

4. EXPERIMENTAL REPORTS

4.1. CONDENSED MATTER PHYSICS

Diffraction

Simultaneous Doping of A- and B-Sites of NdMnO₃ by Sr and Ru: Suppression of Metallic State and Appearance of Unusual “Ferromagnetic” Structure

A.M.Balagurov, S.N.Bushmeleva, V.Yu.Pomjakushin, D.V.Sheptyakov, V.A.Amelichev, O.Yu.Gorbenko, A.R.Kaul, E.A.Gan'shina

Comparative Study of the Magnetic Phase Diagram of (La_{1-y}Pr_y)_{0.7}Ca_{0.3}MnO₃ with Oxygen Isotopes ¹⁶O and ¹⁸O

A.M.Balagurov, V.Yu.Pomjakushin, D.V.Sheptyakov, N.A.Babushkina, O.Yu.Gorbenko, A.R.Kaul

Structural Study of Pressure-Induced Magnetic Phase Transitions In Manganites

Pr_{0.7}Ca_{0.3}Mn_{1-y}Fe_yO₃ (y = 0, 0.1)

D.P.Kozlenko, V.P.Glazkov, I.V.Medvedeva, B.N.Savenko, V.I.Voronin

Investigation of Non-Equilibrium Effects on Residual Stress State of Metallic Composites

J.Schreiber, V.Richter, K.Voigt, G.Bokuchava, A.Tamonov

Study of Residual Stresses in Bimetallic Adapter Steel-Zirconium

V.Sumin, A.Tamonov

Synthesis and examination of new phosphates of K₂LnZr(PO₄)₃ (Ln=Ce-Yb,Y)-type with langbeinite structure and Fe_{0.5}Nb_{1.5}(PO₄)₃ phosphate with kosnarite structure

I.G.Trubach, A.I. Orlova, A.K.Koryttseva, M.V.Zharinova, Ye.V.Lipatova, V.A.Orlova, A.I.Beskrovnyi, A.N. Lukin, V.S.Kurazhkovskaya

Neutron Diffraction Used for Strain Scattering across a Shock-Deformed Quartzite/Dunite Interface

K.Walther, A.Frischbutter, Ch. Scheffzük, T.Kenkmann

Anisotropy of Archean Rocks from the Kola Superdeep Borehole on the Basis of Texture Analysis by Neutron Diffraction

N.V.Zamyatina, T.I.Ivankina, A.N.Nikitin

Small-Angle Scattering

SANS Study of Molecular-Colloidal Solutions of C₆₀ Fullerenes in Water

M.V.Avdeev, V.L.Aksenov, G.V.Andrievsky, L.I.Derevyanchenko, V.K.Klochkov, A.A.Khokhryakov

From SANS Investigations of Mechanism of a Membrane Protein Crystallization to a Molecular Basis for Transcell Signalling

V.Gordeliy, R.Efremov, R.Moukhametzianov, G.Bobarykina, A.Islamov, A.Kuklin, J.Klare, M.Engelhard, G.Bueldt

SAXS Study of Trehalose Influence on the DMPC Vesicle Structure

M.A.Kiselev, I.V.Gapienko, J.Perez, C.Bourgau

Investigation of Structure of Elongation Factor eEF-1A of Rabbit Liver by Neutron Scattering and Microcalorimetry

I.Serdyuk, T.Budkevich, A.Timchenko, E.Tiktopulo, A.El'skaya, B.Negrutskii, V.Shalak, Z.Petrushenko, V.Aksenov, R.Willumeit, I.Kohlbrecher

Small-Angle Neutron Scattering Study of the Bilayer Thickness in Unilamellar DOPC Liposomes Prepared by the Cholote Dilution Method: *n*-Decane Effect
D.Uhríková, N.Kučerka, A.Islamov, A.Kuklin, P.Balgavý

Self-Assembly of Polyelectrolyte Rods in Polymer Gel and in Solution: Small-Angle Neutron Scattering Study
Yu.D.Zaroslov, V.I.Gordeliy, A.I.Kuklin, A.H.Islamov, O.E.Philippova, A.R.Khokhlov, G.Wegner

Inelastic Scattering

Structure and Possible Cluster Formation in Liquid Lead-Potassium Alloys
N.M.Blagoveshchenskii, Yu.V.Lisichkin, V.A.Morozov, A.G.Novikov, V.V.Savostin, A.L.Shimkevich

Structural Phase Transition and Lattice Dynamics of Solid Mesitylene
I.Natkaniec, K.Hołderna-Natkaniec

The Investigation of ammonium Ion Dynamics in $K_{1-x}(NH_4)_xBr$ Mixed Crystal
L.S.Smirnov, I.Natkaniec, V.Yu.Kazimirov, V.V.Dolbinina, L.A.Shuvalov

Neutron Optics

New Composite Materials: Magnetic Nanoparticles in Copolymer Films by Specular and off-Specular Neutron Scattering
V.Lauter-Pasyuk, H.J.Lauter, V.Aksenov, W.Petry, G.P.Gordeev, P.Müller-Buschbaum, B.P.Toperverg, A.Petrenko

4.2. NUCLEAR PHYSICS WITH NEUTRONS

Ultracold Neutrons

Experimental Observation of the UCN Focusing in Time
A.I.Frank, G.V.Kulin, A.N.Strepetov, P.Geltenbort

The Reason for Small Changes in Energy of Ultracold Neutrons (UCN) in Traps
E.V.Lychagin, D.G.Kartashov, A.Yu.Muzychka, V.V.Nesvizhevsky, G.V.Nekhaev, A.V.Strelkov

Parity Violation

Recent Results on the Measurements of the P-odd Correlations in the Capture of Slow Polarized Neutrons by 6Li and ${}^{10}B$
Yu.M.Gledenov, P.V.Sedyshev, V.A.Vesna, E.V.Shulgina, V.V.Nesvizhevsky, A.K.Petukhov, T.Soldner, O.Zimmer

Nuclear Spectroscopy

On the Reliability of the Model-Independent Extraction Results of the Level Density and Radiative Strength Functions from the $(n, 2\gamma)$ Reaction

A.M.Sukhovej, V.A.Khitrov

Applied Research

Study of Element Composition of *Arthrobacter Oxydans* by Epithermal Neutron Activation Analysis

M.V.Frontasyeva, S.S.Pavlov, S.F.Gundorina, L.M.Mosulishvili, Ye.I.Kirkesali, N.Ya.Tsibakhashvili, H.-Y.N.Holman

4.3. IBR-2 SPECTROMETERS COMPLEX AND COMPUTING INFRASTRUCTURE

Methodics

Detector System on the Basis of Multiwire Proportional Chambers

A.A.Bogdzal, A.V.Belushkin, V.V.Zhuravlev, F.V.Levchanovskii, E.I.Litvinenko, V.I.Prikhodko, V.N.Shvetsov

Modernization of Spectrometer Control Systems Based on VME-PC Adapters

A.S.Kirilov, E.I.Litvinenko, V.I.Prikhodko

Scintillation Detectors with Geometric Focusing for Diffractometry

E.S. Kuzmin