

V International Conference
“Condensed Matter and Low Temperature Physics 2025”
(CM<P 2025)
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The second part of the Special Issue dedicated to the 5th International Conference “Condensed Matter and Low Temperature Physics 2025” (CM<P 2025) contains papers that, due to their volume and number, could not be included in the first part. These papers were submitted by conference participants in such areas as modern methods of experimental research and the use of high-energy particle jets: Yu. V. Pustovit and M. O. Ohloblia “Semantic segmentation of ARPES spectra for electronic dispersion visualization” (Taras Shevchenko National University of Kyiv (Ukraine)), D. Gál *et al.* “Modification of electrophysical parameters of CuInP₂S₆ crystals by beta, gamma, and neutron irradiation” (HUN-REN Wigner Research Centre for Physics (Budapest, Hungary), University of Pécs (Hungary), Uzhhorod National University (Ukraine)), features of the properties

of semiconductor structures: J. Sh. Abdullayev *et al.* “Impact of incomplete ionization on the critical electric field of *p-n* junction structures based on Si and GaAs” (National Research University TIIAME, Department of Physics and Chemistry (Tashkent, Uzbekistan)), I. Boyko and J. Seti “Tunneling transport in semiconductor nanostructures considering the presence of a weak time-dependent electromagnetic field: Lewis–Riesenfeld approach” (Lviv, Ukraine), National Technical University (Ternopil, Ukraine)), M. Rudka “The role of donor-acceptor defect complexes in the recombination of non-equilibrium carriers in cadmium iodide” (Polytechnic National University (Lviv, Ukraine)), magnetic and optical properties of solids: A. Kravets *et al.* “Modifications of structure and magnetocrystalline anisotropy due to Fe deficiency in Ni-Zn spinel ferrite ceramics”

(Institute of Magnetism (Kyiv, Ukraine)), B. O. Seredyuk *et al.* “Dielectric properties of layer crystals and nanostructures based on them” (Institute of Mathematics and Applied Physics, Lviv Polytechnic National University (Ukraine)), I. Ovsienko *et al.* “Magnetic and magnetotransport properties of carbon nanotubes modified with cobalt” (National University of Kyiv, Departments of Physics (Ukraine), Department of Physics, LUT University (Lappeenranta, Finland), ILTPE (Kharkiv, Ukraine)), quantum systems: A. Sokolovsky and S. Lyagushyn “Dynamics of small fluctuations in Boltzmann kinetics” (Dnipro National University (Ukraine)), biotechnology: R. Terekhov *et al.* “Increasing the sensitivity of a surface plasmon resonance sensor using Ti_3C_2 MXene” (Institute of Radiophysics and Electronics (Kharkiv, Ukraine)), features of solid solutions and surface treatment of solids: E. I. Get'man and S. V. Radio “Prediction of the limits of isomorphous substitutions of strontium or barium by sodium and actinides for their immobilization in molybdates $M_{1-x}(Na_{0.5}An_{0.5})_xMoO_4$ ($M = Sr$ or Ba) with a scheelite-type structure” (Donetsk National University, (Vinnytsia, Ukraine)), O. V. Khomenko *et al.* “Formation of inhomogeneous spatial structures in the boundary near-surface layer of ice” (Sumy State University (Ukraine), Peter Grünberg Institut-1, Forschungszentrum-Jülich (Jülich, Ger-

many)), O. Chugai *et al.* “Effect of electromagnetic radiation of spark discharge on dielectric properties of $Cd_{1-x}Zn_xTe$ crystals in the low-frequency region” (National Aerospace University “Kharkiv Aviation Institute”, Kharkiv, Ukraine), electrophysical properties of thin films and nanocomposites: V. E. Shaternik *et al.* “Josephson junctions with semiconductor barriers doped by metal” (Institute for Metal Physics (Kyiv, Ukraine)), O. Yakovenko *et al.* “The temperature dependences of resistivity of spinel-nanocarbon-epoxy composites” (Taras Shevchenko National University (Kyiv, Ukraine)), as well as the properties of atomic and molecular solids: S. V. Gedeon *et al.* “Atomic structure calculations of singly ionized vanadium” (Department of Theoretical Physics, Uzhhorod National University (Ukraine)), V. Slynko *et al.* “Dynamic cluster magnetic subsystems in diluted magnetic semiconductor $Ge_{1-x-y}Sn_xMn_yTe$ ” (Chernivtsi Branch of Frantsevych Institute for Problems of Materials Science (Ukraine)).

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