleva and V.V. Ostko</i>	325
The Electron Paramagnetic Resonance of the Iron Ions in K_3AlF_6 <i>Al. Darabont, S.I. Fărcas and Al. Nicula</i>	326
Line Intensity in ESR <i>P. Mialhe</i>	327
EPR and Optical Absorption of the Ni^{2+} Ions in Complex Tungstates and Molybdates <i>G.I. Pilipenko, V.S. Kiyko, F.F. Gavrilov, E.V. Tkachenko and V.M. Zhukovsky</i>	328
Electrofield Effect in EPR as a Technique for Determination of Local Electrical Fields <i>I.N. Geifman, M.F. Deigen, B.K. Krulikovskiy and M.D. Glinchuk</i>	329
EPR Spectra of Ni^+ and Ni^{2+} Centers in LiH Crystals <i>U. Haldre, T. Lehto, A. Ots, S. Reifman, S. Cholakh, P. Gavrilov and T. Betenekova</i>	330
ESR in Low Magnetic Fields for Paramagnetics with an Exchange <i>A. Sobolev and A. Chirkov</i>	331

The ESR of Photoproduced Protium and Deuterium in Acidic Ices. The Kinetics of Isotope Separation and Decay <i>B.F. Alekseev, A.M. Belonogov, Yu.V. Bogachev, V.Z. Drapkin and S.G. Fedin</i>	332
Investigation of Exchange-Coupled Pairs of Mn^{2+} - Ni^{2+} Ions in $KMgF_3$ by the EPR Method <i>R.Yu. Abdulsabirov, R.L. Garifullina and L.D. Litvanova</i>	333
Generation of Coherent Radiation from Heat through Adiabatic Demagnetization of $^{59}Co^{2+}:Ce^{3+}:La_2Mg_3(NO_3)_{12} \cdot 24H_2O$ Type Crystals <i>M.P. Vaisfel'd</i>	334
Single and Double-Quantum Transitions in EPR of Cubic Pr^{3+} in Fluorite <i>V. Lupel</i>	335
ESR Investigation of Gd^{3+} Substituted for Ca^{2+} in $RbCaF_3$ and $CsCaF_3$: a) O_h six-fold coordinated sites; b) weak tetragonal distortion below T_C in $RbCaF_3$ <i>J.Y. Euzaré, A. Leblé, J.J. Rousseau and J.C. Fayet</i>	336
Phonon Bottleneck in Orbach-Aminov Spin-Lattice Relaxation in $LiYF_4$ - Er^{3+} Single Crystals <i>A.A. Antipin, S.L. Korablyeva, R.M. Rakhmatullin and A.A. Fedt'k</i>	337
EPR Investigations of Er^{3+} , Nd^{3+} and Ho^{3+} in $ThGeO_4$ <i>M. Baran, M. Gutowska, H. Szymczak and B.M. Wanklyn</i>	338
Paramagnetic Relaxation, EPR Spectra and Structural Changes in Aqueous Solutions of $Mn(II)$ and $Cr(III)$ Salts in the Process of Their Freezing and Thawing <i>G. Vishnevskaja, F. Gumerov, B. Kozyrev and I. Donskaja</i>	339
The Dependence of the SHF Linewidth on the Fine Structure Transitions for $CdF_2:Gd^{3+}$ <i>W. Gehlhoff and J. Kreissl</i>	340
Peculiarities of Electron Spin-Lattice Relaxation of Rare-Earth Ions under Hydrostatic Compression of Crystals <i>A.Yu. Kozhukhar, G.N. Neilo, A.D. Prokhorov and G.A. Tsintsadze</i>	341
Temperature Dependence of the Cubic Splitting in the EPR Spectrum of Gd^{3+} in PbF_2 Single Crystals: $-b_4^0$ as Function of Interionic Distance <i>T. Rewaj</i>	342
Low Symmetry Effects in EPR Spectrum of $KY(MoO_4)_2 + Er^{3+}$ <i>A.I. Zuyagin, M.I. Kobets, A.M. Pehisukha and A.S. Chernyi</i>	343
Temperature Dependence of the Second-Order Spin-Lattice Coefficients for Eu^{2+} in SrF_2 Single Crystals <i>J. Kuriata, N. Guskos and T. Rewaj</i>	344
EPR, Electric Field Effect and Eu^{2+} -, Mn^{2+} -Vacancy Centers Reorientation in Alkali-Halide Crystals <i>E.N. Kalabuchova, V.M. Mayevsky and B.D. Shanina</i>	345
Theory of Electric Field Effects on Magnetic Resonance Spectra in $CaF_2:RE^{3+}$ Single Crystals <i>B.Z. Malkin and S.M. Archipov</i>	346
Session C AFMR; Antiferromagnetic Systems; FMR; Ferromagnetic Systems; Phase Transitions; Phase Transitions in Magnetic Systems; Phase Transitions in Ferroelectrics; Spin Waves; Polarization Echoes; Magneto-Optic Effects; NMR and EPR in Metals; One-Dimensional Systems; Novel Relaxation Phenomena in Solids	
NMR on Mn^{55} Nuclei in Magnetodielectrics at Millidegree Temperatures <i>B.S. Dumesch</i>	347
Observation of Excitation of the Antiferromagnetic Mode in the Paramagnetic State of $(C_2H_5NH_3)_2CuCl_4$ <i>H. Peimann, H. Hagen, F. Waldner and H. Arend</i>	348
Antiferromagnetic Resonance in $CoCO_3$ <i>A.I. Maslennikov, V.V. Eremenko, V.M. Naumenko and A.V. Klochko</i>	349
Magnetic Phase Diagram of Deuterated Copper Chloride <i>A. Galkin, V. Galushko, V. Kulbatskii and V. Telepa</i>	350

Magnetostriction Effect on Resonant Properties of Cuprous Chloride Dihydrate under Pressure <i>V.G. Bar'yakhtar, A.A. Galkin, S.V. Ivanova, V.I. Kamenev and P.I. Polyakov</i>	351
Zero-Field Cl NMR-NQR Spectroscopy in the Para- and Antiferromagnetic Phase of $\text{ND}_3(\text{CH}_2)_2\text{ND}_3\text{MnCl}_4$ <i>P. Murali and H. Kammer</i>	352
Theory of Electron Spin Resonance in Dilute Magnetic Alloys at Low Temperatures <i>N.G. Fazleyev</i>	353
Sharp Magnetic Resonance in the Quasi 2-d Antiferromagnet $[\text{NH}_3-(\text{CH}_2)_4-\text{NH}_3]\text{MnCl}_4$ Near T_N <i>H. Hagen, H. Reimann, F. Waldner and H. Arend</i>	354
Resonance Phenomena in the Region Where the NMR and FMR Overlap <i>V.A. Ignatchenko, V.K. Mal'tsev and V.I. Tsifrinovich</i>	355
^{57}Fe and ^{53}Cr NMR in Domain Walls of Some Canted Antiferromagnets <i>S. Nadolski, M. Gutowski, E. Jedryka and H. Szymczak</i>	356
Nonlinear Phenomena in Nuclear Spin Echo in FeBO_3 <i>M.P. Petrov and V.R. Korneev</i>	357
Resonance Properties of Domain Walls in Antiferromagnets <i>A.E. Borovik and V.S. Kuleshov</i>	358
Low Dimensional Magnetic Structures in Organic Free Radicals <i>J. Burg and P. Grobet</i>	359
Magnetic Properties of Solid Picryl-N-Aminocarbazyl <i>P. Grobet, J. Burg and L. Van Gerven</i>	360
Spin Echo Spectra of Fe^{57} and F^{19} Nuclei in a Canted Antiferromagnet FeF_3 at 4.2-340 K <i>A.V. Zalessky, V.V. Vanchikov, V.G. Krivenko and A.N. Ivashchenko</i>	361
Static Critical Behaviour of Antiferromagnet with Two Pairs of Magnetic Sublattices <i>A.S. Kamzin, V.A. Bokov, G.A. Smolensky and A.I. Sokolov</i>	362
Second Nuclear Echo in Magnetic Materials <i>E.A. Glozman, V.A. Ignatchenko and V.I. Tsifrinovich</i>	363
Subthreshold Two-Magnon Absorption in Quasi-One-Dimensional Antiferromagnet $\text{CsMnCl}_3 \cdot 2\text{H}_2\text{O}$ <i>A.G. Anders, A.I. Zvyagin and A.I. Petutin</i>	364
Conduction Electron Spin Scattering on the Boundary with Ferromagnet <i>E.G. Kharakhash'yan and I.G. Zamaleev</i>	365
On the Theory of the FMR Linewidth in Metals <i>O. Olkhov and S. Semin</i>	366
Magnetic Structure and Internal Fields in $\text{ND}_3(\text{CH}_2)_2\text{ND}_3\text{CuCl}_4$ <i>H. Kammer</i>	367
Critical and High-Temperature Spin Dynamics in Two 3-D and Two 2-D Ferromagnets <i>W.L.C. Rutten and J.C. Verstelle</i>	368
Interaction of Light with the Spin System at the Ferromagnetic Resonance in K_2CuF_4 <i>A.S. Borovik-Romanov, V.G. Jotikov, N.M. Kreines, V. Zavaritskii and R. Laiho</i>	369
Ferromagnetic Resonance Line Broadening in Cubic Ferromagnetics due to Domain Structure <i>V.V. Danilov, I.V. Zavislyak and V.I. Sugakov</i>	370
Investigation of Hexagonal Ferrites Ni_2ScW by FMR Method throughout the Temperature Range 300-4.2 K <i>V.I. Ivanova, L.N. Kolpakova, I.I. Petrova, T.A. Smirnova and N.T. Cherpak</i>	371
Effect of Ions with Minority Valence on Magnetic Anisotropy and Relaxation <i>A.G. Gurevich, L.M. Emiryan, K.G. Nikiforov and A.N. Anisimov</i>	372

Quantitative Analysis of Magnetostatic Excitations in the Ferromagnetic Layer Compound $(C_2H_5NH_3)_2CuCl_4$ <i>H. Reimann, H. Hagen, F. Waldner and H. Arend</i>	373
EPR Study of Some Ferrimagnetic Compounds <i>E. Burzo, M. Bălănescu and I. Ursu</i>	374
Rotating Sample Method Used in Ferromagnetic Resonance Experiment on Ferrite Single Crystals /1,2/ <i>J. Kolovrat</i>	375
On the Composition Dependence of g Values in Some Yttrium Compounds <i>E. Burzo, R. Batcan and I. Ursu</i>	376
A High Pressure NMR Investigation of Phase Transitions in Solid Ethane <i>M.H.M. Schutte, K.O. Frins and N.J. Trappeniers</i>	377
NMR of Polycrystalline $NaUF_6$ <i>E. Fukushima and G.W. Halstead</i>	378
EPR Study of Mn^{2+} and Gd^{3+} around the Ferroelastic Transition Point of $Pb_3(PO_4)_2$ <i>B. Houlter and M. Raseghi</i>	379
Magnetic Resonance Study of Central Peak Dynamics in Hydrogen Bonded Ferroelectric Crystals <i>J. Slak, V. Rutar, P. Ceve, G. Ceve, B. Ložar and R. Blinc</i>	380
EPR Spectra of Double Molybdates and Tungstates Undergoing Ferroelastic Phase Transitions <i>A.I. Otko and N.M. Nesterenko</i>	381
^{75}As Nuclear Quadrupole Interactions and Lattice Dynamics in KH_2AsO_4 -Type Ferroelectrics and Antiferroelectrics <i>A.P. Zhukov and L.A. Shuvalov</i>	382
NQR Study of Ferroelastic Phase Transition in Hg_2Cl_2 Crystals <i>A.A. Kaplyanskii, S.N. Popov and C. Barta</i>	383
Electron Spin-Echo Studies of Anomalous Spin-Lattice Relaxation Behaviour Near Ferroelectric Phase Transitions <i>G. Völkel, W. Brunner and W. Windsch</i>	384
Relaxation Processes in Structural Phase Transitions of Order-Disorder Type <i>V.G. Vaks, V.E. Schneider and A.A. Vlasova</i>	385
Broadening of the NMR Line Near Critical Point of Diamagnetic Phase Transition of the First Order <i>L.D. Zusman</i>	386
The EPR Study of Structural Changes in Oxide Glasses under Crystallization <i>R. Abdrakmanov and T. Ivanova</i>	387
The Investigation of the Statical and Dynamical Critical Behaviour of $SbSI$ in Passing through the Tricritical Point <i>I.P. Aleksandrova and A.K. Moskalev</i>	388
Change in the Local Environment of Paramagnetic Ions in Phase Transition during Glass Crystallization <i>E.I. Abdrashitova</i>	389
NMR Method Applied for the Study of Phase Transitions in Heterogeneous Objects <i>V.I. Kulividze</i>	390
EPR and Hypothesis of Universality <i>V.G. Anufriev</i>	391
Paramagnetic Resonance in Magnetic Semiconductors <i>V.N. Berzhansky, V.I. Ivanov and S.A. Havrichkov</i>	392
^{57}Fe NMR Signal Relaxation in the Vicinity of the First Order Spin-Reorientation Phase Transition of the Morin Type in Rare Earth Orthoferrites <i>V.G. Bar'yakhtar, A.S. Karnachev, N.M. Kovtun, T.K. Soboleva, E.E. Solov'ev and E.P. Stefanovskii</i>	393
Electron-Vibrational Interactions in Paramagnetic Complexes of 3d-Ions with Close Levels of Different Spin Multiplicity <i>V. Shipilov, V. Zelentsov and V. Fedirko</i>	394
Magnetic Resonance in the Two-Dimensional Ising Magnet <i>G.O. Berim and A.R. Kessel</i>	395

NMR in the Systems with Magnetic Order <i>V.V. Prudnikov and G.B. Teitelbaum</i>	396
Radiospectroscopic Investigations of the Electroacoustic Echoes <i>G.A. Smolensky, E.A. Tarakanov, N.N. Krainik and S.N. Popov</i>	397
Acoustic Nuclear Spin Echo in Antiferromagnets <i>Kh.G. Bogdanova, V.A. Golenishchev-Kutuzov, S.A. Zeldovich, A.R. Kessel and A.A. Monakhov</i>	398
Reorientational Motions in Ferroelastic and Ferroelectric Crystals <i>D.C. Allion, H.T. Stokes and T.A. Case</i>	399
Fluctuations and Spin Waves in Ferroelectroantiferromagnet in Strong Magnetic Field <i>M.A. Savchenko, A.V. Stephanovich and M.A. Khabakhpashev</i>	400
Method of Parametric Nuclear Spin Echo <i>Yu.M. Bunkov</i>	401
Optical Studies of Spin Waves in YIG Single Crystals under Longitudinal Magnetic Pumping <i>V.V. Eremenko, V.N. Venitskii and E.V. Matyushkin</i>	402
Light Scattering on Magnons and Phonons Excited by Microwave Pumping in Antiferromagnet <i>A.S. Borovik-Romanov, V.G. Jotikov and N.M. Kreines</i>	403
New Method of the Determination of the Magnons Relaxation Rate <i>L.A. Prozorova and A.I. Smirnov</i>	404
Light Scattering on Parametrically Excited Spin and Magnetoelastic Waves in Yttrium Ferrite Garnet <i>A.A. Solomko, Yu.A. Gaidai and V.I. Maistrenko</i>	405
Effect of Dislocations on Nuclear Spin-Wave Relaxation in Antiferromagnet <i>M.A. Savchenko and V.P. Sobolev</i>	406
Nonlinear Magnetization and Parametric Resonance in Magnetic Semiconductors in High-Frequency Electric Field <i>A. Romanov and V. Tolstikhin</i>	407
Oscillations of Past-Threshold Susceptibility in Parametric Excitation of Electron Magnons in Antiferromagnetic CsMnF_3 <i>B.Ya. Kotyushanskii and L.A. Prozorova</i>	408
The Hard Excitation and the Phonon Generation under Parametric Pumping of Magnons in Antiferromagnets <i>V.S. Lutovinov and M.A. Savchenko</i>	409
Magnetoacoustic Solitons in Easy Plane Type Antiferromagnets <i>V.P. Preobrazhensky and M.A. Savchenko</i>	410
Relaxation of HRF Macroscopic Magnetization at Parametric Spin Wave Excitation in Ferrites <i>V.S. Zhitnyuk and G.A. Melkov</i>	411
On the Theory of High-Frequency Properties of Ferrimagnets <i>V.N. Krivoruchko and D.A. Yablonskii</i>	412
The Effect of Magnet Nonlinear Properties on Spin Wave Excitation <i>A.S. Bakaj and G.G. Sergeeva</i>	413
Resonant Enhancement of Polarization Echo in Paramagnetic Ferroelectrics <i>B.P. Smolyakov and B.Z. Malkin</i>	414
Superradiance in Paraelectric Systems <i>F.S. Vagapova, G.M. Ershov and R.V. Saburova</i>	415
The Theory of Defect Mechanism of Powder Echo <i>S.B. Leble</i>	416
Spin Echo of Coherence Signals of Optically Oriented Atoms <i>N.A. Dovator and R.A. Zhitnikov</i>	417
Effect of Magnetic Resonance of Optically Oriented Rb and He Atoms on Plasma Conductivity <i>A.I. Okunevich, S.P. Dmitriev and R.A. Zhitnikov</i>	418

Magneto-Optical Investigation and Double Optical-Magnetic Resonance in $A^{II}B^{VI}$ Semiconductors Doped with Iron Group Ions <i>A.V. Komarov, S.M. Ryabchenko and O.V. Terletskiy</i>	419
Conductivity Variation in Silicon with the Increased Dislocation Density under Spin Resonance Conditions <i>I. Kolomiets, V. Strikha and O. Tretyak</i>	420
On the Knight Shift Theory <i>S.A. Vorontsov, D.G. Dolgoplov and I.V. Svehkarev</i>	421
The Knight Shift in Liquid LiCd and LiIn Alloys <i>C. van der Marel, W. Hilbrants and W. van der Lugt</i>	422
Magnetic and Resonance Properties of Transition Metal Compounds and Alloys <i>V.P. Kalantaryan</i>	423
NMR Study of Intermetallic Compounds LuB <i>B. Perrin, P. Descouts and A. Dupanloup</i>	424
Magnetic Properties of the A 15 Compounds of Transition Metals with High T_c <i>B.N. Kodess and S.Ya. Rakhmanov</i>	425
Theory of NMR in Superconductors with Paramagnetic Impurities in a Singlet State <i>A.A. Kosov and S.L. Tsarevskii</i>	426
Nuclear Magnetic Resonance and Relaxation in $V_{2-x}Nb_xHf$, $V_{2-y}Nb_yZr$ Compounds <i>S.V. Verkhovskii, V.N. Kozhanov, A.P. Stepanov and E.P. Romanov</i>	427
Method of NMR in the Internal Field for Determining Radiation Effects in Ferromagnetic Materials <i>D. Aksenov, Sh. Ibragimov, V. Ivin, S. Pivovarov, L. Smikova and O. Stahov</i>	428
EPR Studies of Electron Properties and Indirect Exchange Interaction in the Pd-Gd-H System <i>I.A. Garifullin, N.M. Suleymanov and H. Drulis</i>	429
Dynamics of Interaction of Spin Systems with Different g-Factors <i>T.S. Altshuler, E.F. Kukovitskii and M.M. Zaripov</i>	430
Resonant Sound Attenuation in II-Type Superconductor <i>V.A. Zhikharev and B.P. Vodopianov</i>	431
Conduction Electron Spin Echo in Small Metallic Particles in Neutron-Irradiated LiF Crystals <i>F.G. Cherkasov, E.G. Kharakhash'yan, Y.I. Talanov, K.K. Shwartz and A.Ya. Vitols</i>	432
^{171}Yb and 1H NMR in Orthorhombic Ytterbium Dihydride <i>O.J. Zogal and B. Staliński</i>	433
Paramagnetic Relaxation of Conductivity Electrons due to Indirect Interaction via a Phonon Field <i>B.A. Timerkaev and B.M. Khabibullin</i>	434
A Comparison of SQUID NMR and Noise Thermometers <i>B. Ahola, G.J. Ehnholm, S.T. Islander and B. Rantala</i>	435
ESR Bottleneck of Er and Dy - Doped $GdAl_2$ <i>A. Chełkowski, K. Kaczmarska, D. Konopka, E. Kwapińska, E. Sierka-Talik and G. Wnętrzak</i>	436
Knight Shift and Nuclear Relaxation Times in Amorphous Ni-P and Cu-Ni-P Alloys <i>I. Bakonyi, K. Tompa, E. Tóth-Kádár and A. Lovas</i>	437
Spin-Lattice Relaxation in Intermetallics V_3Ga and V_3Si <i>A.P. Stepanov, A.V. Skripov and B.A. Aleksashin</i>	438
Proton Spin Lattice Relaxation in $DIP\Phi_4$ -TCNQ <i>J. Alizon, G. Berthet, J.P. Blanc, P. Durand, J. Gallice and C. Thibaud</i>	439
ESR and Spin Lattice Relaxation in $(CH_3)_4N MnCl_3$ (TMMC) <i>D. Bourdel, F. Ruiz, G. Ablart and S. Clement</i>	440
ESR Study of Organic Semiconductors Based on Salts of Tetracyanoquinodimethane <i>O.A. Yashchurginskaya, B.P. Berkovsky, V.M. Vozgennikov, M.P. Votinov, A.F. Dokukina, Z.A. Smirnova and V.A. Fomin</i>	441

Cross-Relaxation Processes in Nuclear Radiation Detected NMR <i>F. Fujara, H. Ackermann, W. Buttler, K. Doerr, D. Dubbers, H. Grupp, P. Heitjans, G. Kiese, A. Koerblein and H.-J. Stoeckmann</i>	442
Electron Spin Lattice Relaxation via Nuclear Tunneling Modes for Trapped Radicals in Glassy Matrices <i>M.K. Bowman, L. Kevan and J. Michalik</i>	443
NMR Spectroscopy of Tunneling in Solid SiH ₄ <i>P. Van Hecke, G. Janssens and L. Van Gerven</i>	444
Fluctuations and Spin Waves in Heavy Rare Earth Metals <i>V.F. Mesheryakov, M.A. Savchenko and A.V. Stephanovich</i>	445
Session D Liquid Crystals; NMR in Liquids; Molecular Dynamics in Liquids; Chemical Shifts and Structure; Complexes in Solutions; Polymers; EPR in Biology; Biopolymers; Spatial Structure of Biopolymers; Biopolymer Dynamics; Membranes; Micelles and Membranes; Spatial Structure of Biological Systems; New Techniques	
Proton Enhanced ¹³ C Resonance in Smectic Phases of Liquid Crystals <i>S. Grande, J. Schulz and A. Lösche</i>	446
Nuclear Spin Relaxation by Translational Diffusion in Thermotropic and Lyotropic Liquid Crystals with Layered Structure <i>S. Zumer and M. Vilfan</i>	447
Formation of Di-Tert-Butylnitroxide Radicals in Liquid Crystals Studied by EPR <i>G.B. Sergeev, V.A. Batyuk, M.B. Stepanov and T.I. Shabatina</i>	448
Proton and Deuteron Line Shape Study of Nematic Para-Azoxyanisole <i>J. Lewis, R.Y. Dong, E. Tomchuk, E. Bock and Chas. G. Wade</i>	449
Nuclear Spin-Lattice Relaxation Time in Solid and Nematic DB-PBB and DCl-PBB <i>I. Pöcsik and K. Tompa</i>	450
NMR Investigation of Reorientation of Smectic C Phase by Magnetic Field <i>Yu. Molchanov and P.M. Borodin</i>	451
Possible Distribution of Long Molecular Axes in Nematic Phase <i>I. Pöcsik</i>	452
Peculiarities of Nuclear Spin-Lattice Relaxation in Cholesteric Liquid Crystals <i>D.F. Baisa, A.I. Ovcharenko, A.S. Trofimov and E.D. Chesnokov</i>	453
Molecular Motions and Phase Transitions in Plastic Closocarboranes <i>A.L. Blumenfeld and E.I. Fedin</i>	454
Proton Spin Relaxation in the Liquid Crystal PAA <i>W. Wölfel and F. Noack</i>	455
High Resolution ¹³ C NMR of Nematic Phases of Liquid Crystals <i>R. Teeäär, I. Heinmaa and E. Lippmaa</i>	456
NMR Spectra of the Liquid-Crystalline State of Aromatic Polyamide Solution <i>A.I. Koltsov and A.V. Gribov</i>	457
Application of High Resolution NMR for the Study of Association Processes in the Plastic Crystals <i>L.L. Kimtys</i>	458
On Discrimination between Various Mechanisms of Orientational Relaxation in Liquids <i>A.I. Burshtein and S.I. Temkin</i>	459
Isotopic Effects in the ¹ H-, ¹³ C- and ¹⁷ O-Magnetic Resonance Spectra of Water Molecules in Acetone <i>U. Eichhoff, E.W. Hull and V.A. Scherbakov</i>	460
Molecular Motion and Intermolecular Interactions in Solutions of Aliphatic Alcohols, Fatty Acids and Ethers in SnCl ₄ <i>O.F. Bezrukov, A. Kuvatov and B.P. Nikolaev</i>	461
Stereospecificity of Selective Proton Relaxation Times in Rigid Organic Molecules <i>Yu.Yu. Samitov and R.H. Saddykov</i>	462

Spinecho Study of Selfdiffusion in Ethylene and Xenon at High Pressures <i>B. Arends, K.O. Prins and N.J. Trappeniers</i>	463
NMR Relaxation in Simple Liquids. The Relation between the Rotational and Translational Motion of Molecules <i>O.P. Revokatov</i>	464
NMR of Complexes of Nitroxide Radicals with Various Alcohols <i>E. Dally and W. Müller-Warmuth</i>	465
Nuclear Magnetic Relaxation in Viscous Liquids under High Pressures <i>V. Kicelnik and A. Toryanik</i>	466
NMR Relaxation Study of Microstructure of Electrolyte Solutions <i>V.I. Chizhik, V.I. Mikhailov and T.T. Ermolaeva</i>	467
Counterion NMR in Some Polyelectrolyte Systems <i>H. Gustavsson, B. Lindman and G. Siegel</i>	468
Quadrupolar Relaxation Mechanism of Ionic Nuclei ^7Li and ^{23}Na in Basic Solvents <i>A.I. Mishustin, A.I. Podkovyrin and Yu.M. Kessler</i>	469
Nuclear Magnetic Resonance Study of Molecular Interactions in Aqueous Solutions of Polyethylene Glycols <i>V.D. Zinchenko, V.V. Mank and V.A. Moiseyev</i>	470
Viscosity, Molecular Motion and the Structure of Aqueous Solutions of Nonelectrolytes <i>O.F. Bezrukov</i>	471
Electron Molecular Resonance in Liquids <i>V. Je. Pogorelov and G.I. Salivon</i>	472
The Spin-Lattice Relaxation of the Proton Taking Part in the Hydrogen Bond Formation <i>V.S. Kuts and V.D. Pokhodenko</i>	473
Relaxation of Alkali Metals Ions Nuclei in Water Solutions and Molecular Dynamics of Ions Nearest Environment <i>R.K. Mazitov</i>	474
Study of Molecular Motion in Liquids by the Multiplet Effect in the Spin-Lattice Carbon-13 Relaxation <i>V.A. Daragan and T.N. Khazanovich</i>	475
A New Approach to the Magnetic Relaxation of Spins in Liquids <i>R.M. Yulmetyev</i>	476
Nuclear Magnetic Resonance Study of Electrolyte Solutions in Mixtures of Heavy Water (D_2O) with Organic Solvents in Wide Range of Concentrations and Temperatures <i>V.V. Kuschenko, K.P. Mischenko and L.V. Litvinova</i>	477
^1H and ^{13}C NMR Measurements of Dimethylchloroformiminium Chloride and Dimethylformamide Hydrochloride <i>J. Paasivirta, I. Ahonen and H. Häkli</i>	478
Effect of the Spin-Orbital Interaction on the Nuclear Magnetic Shielding in Molecules <i>M.I. Volodicheva and T.K. Rebane</i>	479
A Study of Configuration of Cyclic Compounds with Low Conformational Energies from Temperature Dependences of Their ^1H NMR Spectra. Cyclo-tetrasilazanes <i>B.D. Lavrukhin, T.V. Strelkova, B.A. Astapov and A.A. Zhdanov</i>	480
Fourier Transform NMR Investigations of ^{13}C -Labelled Silyl and Stannyl Acetylenes <i>K. Kamińska-Trela</i>	481
Calculation of Nuclear Magnetic Shielding in Some Molecules <i>R.M. Aminova</i>	482
^{31}P Chemical Shift Anisotropy and Phosphorus Oxygen Bond <i>A.-R. Grimmer</i>	483
The Quantitative Estimation of the Geminal Interaction in Organic and Metalloorganic Molecules <i>V.P. Feshin, P.A. Nikitin, M.G. Voronkov, N.M. Vitkovskaya and V.B. Kobychhev</i>	484

Proton, Carbon and Cadmium NMR Measurements and Relativistic Calculation of the Cadmium-Carbon Coupling Tensor in Dimethyl Cadmium <i>K. Räsänen, J. Jokisaari, L. Lajunen, A. Passoja and P. Pyykkö</i>	485
NMR Investigation of Alkaline Derivatives of 1,3-Dicarbonyl Compounds <i>B. Ershov, A. Petrov and S. Esakov</i>	486
NMR ^1H and ^{13}C Studies of Protonation of Biologically Active Systems <i>G.G. Dvoryantseva, T.N. Ulyanova, Yu.N. Sheinker, P.V. Petrovsky and E.I. Fedin</i>	487
Determination of Proton Chemical Shifts by Analysis of Intensities of Low Resolved Multiplets in Off-Resonance Decoupled Carbon-13 Spectra <i>G. Großmann, D. Scheller and Th. Götz</i>	488
^1H , ^2D , ^{13}C NMR Investigation of the Potential Energy Surfaces and of the Proton Exchange Mechanisms through Hydrogen Bond <i>N.N. Shapet'ko, Yu.S. Bogachev, I.L. Radushnova, S.S. Berestova and D.N. Shigorin</i>	489
Correlations between Stretching Frequencies and Some NQR- or NMR-Quantities Depending on the Properties of Electron Shell around the Hydrogen Nucleus <i>I.F. Tupitsyn and N.N. Zatsepina</i>	490
Intermolecular Effects on the Mercury-199 Chemical Shifts in Organo-mercury Compounds <i>Yu.K. Grishin, Yu.A. Ustynyuk, Yu.A. Strelenko, O.K. Sokolikova and L.A. Margulis</i>	491
Selenium-77 NMR Spectroscopy. Some Aspects of Organoselenium Compounds Study <i>G.A. Kalabin and D.F. Kushnarev</i>	492
NMR and IR Study of the Conformations of N-Acetyl- α -Amino Acid Esters in Solution <i>V. Slet, I. Arro and T. Lumiste</i>	493
^{13}C NMR Spectra of Methylsubstituted 2- and 4-Azafluorenes <i>N.I. Golovtsov, V.P. Zvolinsky, Yu.N. Luzikov, A.A. Fomichev, V.F. Zakharov, V.G. Pleshakov and Yu.A. Ustynyuk</i>	494
Calculations of Isotopic Effects on Spin-Spin Coupling Constants $^1J_{\text{CH}}$ and ^{13}C Chemical Shifts in Methane, Ethylene and Acetylene <i>Kh. Orazberdiev, V.M. Mamayev and N.M. Sergeyev</i>	495
Conformational Analysis and Carbon-13 Spin-Lattice Relaxation in Menthol Isomers <i>T. Pekk</i>	496
^{13}C NMR Spectroscopy of Some Pyrimidine Nucleosides, 5'-AMP-di-Na-Salt, NAD^+ and NADH -di-Na-Salt. The Analysis of Coupling Constants $^3J^{13}\text{C}_6\text{-H}_1$, $^3J^{13}\text{C}_2\text{-H}_1$ and $^3J^{13}\text{C}_8\text{-H}_1$ and Rotary Isomerism about a Glycosidic Bond <i>A.F. Abramov</i>	497
Application of Nuclear Magnetic Resonance for the Cupriammonium Cellulose Complex <i>G.L. Dolgin, V.V. Kuschenko and A.A. Borichev</i>	498
^{199}Hg Chemical Shifts and Structure of Organomercury Compounds. Electronic and Spatial Effects in Alkyl, Allyl, Vinyl and Aromatic Mercury Derivatives <i>Yu.A. Ustynyuk, Yu.A. Strelenko, Yu.K. Grishin, D.N. Kravtsov and M.A. Voronov</i>	499
Mono- and Multifrequency Resonances ^1H , ^{13}C , ^{31}P and Lanthanide Shifts of Fourcoordinated Phosphorus Compounds <i>B.I. Ionin, V.I. Zakharov, G.A. Berkova, V.Ya. Komarov, Yu.F. Sigolaev and A.A. Petrov</i>	500
Solvent Dependence and the Nature of ^{13}C - ^{119}Sn Couplings in Methyltin Halides <i>V.S. Petrosyan, A.B. Permin, O.A. Reutov and J.D. Roberts</i>	501
The PMR and Magnetic Susceptibility Studies on Some Binuclear Oxygen-Bridged Iron(III) Complexes of Schiff Bases <i>B. Jeżowska-Trzebiatowska, A. Ożarowski and L. Latos-Grażyński</i>	502
Analysis of the Facilities of the NMR in Study of the Geometry of Paramagnetic Metal Complexes in Solutions <i>V.M. Nekipelov and K.I. Zamaraev</i>	503

Magnetic Anisotropy and Structure Study of Pseudotetrahedral Complexes of Co(II) and Ni(II) in Solution by NMR Method <i>A.V. Kessenikh, A. Ataev, O.V. Ivanov and V.M. Dziomko</i>	504
Spin Coupling Constants ^{27}Al - ^{14}N and ^{71}Ga - ^{14}N <i>V.P. Tarasov, S.P. Petrosyants, G.A. Kirakosyan and Yu.A. Buslaev</i>	505
EPR Studies of Unstable Complexes of Some Transition Metals <i>N.I. Zotov and Yu.V. Glazkov</i>	506
Dynamic Spin Decoupling ^1H - $\{^{31}\text{P}\}$ in the NMR Spectra of Cyclic Phosphorous Compounds <i>T.A. Zhablikova, E.I. Zoroatskaya and A.V. Il'yasov</i>	507
Spin Relaxation and Magnetic Shielding of ^{27}Al and ^{93}Nb Nuclei in $[\text{AlCl}_n\text{Br}_{4-n}]$, $[\text{NbCl}_n\text{Br}_{6-n}]$ Complexes <i>V.P. Tarasov, V.I. Privalov and Yu.A. Buslaev</i>	508
EPR-Study on Solute Segregations in Rapidly Frozen Ionic Solutions <i>N.W. Schmidt and K.G. Breitschwerdt</i>	509
^1H and ^{13}C NMR Study of Complex Formation between Aliphatic Oxyacids and III-VI Group Metals <i>B. Pestriakov, Y. Tselinsky, A. Olivson and M. Alla</i>	510
Molecular Dynamics of Polymers and Polymer Solutions as Studied by Spin Probe and Spin Label Methods: Evaluations of the Dipolar and Exchange Interactions, Influence of Pressure, Rotational Anisotropy <i>A.M. Wasserman, T.A. Alexandrova, A.A. Dadali and A.L. Kovarskii</i>	511
A Spin Probe Study of Cross-Linked Dextran Gels in Aqueous Media as a Model for Cell Walls <i>J.J. Windle and R. Scherrer</i>	512
Differential Spectra for Separating Different Types of Radical States <i>S. Pivovarov, A. Poliakov, N. Philippov and M. Bitenbaev</i>	513
EPR Studies on Gamma Irradiated Polypropylene <i>R. Bataian and M. Chipara</i>	514
NMR Relaxation in Crosslinked Polyetherurethane Elastomers <i>I.I. Nazarova, Yu.A. Ol'hkov and S.M. Baturin</i>	515
Characterization of Diene Elastomers Structure Details by Carbon NMR <i>A.S. Khatchaturov, E.L. Abramenko, V.A. Kormer and E.N. Kropatcheva</i>	516
ESR Study of Polymer Radicals. Influence of High Pressure and Crosslinking on Reactivity <i>F. Szöcs and K. Dušek</i>	517
Spin Label Study of Slow Molecular Rotations by Use of ESR Saturation Effects <i>V.A. Livshits and V.A. Kuznetsov</i>	518
Saturation Transfer Spectroscopy: A Progress Report on Theoretical Advances and Selected Biomedical Applications <i>L.R. Dalton, B.H. Robinson and L.A. Dalton</i>	519
ESR Studies of the Electron Transfer in P-450 Cytochrome Complexes with Stabilized Radicals <i>L. Weiner, S. Eremenko, V. Popova, R. Sagdeev, I. Tsyrllov and V. Lyakhovich</i>	520
Simple Analysis of ESR Spectra of Spin-Labelled Macromolecules with Account of Fast Anisotropic Rotation of a Spin-Label and Slow Diffusion Rotation of a Macromolecule <i>I.V. Dudich, V.P. Timofeev and M.V. Volkenstein</i>	521
ESR Studies of Conformational Changes in Cytochrome C <i>G.B. Postnikova, R.I. Artjukh, N.P. Gorbunova and M.V. Volkenstein</i>	522
Use of ESR and PMR Methods for the Study of Initial Photosynthesis Processes <i>Z.P. Gribova, N.I. Zacharova and L.I. Murza</i>	523
ESR Investigation of Radiation Action on the Normal Tissues and Tumors <i>G.T. Rikhiyeva, M.K. Pulatova, M.M. Turganov, N.P. Pal'mina and E.B. Burlakova</i>	524
The Structure of the Monomeric Dioxygen Adduct of Vitamin B $_{12}$. A Single Crystal EPR Study <i>A. Schweiger, E. Jörin and Hs.H. Günthard</i>	525

ESR and ENDOR Study of Free Radicals and Their Transformations in Irradiated Proteins and Nucleic Acids <i>M.K. Pulatova and Z.V. Kuropteva</i>	526
Origin and Properties of Radicals in the γ -Irradiated Biopolymers and Natural Complexes <i>V.A. Sharpatyi</i>	527
Carbon-13 Relaxation Parameters of Small Peptides <i>J.A. Ferretti, G.R. Marshall and R.K. Gupta</i>	528
NMR Study of the Nitrogenase Active Centres Stereometry <i>L.A. Syrtsova, T.N. Pisarskaya, V.P. Lezina, A.U. Stepanyants and G.I. Likhtenstein</i>	529
Proton Magnetic Relaxation for Animal Tissues Versus Time and Temperature <i>A. Bączkowski, C.J. Lewa and St. Łętowski</i>	530
A New Approach to the Determination of Local Physicochemical Properties of Biomacromolecules Solvate Surrounding Using Magnetic Relaxation Method <i>A.U. Stepanyants, V.P. Lezina, I.A. Magaji, N.L. Shimanovsky and G.I. Likhtenstein</i>	531
Determination of the Structure of Water in Collagen on the Basis of ^1H and ^2H NMR Data <i>S.P. Habuda and A.F. Rzhavin</i>	532
Proton Magnetic Resonance of Native Collagen: Structural Ordering of Water in Ontogenesis <i>V.N. Sheherbakov, S.P. Habuda and E.N. Mishin</i>	533
Proton Magnetic Relaxation Study of Some Pathological Process Development <i>L.I. Murza, A.I. Sergeev, A.M. Kulakova and V.I. Naidich</i>	534
The State of Water in Crystalline Lenses <i>P. Rácz, K. Tompa and I. Pócsik</i>	535
Study of the Water Selfdiffusion in the Model and Biological Objects by NMR Pulsed Field Gradient Method <i>V. Volkov, G.A. Velikanov, R.A. Dautov and N.N. Neprimerov</i>	536
Dependence of Cell Water T_1 on Culture Medium and on Virus-Induced Alterations <i>R. Basosi, E. Gaggelli, E. Tieszi and G. Valensin</i>	537
Nuclear Magnetism of Some Physiological Fluids in Low Fields <i>G.J. Béné, B. Borcard, E. Hiltbrand and P. Magnin</i>	538
Application of Difference Spectroscopy and Multiresonance Techniques for Signal Assignment in the ^1H NMR Spectra of Apamin <i>A.Z. Gurevich, V.A. Afanasiev, A.S. Arseniev and V.V. Okhanov</i>	539
Study of the Metabolism of Photosynthetic Bacteria <i>Chlorobium Thiosulfatophilum</i> by ^{13}C NMR <i>T. Paalme, R. Vilu, K. Vanatalu and A. Olivson</i>	540
Effect of Bicarbonate and Inhibitors on the ^{113}Cd NMR Signals in Zinc-Replaced Human Carbonic Anhydrase <i>J.L. Sudmeier, J.L. Evelhoch and U. Carlsson</i>	541
The Study of the Conformational Changes and Electron Transfer in Cytochrome <i>c</i> by High Resolution PMR-Spectroscopy <i>L.A. Sibeldina</i>	542
Two Dimensional Fourier Transform NMR Spectroscopy of Biologically Relevant Molecules <i>M.R. Willcott, D.F. Dyckes, B.J. Harina, R.R. Inners, L.F. Johnson, D.L. Dalrymple and W.W. Conover</i>	543
NMR Studies of Neurotoxin II Spatial Structure <i>V.S. Pashkov, A.S. Arseniev and V.I. Kondakov</i>	544
The Effect of Water on the Dynamic Behaviour of Phospholipid Membranes <i>K. Arnold, K. Gawrisch, F. Volke and G. Klose</i>	545
The Contribution of Relaxation Processes to the Compressibility of Proteins Obtained from Acoustical Spectroscopy Data <i>A.P. Sarvasayn and P. Hemmes</i>	546

Comparative Study of Spin-Echo Decays of Protons in Aqueous Solutions of Various Biopolymers <i>S.I. Aksyonov and A.V. Filatov</i>	547
Study of Internal Motions in Globular Proteins by Temperature and Frequencies Dependencies of Protein Protons T ₁ <i>A.V. Filatov, S.I. Aksyonov and L.A. Maltseva</i>	548
High-Field NMR of Membranes and Proteins <i>H.S. Gutowsky, S.Y. Kang and E. Oldfield</i>	549
Solid State NMR Studies of Lipid Bilayer Structure <i>R.A. Haberkorn, J. Herzfeld, R. Osredkar, R.J. Wittebort and R.G. Griffin</i>	550
Determination of Orientational Order in Bilayer Systems Using Moments of Deuterium Magnetic Resonance Spectra <i>M. Bloom, J.H. Davis and F.W. Dahlquist</i>	551
Study of Micelle Formation of Surfactants by Spin Probe Method <i>N. Kalibabchuk, A. Boldeschool and V. Gaevoy</i>	552
New Paramagnetic Shifts in the Aqueous Solution of Paramagnetic Salts <i>E.E. Zhev, L.M. Khalilov and J.B. Yasman</i>	553
Defect Diffusion Models for NMR Relaxation with Application to Alkane Phases <i>R. Kimmich and G. Voigt</i>	554
¹ H-NMR Study of Structural Changes in Membranes of <i>M. Lysodeikticus</i> , Induced by Gramicidin S <i>V.A. Eriomn, N.F. Sepetov, L.A. Sibeldina and D.N. Ostrovsky</i>	555
Study of the Phototransformation Products of Bacteriorhodopsin Membrane Complex by ESR Method <i>G.T. Rikhireva and M.K. Pulatova</i>	556
A Study of Photoreceptor Membrane Dynamic State Influence on Low Temperature Rhodopsin Photolysis by Free-Radical Label <i>V.G. Omelyanenko, A.I. Mikhailov, G.R. Kalamkarov, M.A. Ostrovsky and V. G. Goldansky</i>	557
Use of Nitroxide Biradicals for Studying Structure and Properties of Biological Membranes <i>S.A. Vlasova and A.I. Kokorin</i>	558
The Use of Spin-Spin Interactions in Investigation of Biological and Model Systems <i>G.I. Likhtenstein, A.V. Kulikov, A.I. Kotelnikov, A.V. Melnikov, S.N. Kuznetsov and V.R. Fogel</i>	559
Nuclear Magnetic Resonance of Tobacco Mosaic Virus <i>J.L. de Wit, N.C.M. Alma, T. Trienekens, M.A. Hemminga and T.J. Schaafsma</i>	560
Study of the Conformation of Some Europium - Nucleotide Complexes by Means of PMR and Luminescence Spectroscopy <i>V.F. Zolin and L.G. Koreneva</i>	561
The Investigation of the Possibilities for the Josephson Effect Application in Magnetic Resonance Experiments <i>R. Mutažija</i>	562
Selective Excitation Techniques in Fourier Transform NMR <i>G.A. Morris, R. Freeman and H.D.W. Hill</i>	563
Submillimetre Investigations of the Resonant Phenomena in Solids <i>N.A. Irişova, T.S. Mandelstam and V.N. Mursin</i>	564
Saturation Transfer Spectroscopy: A Progress Report on Instrumental Developments <i>L.R. Dalton, L.A. Dalton and K.D. Schmalbein</i>	565
Group Approach in Spin Dynamics <i>V. Sinivee</i>	566
Submillimetre Magnetic Resonance in Chemical Physics <i>Ya.S. Lebedev</i>	567
A Modified Pulsed Gradient Technique for Measuring Diffusion in Powdered Samples <i>I.J. Lowe and R.F. Karlicek, Jr.</i>	568

A Resonance-Type Quasi-Optical Polarimeter for the 150 GHz Magnetic Radio Spectrometer <i>A.A. Vertiy, Yu.P. Popkov and V.P. Shestopalov</i>	569
The Use of the Maser for Kinetics and Mechanism of Elementary Atomic-Molecular Chemical Processes Studies <i>E.B. Gordon and A.P. Perminov</i>	570
2 mm Wave Band ESR of RO ₂ Radicals <i>O.Ya. Grinberg, A.A. Dubinsky, A.P. Moravsky, V.F. Shuvalov and Ya.S. Lebedev</i>	571
Selective Excitation in FT NMR <i>J. Puskar and J. Past</i>	572
Time Resolved ESR Spectroscopy Using a Stopped-Flow Technique <i>G. Lassmann, N. Klimes and B. Ebert</i>	573
Application of Laser Polarimeter to Microwave Spectroscopy <i>E.B. Alexandrov and V.S. Zapasskii</i>	574
Nuclear Spin Polarimeter via the Lamb-Shift <i>Yu.A. Plis and L.M. Soroko</i>	575
The Dynamical Theory of a Nuclear Zeeman Maser <i>K.V. Vladimirovskii and A.A. Norvaishas</i>	576
Regenerative High Resolution NMR Spectroscopy <i>Yu.S. Konstantinov, A.M. Smirnov and S.D. Varlamov</i>	577
Transient EPR Signals in Solving Some Problems of Separating Paramagnetic Centers <i>J. Ryabikin, B. Alimbek, S. Pivovarov and A. Poliakov</i>	578
Transient Nutations in Heteronuclear Spin Systems <i>A.J. Mamykin</i>	579
Phase Shifter and Amplitude Detector for Pulsed NMR Receivers <i>V. Mihele and B. Ianculovici</i>	580
The Usage of NMR for Measurements of Physical Quantities <i>S.A. Spektor</i>	581
Laser Properties for Laser Magnetic Resonance Spectrometer Sensitivity Improvement <i>Yu.M. Gershenzon and B.L. Livshitz</i>	582
Conversion of an E-3 ESR Spectrometer to Detect the 2nd, 3rd, and 4th Harmonic of Absorption <i>D. Schwarz and N. Klimes</i>	583
Multiple-Resonance Transitions in NMR <i>E. Lysenko and P. Cheremnykh</i>	584
The Radiofrequency Coil Design and the Signal Intensity for Continuous-Wave NMR and NQR Spectrometers <i>J. Lužnik and Z. Trontelj</i>	585
Investigation of Oscillation Processes in Electron Plasma by ESR Method <i>A.N. Katyshev</i>	586
Dynamics of the Nuclear Spin System with the Radiofrequency Locking Field <i>A.A. Lundin and V.E. Zobov</i>	587