## **List of projects in the competence of the PAC for Condensed Matter Physics according to the JINR Topical Plan for 2021**

## **Condensed Matter Physics, Radiation and Radiobiological Research (04)**

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| **№** | **Name of the project** | **Theme** | **Leader** | **Terms** |
| 1. | Development of an inelastic neutron scattering spectrometer in inverse geometry at the IBR 2 reactor (DINSS) | 1142 | D.M. Chudoba | 2021-2023 |
| 2. | Construction of a complex of cryogenic moderators at the IBR-2 facility | 1105 | K.A. Mukhin | 2014-2022 |
| 3. | Construction of a wide-aperture backscattering detector (BSD) for the HRFD diffractometer | 1143 | V.M. Milkov | 2021-2023 |
| 4. | Raman microspectroscopy in biomedical study (Biophotonics) | 1133 | G.M. Arzumanyan, N. Kucerka | 2021-2023 |
| 5. | Research on the biological effects of heavy charged particles with different energies | 1077 | E.A. Krasavin,А.N. Bugay | 2015-2023 |
| 6. | Research on cosmic matter on Earth and in nearby space; research on the biological and geochemical specifics of the early Earth | 1112 | E.A. Krasavin | 2013-2022 |
| 7. | Further development of methods, technologies, schedule modes and delivery of radiotherapy | 1132 | G.V. MitsynK.Sh. Voskanyan | 2017-2022 |
| 8. | RADIOGENE: Molecular genetics of radiation-induced changes at the gene, genome and transcriptome level in Drosophila melanogaster | 1132 | I.D. Alexandrov | 2017-2022 |
| 9. | Study of the radioprotective properties of the Damage supressor (Dsup) protein on a model organism D.melanogaster and human cell culture HEK293 | 1132 | E.V. Kravchenko | 2021-2022 |
| 10. | Novel semiconductor detectors for fundamental and applied research | 1126 | G.A. ShelkovDeputy:V.A. Rozhkov | 2015-2023 |
| 11. | Development of experimental techniques and applied research with slow monochromatic positron beams (PAS) | 1126 | A.G. KobetsK. SiemekScientific leaderI.N. Meshkov | 2016-2023 |

## **Educational Programme (06)**

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| **№** | **Name of the project** | **Theme** | **Leader** | **Terms** |
| 12. | Open information and educational environment for supporting fundamental and applied multidisciplinary research at JINR | 1139 | Yu.A. Panebrattsev | 2021-2023 |