

4. EXPERIMENTAL REPORTS

4.1. CONDENSED MATTER PHYSICS

Diffraction

Long Scale Phase Separation Versus Homogeneous Magnetic State in $(\text{La}_{1-y}\text{Pr}_y)_{0.7}\text{Ca}_{0.3}\text{MnO}_3$
V.Pomjakushin, A.Balagurov, D.Sheptyakov, V.Aksenov, P.Fischer, L.Keller, O.Gorbenko, A.Kaul, N.Babushkina

Effect of Partial $^{16}\text{O} \rightarrow ^{18}\text{O}$ Substitution on the Magnetic Structure of $(\text{La}_{0.25}\text{Pr}_{0.75})_{0.7}\text{Ca}_{0.3}\text{MnO}_3$
D.V.Sheptyakov, V.Yu.Pomjakushin, V.L.Aksenov, A.M.Balagurov, N.A.Babushkina, O.Yu.Gorbenko, A.R.Kaul

X-Ray and Neutron Diffraction Studies of a New Aurivillius Phase $\text{Bi}_{2.53}\text{Li}_{0.29}\text{Nb}_2\text{O}_9$
A.M.Balagurov, A.I.Beskrovniy, S.G.Vasilovsky, L.S.Smirnov, M.Sarrion, L.Mestres, M.Herraiz

Peculiarities of Incommensurate Phase in Ferroelectric-Semiconductor TlInS_2
A.I.Beskrovnyi, B.R.Gadjiev, N.Yamamoto, N.Mamedov, S.Iada, H.Uchiki, S.Kashida

Neutron Diffraction Study of the Strain/Stress Behaviour on Dolomite Rock
Ch.Scheffzuk, W.Walther, A.Frischbutter, R.A.Zhukov

Texture - an Indicator of Rock Metamorphism and Deformation Processes in the Continental Crust
A.N.Nikitin, T.I.Ivankina, N.V.Zamyatina, V.I.Kazansky, K.V.Lobanov, A.V.Zharikov

Structural Study of Ternary Mercury Chalcogenide Systems $\text{HgSe}_{1-x}\text{S}_x$ ($x=0.3, 0.5, 0.6$) under High Pressure
V.I.Voronin, V.P.Glazkov, D.P.Kozlenko, S.V.Tikhomirov, B.N.Savenko, I.F.Berger, V.V.Shchennikov

Fullerene Molecule Strain in RbC_{60}
V.L.Aksenov, Yu.A.Ossipyan, L.Forro, S.Khasanov, V.V.Chernyshev, V.S.Shakhmatov

Symmetry Groups of Carbon Nanotubes
V.L.Aksenov, Yu.A.Ossipyan, V.S.Shakhmatov

Fourier Stress Diffractometer (FSD): First Results
G.D.Bokuchava, V.L.Aksenov, A.M.Balagurov, E.S.Kuzmin, A.V.Tamonov, V.V.Zhuk, V.V.Zhuravlev, V.A.Trounov, V.A.Kudrjashev, A.P.Bulkin

Effect Anisotropic Thermal Expansion on the Physical Weathering of Marbles
K.Ullemeyer, S.Siegesmund, T.Weiss, E.K.Tschegg

Small-Angle Scattering

Influence of Particle Concentration on Ferrofluids Microstructure Studies by SANS
M.V.Avdeev, Maria Balasoiu, Doina Bica, L.Rosta, G.Torok, L.Vekas

Small-Angle Neutron Scattering from Tetradecyltrimethylammonium Bromide in NaBr Aqueous Solutions
G.Eckold, N.Gorski

Structural Characterization of Unilamellar Lipid Vesicles with Anchored Alkylglycosides at High Water Excess for Studying Cell Recognition Processes
P.Jorchel, J.Gorshkova, G.Klose, H.Schmiedel

Low Energy Excitations in Solid State Electrolyte Cu_{2-x}Se

N.N.Bickulova, S.Danilkin, V.A.Semenov, A.Skomorokhov, Z.A.Jagofarova, E.L.Jadrowski

Investigations of Mechanism of Membrane Proteins Crystallization in Lipidic Cubic Phase

G.Bobarykina, R.Efremov, V.Gordeliy, A.Islamov, A.Kuklin, G.Bueldt

The Study of the Unbinding of Membranes by SANS

V.Gordeliy, U.Gorshkova, A.Islamov, V.Haramus

Water Moderator of a Reactor IBR-2 with a Canyon on a Lateral Surface. A Design and Physical Parameters

A.A.Beliakov, V.I.Bodnarchuk, D.A.Korneev, V.F.Peresedov, E.P.Shabalin, S.P.Yaradaikin

DMPC Membrane Swelling by Nonionic Surfactant C_{12}E_8 : X-Ray Diffraction Study

M.A.Kiselev, D.Lombardo, P.Lesieur

Structure Factor of DMPC Unilamellar Vesicles: SAXS Study at Synchrotron

M.A.Kiselev, D.Lombardo, A.M.Kisselev, P.Lesieur

Neutron Optics

Neutron Wave Channeling in the Structure $\text{Cu}(30\text{nm})/\text{Ti}(150\text{nm})/\text{Cu}(100\text{nm})/\text{glass}$

V.L.Aksenov, Yu.V.Nikitenko, A.V.Petrenko, V.V.Proglyado, F.Radu, V.G.Syromyatnikov

Neutron Spatial Beam-Splitting and Polarization Analysis in Reflectometry

V.L.Aksenov, S.V.Kozhevnikov, Yu.V.Nikitenko

RBS Investigation of Multilayer Structures

A.P.Kobzev, A.Z.Kiss, A.Simon

Inelastic Scattering

Surface Excitations in Thin Helium Film in Silica Aerogels

I.V.Bogoyavlenskii, A.V.Puchkov, H.J.Lauter, A.Skomorokhov

Structural and Magnetic Phase Transitions in $\text{Rb}_{1-x}(\text{NH}_4)_x\text{MnF}_3$ Provsites ($0.75 \leq x \leq 1$)

I.Natkaniec, J.Rubin, L.Smirnov

Phonons in Coarse Grained and Plastically Deformed Vanadium

S.Danilkin, M.Jung, H.Wipf

Quasielastic Scattering Investigation of Liquid Phosphorus Oxychloride POCl_3

A.G.Novikov, O.V.Sobolev

Inelastic Neutron Scattering and Hydration Kinetics in Aqueous Solutions

A.G.Novikov, M.N.Rodnikova, O.V.Sobolev

The Effect of Pressure on Hydrogen Tunneling in $\alpha\text{-Mn}$

V.E.Antonov, V.P.Glazkov, D.P.Kozlenko, B.N.Savenko, V.A.Somenkov, V.K.Fedotov

Neutron Diffraction Study of Pyridinium Perrhenate at Ambient and High Pressures

L.Bobrowicz-Sarga, J.Wasicki, A.I.Beskrovnyi, P.Czarnecki, I.Natkaniec, W.Szczepanski

Isotopic Effects on Dynamics of Crystalline and Vitreous Methanol
I.Natkaniec, K.Holderna-Natkaniec, K.Parlinski

Computer Simulation and Neutron Scattering Investigation of Dynamics of Urea: $\text{CO}(\text{NH}_2)_2$ and $\text{CO}(\text{ND}_2)_2$
I.Natkaniec, K.Parlinski, K.Holderna-Natkaniec, J.Mayer

4.2. NEUTRON NUCLEAR PHYSICS

Fundamental Properties of the Neutron

Investigation of the Neutron-Electron Interaction
E.L.Enik, L.V.Mitsyna, V.G.Nikolenko, S.S.Parzhitskii, A.B.Popov, G.S.Samosvat, R.V.Khariuzov

Investigation of Interference Minima near s-Wave Resonances of ^{238}U
T.L.Enik, L.V.Mitsyna, G.S.Samosvat, V.V.Sinitsa

Fission

Parity Violation and Interference Effects in Angular Distributions of Fission Fragments
V.P.Alfimenkov, N.A.Bazhanov, L.Lason, Yu.D.Mareev, V.V.Novitskii, L.B.Pikelner, T.L.Pikelner, M.I.Tsulaia, A.N.Chernikov

Improving Explosive Nucleosynthesis Models via (n,α) Measurements
P.E.Koehler, Yu.M.Gledenov, J.Andrzejewski, K.H.Guber, S.Raman, T.Rauscher

Nuclear Structure

Level Density and Radiative Strength Functions of Dipole Transitions below B_{η} in $^{185,187}\text{W}$ and $^{191,193}\text{Os}$
V.A.Bondarenko, J.Honzanko, V.A.Khitrov, A.M.Sukhovej, I.Tomandl

Applied Research

Weekly Cycles of Element Pollutants in Air of the Greater Cairo Area (Egypt) Studied by Neutron Activation Analysis
M.V.Frontasyeva, A.B.Ramadan, T.Ye.Galinskaya

Study of Trace Elements in Annual Segments of Moss Biomonitors Using Epithermal Neutron Activation Analysis: Link with Atmospheric Aerosol
Ye.V.Yermakova, M.V.Frontasyeva, E.Steinnes, K.A.Rahn