

Curriculum Vitae

Fedor A. Danevich (Fedir Danevych)

Current Positions

Acting chief sci. researcher of the Lepton Physics Department,
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Personal data

Born on May 20, 1958, Novyi Bykiv, Ukraine.

Married to Tetiana Danevych (nee Spivak). We have three children and nine grandchildren.

Education

1975–1980: Kiev State University, Department of Experimental Nuclear Physics.
Degree: M.S. Diploma in experimental nuclear physics

1995: Institute for Nuclear Research, Ukraine. Advisor: Professor Yuri G. Zdesenko.
Dissertation: "The research of Double Beta Decay of ^{116}Cd with the help of the cadmium tungstate scintillators"
Degree: Kandydat nauk (equiv. PhD, Physics and Mathematics)

2006: Institute for Nuclear Research, Kiev, Ukraine. Dissertation: "Experimental research of double beta decay of atomic nuclei"
Degree: Doctor of Sciences (DrSc, Physics and Mathematics)

Professional Employment

1978–1980: Institute of Geochemistry and Geophysics of Minerals, Ukrainian Academy of Sciences, Kiev, Ukraine (technician, engineer)

1980–1982: Soviet Army (lieutenant-engineer, senior lieutenant-engineer)

1982–1985: Special Construction Technological Center, Institute for Nuclear Research, Ukrainian Academy of Sciences, Kiev, Ukraine (engineer, senior engineer)

1986–2004: Lepton Physics Department, Institute for Nuclear Research, National Academy of Sciences of Ukraine, Kiev, Ukraine (1986-1996 junior scientific researcher, 1996-1999 scientific researcher, 1999-2004 senior scientific researcher)

2004–2005: Lepton Physics Department, Institute for Nuclear Research, National Academy of Sciences of Ukraine, Kiev, Ukraine (acting head of the Department)

2005– 2022: Lepton Physics Department, Institute for Nuclear Research, National Academy of Sciences of Ukraine, Kiev, Ukraine (head of the Department)

2017-2018: Université Paris-Saclay, France, Grants program "Jean d'Alembert" ("senior researchers" scholarship)

2022 – till now: Lepton Physics Department, Institute for Nuclear Research, National Academy of Sciences of Ukraine, Kiev, Ukraine (deputy chief sci. researcher of the department)

2022 – till now: Assegno di Ricerca, INFN sez. Tor Vergata, Italy

Academic rank

2002 Senior scientific researcher (equiv. Associate professor)

2016 Professor

Membership

2006 – till now Scientific Council of the Institute for Nuclear Research

2007 – till now Council for PhD and Doctor's degrees of the Institute for Nuclear Research

2007 – till now Scientific Ethics Commission of the Institute for Nuclear Research

2007 – 2012 Scientific Council "Astroparticle Physics" of the National Academy of Sciences of Ukraine

2020-till now Commission for Universities evaluation of the Ministry Education and Sciences of Ukraine

2020-till now Expert group for evaluation of textbooks for high school of the Ministry Education and Sciences of Ukraine

2022-till now Member of the General Assembly of the Astroparticle Physics European Consortium

Teaching

- Assistance for Bachelor and M.S. diploma (1995, 2000–2004, 2006 – 2020), PhD theses supervision (2005–2023)
- Lectures in the Taras Shevchenko National University of Kyiv (Astroparticle physics, 2007 – 2010).
- Lectures in the frame of the Course of Nuclear and Subnuclear Physics, University of Insubria, Como, Italy, November 2010.
- Lectures in the Tor Vergata University (visiting professor, Rome, Italy): Underground technologies; Methods and technique of low counting experiments, Radioactivity, Low counting experimental techniques (March-May, October –December 2015)

PhD students

Denys Poda 2009, Ruslan Podviyanuk 2010, Sergiy Yurchenko 2011, S.S. Nagorny 2011, Dmitry Chernyak 2015, V.M. Mokina 2015, Dmytro Kasperovych 2019, Volodymyr Klavdiienko 2024, Mykola Zarytsky 2024

Awards

2007: C.D. Sinelnikov prize of the National Academy of Sciences of Ukraine for outstanding results in physics

2017: the State Prize of Ukraine in Science and Technology 2016 for the series of works "Properties of neutrino and weak interactions, search for effects beyond the Standard Model"

Referee in founding agencies

ANVUR, PRIN (Italy), Czech Science Foundation (Czech Republic), Ministry of Education and Sciences of Ukraine, National Academy of Sciences of Ukraine, Science and Technology Center in Ukraine

Referee in journals

Nuclear Instruments and Methods, JINST, IEEE Transactions in Nuclear Sciences, Optical Materials, Radiation Measurements, Optical Materials, Journal of Environmental Radioactivity, Applied Radiation and Isotopes, Mass Spectrometry Reviews, Frontiers, Journal of Crystal Growth, Materials Chemistry and Physics, Materials Research Bulletin, Physical Review & Research International, Solid State Sciences, Journal of Low Temperature Physics, Current Applied Physics, International Journal of Modern Physics, Ukrainian Journal of Physics, The Journal of Biological and Chemical Luminescence, Nuclear Physics and Atomic Energy, Journal of Non-Crystalline Solids, The Open Nuclear & Particle Physics Journal, Materials Letters, Tekhnologiya i Konstruirovaniye v Elektronnoy Apparature

Editorial board of the journals

Nuclear Physics and Atomic Energy, Functional Materials

Research Interests

Double beta decay, dark matter, solar axions, astrophysical neutrino, rare alpha and beta decays. development of low radioactive technique, R&D of scintillators for astroparticle physics, cryogenic scintillators.

International collaboration

- NEMO experiment (1992, 2005, Laboratoire de l'Accélérateur Linéaire, Orsay; 1993, Centre de Recherches Nucléaires, Strasbourg, France)
- Search for $\beta\beta$ processes in ^{106}Cd (1995, Max-Planck Institut für Kernphysik, Heidelberg, Germany)
- Search for $\beta\beta$ decay of cadmium and tungsten, search for α decay of natural tungsten, study of crystal scintillators (1997, 1999–2012, Università di Firenze and INFN, Italy).
- SuperNEMO collaboration (2005 – 2009), R&D of high sensitivity double beta experiment to search for neutrinoless double beta decay of ^{82}Se (^{48}Ca , ^{150}Nd)
- University of Oxford, UK (2006 – 2014), Development of scintillating bolometers for priority experiments in particle physics
- EURECA collaboration (2007 – 2014), European dark matter search with cryogenic detectors
- AMoRE collaboration (2009 – continuing), search for double β decay of ^{100}Mo with CaMoO_4 cryogenic scintillating bolometers
- Study of cryogenic scintillators for double beta decay in the Cryodetector Laboratory of the Department of Physics and Mathematics of the University of Insubria (2010, Como, Italy, supported by a fellowship of the Cariplo Foundation organized by the Landau Network-Centro Volta)
- Investigations of rare α decays and search for double β decay, in collaboration with the Institute for Reference Materials and Measurements of Joint Research Centre of the European Commission, Geel, Belgium (2010 – continuing).
- ISOTTA project (Advanced techniques for the production, purification and radio-purity analysis of isotopically enriched sources for double beta decay, 2011 – 2014).
- LUMINEU project (2012 – 2017) to develop high sensitivity experiment to search for $0\nu 2\beta$ decay of ^{100}Mo by using cryogenic ZnMoO_4 scintillating bolometers

- Collaboration with the DAMA group, search for 2β decay and solar axions, superheavy elements, study of rare β and α decay (2000 – continuing, Gran Sasso National Laboratory, INFN, Italy).
- CUPID-Mo collaboration for the construction of a ^{100}Mo CUPID demonstrator based on cryogenic lithium molybdate scintillating bolometers (2018 – continuing).
- CUPID collaboration, large scale cryogenic experiment to search for neutrinoless double beta decay of ^{100}Mo (2019 – continuing).
- CROSS collaboration aiming to develop a new method of particle discrimination of surface events with Li_2MoO_4 and TeO_2 bolometers for the CUPID project (2019 – continuing)
- BINGO collaboration aiming to develop active shield of low temperature bolometers for double beta decay experiments (2020 – continuing).
- RES-NOVA collaboration aiming to develop low-temperature bolometric set-up for astrophysical neutrino detection (2022 – continuing).

List of publications

Book

F.A. Danevich, V.V. Kobychhev, V.I. Tretyak, Search for effects beyond the Standard Model of particles in low counting experiments (chapter in the book: Dark matter: Observational manifestation and experimental searches), Akademperiodyka, Kyiv, Ukraine, 2015

Selected journals and proceedings publications

1. F.A. Danevich et al., Search for 2β decay of ^{116}Cd with the help of $^{116}\text{CdWO}_4$ scintillator. JETP Lett. 49 (1989) 476.
2. F.A. Danevich et al., The research of 2β decay of ^{116}Cd with enriched $^{116}\text{CdWO}_4$ crystal scintillators. Phys. Lett. B 344 (1995) 72.
3. D. Dassi et al., Two-neutrino double- β decay measurement of ^{100}Mo . Phys. Rev. D 51 (1995) 2090.
4. S.Ph. Burachas et al., Large volume CdWO_4 crystal scintillators. Nucl. Instr. Meth. A 369 (1996) 164.
5. A.Sh. Georgadze et al., Beta-decay of ^{113}Cd . Phys. At. Nucl. 59 (1996) 1.
6. F.A. Danevich et al., Investigation of $\beta^+\beta^+$ and β^+/EC decay of ^{106}Cd . Z. Physik A 355 (1996) 433.
7. T. Fazzini et al., Pulse-shape discrimination with CdWO_4 crystal scintillators. Nucl. Instr. Meth. A 410 (1998) 213.
8. F.A. Danevich et al., New results of ^{116}Cd double beta decay study with $^{116}\text{CdWO}_4$ scintillators. Phys. Rev. C 62 (2000) 045501.
9. G. Bellini, High sensitivity quest for Majorana neutrino mass with the BOREXINO counting test facility. Phys. Lett. B 493 (2000) 216.
10. G. Bellini et al., High sensitivity 2β decay study of ^{116}Cd and ^{100}Mo with the BOREXINO Counting Test Facility (CAMEO project). Eur. J. Phys. C 19 (2001) 43.
11. F.A. Danevich et al., Quest for double beta decay of ^{160}Gd and Ce isotopes. Nucl. Phys. A 694 (2001) 375.
12. Yu.G. Zdesenko et al., Has neutrinoless double β decay of ^{76}Ge been really observed? Phys. Lett. B 546 (2002) 206.

13. F.A. Danevich et al., α activity of natural tungsten isotopes. *Phys. Rev. C* 67 (2003) 014310.
14. F.A. Danevich et al., Two neutrino 2β decay of ^{116}Cd and new half-life limits on β decay of ^{180}W and ^{186}W . *Nucl. Phys. A* 717 (2003) 129.
15. P. Belli et al., Performance of a CeF_3 crystal scintillator and its application to the search for rare processes. *Nucl. Instr. Meth. A* 498 (2003) 352.
16. F.A. Danevich et al., Search for 2β decay of cadmium and tungsten isotopes: Final results of the Sotvina experiment. *Phys. Rev. C* 68 (2003) 035501.
17. Yu.G. Zdesenko et al., Sensitivity and discovery potential of the future 2β decay experiments. *J. Phys. G: Nucl. Part. Phys.* 30 (2004) 971.
18. Yu.G. Zdesenko, et al., CARVEL experiment with $^{48}\text{CaWO}_4$ crystal scintillators for the double β decay study of ^{48}Ca . *Astropart. Phys.* 23(2005)249-263.
19. V.I. Tretyak et al., On the possibility to search for 2β decay of initially unstable (α/β radioactive) nuclei. *Europhysics Letters* 69 (2005) 41.
20. Yu.G. Zdesenko et al., Scintillation properties and radioactive contamination of CaWO_4 crystal scintillators. *Nucl. Instr. Meth. A* 538 (2005) 657.
21. F.A. Danevich et al., YAG:Nd crystals as possible detector to search for 2β and α decay of neodymium. *Nucl. Instr. Meth. A* 541 (2005)583.
22. F.A. Danevich et al., ZnWO_4 crystals as detectors for 2β decay and dark matter experiments. *Nucl. Instr. Meth. A* 544 (2005) 553.
23. F.A. Danevich et al., Application of PbWO_4 crystal scintillators in experiment to search for 2β decay of ^{116}Cd . *Nucl. Instr. Meth. A.* 556 (2006) 259.
24. L. Bardelli et al., Further study of CdWO_4 crystal scintillators as detectors for high sensitivity 2β experiments: Scintillation properties and pulse-shape discrimination. *Nucl. Instr. Meth. A* 569 (2006) 743.
25. P. Belli et al., Search for α decay of natural Europium. *Nucl. Phys. A* 789 (2007) 15.
26. P. Belli et al., Investigation of β decay of ^{113}Cd . *Phys. Rev. C* 76 (2007) 064603, 10 p.
27. L. Bardelli et al., Pulse-shape discrimination with PbWO_4 crystal scintillators. *Nucl. Instr. Meth. A* 584 (2008) 129.
28. A.N. Annenkov et al., Development of CaMoO_4 crystal scintillators for double beta decay experiment with ^{100}Mo . *Nucl. Instr. Meth. A* 584 (2008) 334.
29. P. Belli et al., ^7Li solar axions: Preliminary results and feasibility studies. *Nucl. Phys. A* 806 (2008) 388.
30. P. Belli et al., Search for 2β processes in ^{64}Zn with the help of ZnWO_4 crystal scintillator. *Phys. Lett. B* 658 (2008) 193.
31. P. Belli et al., Search for double- β decay processes in ^{108}Cd and ^{114}Cd with the help of the low-background CdWO_4 crystal scintillator. *Eur. Phys. J. A* 36 (2008) 167.
32. H. Kraus et al., ZnWO_4 scintillators for cryogenic dark matter experiments. *Nucl. Instr. Meth. A* 600 (2009) 594.
33. P. Belli et al., Search for double beta decay of zinc and tungsten with low-background ZnWO_4 crystal scintillators. *Nucl. Phys. A* 826 (2009) 256.
34. F.A. Danevich et al., Ancient Greek lead findings in Ukraine. *Nucl. Instr. Meth. A* 603 (2009) 328.
35. L.L. Nagornaya et al., Large volume ZnWO_4 crystal scintillators with excellent energy resolution and low background. *IEEE Trans. Nucl. Sci.* 56 (2009) 994.

36. O.P. Barinova et al., Intrinsic radiopurity of a Li_2MoO_4 crystal. Nucl. Instr. Meth. A 607 (2009) 573.
37. F.A. Danevich et al., MgWO_4 – A new crystal scintillator. Nucl. Instr. Meth. A 608 (2009) 107.
38. L.L. Nagornaya et al., Tungstate and Molybdate Scintillators to Search for Dark Matter and Double Beta Decay. IEEE Trans. Nucl. Sci. 56 (2009) 2513.
39. P. Belli et al., Search for double- β decays of ^{96}Ru and ^{104}Ru by ultra-low background HPGe γ spectrometry. Eur. Phys. J. A 42 (2009) 171.
40. O.P. Barinova et al., First test of Li_2MoO_4 crystal as a cryogenic scintillating bolometer. Nucl. Instr. Meth. A 613 (2010) 54.
41. P. Belli et al., Development of enriched $^{106}\text{CdWO}_4$ crystal scintillators to search for double β decay processes in ^{106}Cd , Nucl. Instr. Meth. A 615 (2010) 301.
42. P. Belli et al., New observation of $2\beta 2\nu$ decay of ^{100}Mo to the 0_1^+ level of ^{100}Ru in the ARMONIA experiment. Nucl. Phys. A 846 (2010) 143.
43. L. Gironi et al., Performance of ZnMoO_4 crystal as cryogenic scintillating bolometer to search for double beta decay of molybdenum, J. Instr. 5 (2010) 11007.
44. P. Belli et al., Search for 2β decay of cerium isotopes with CeCl_3 scintillator, J. Phys. G: Nucl. Part. Phys. 38 (2011) 015103.
45. P. Belli et al., Radioactive contamination of ZnWO_4 crystal scintillators, Nucl. Instr. Meth. A 626-627 (2011) 31.
46. F.A. Danevich et al., Effect of recrystallisation on the radioactive contamination of CaWO_4 crystal scintillators, Nucl. Instr. Meth. A 631 (2011) 44.
47. S.J. Lee et al., The development of a cryogenic detector with CaMoO_4 crystals for neutrinoless double beta decay search, Astropart. Phys. 34 (2011) 732.
48. P. Belli et al., First observation of α decay of ^{190}Pt to the first excited level ($E_{\text{exc}}=137.2$ keV) of ^{186}Os , Phys. Rev. C 83 (2011) 034603.
49. P. Belli et al., First search for double β decay of dysprosium, Nucl. Phys. A 859 (2011) 126.
50. P. Belli et al., First search for double β decay of platinum by ultra-low background HP Ge γ spectrometry, Eur. Phys. J. A 47 (2011) 91.
51. A.S. Barabash et al., Low background detector with enriched $^{116}\text{CdWO}_4$ crystal scintillators to search for double β decay of ^{116}Cd , JINST 06 (2011) P08011.
52. P. Belli et al., Final results of an experiment to search for 2β processes in zinc and tungsten with the help of radiopure ZnWO_4 crystal scintillators, J. Phys. G: Nucl. Part. Phys. 38 (2011) 115107.
53. P. Belli et al., Radioactive contamination of $\text{SrI}_2(\text{Eu})$ crystal scintillator, Nucl. Instr. Meth. A 670 (2012) 10.
54. J.W. Beeman et al., A next generation neutrinoless double beta decay experiment based on ZnMoO_4 scintillating bolometers, Phys. Lett. B 710 (2012) 318.
55. P. Belli et al., Search for ^7Li solar axions using resonant absorption in LiF crystal: Final results. Phys. Lett. B 711 (2012) 41.
56. P. Belli et al., Search for double- β decay processes in ^{106}Cd with the help of a $^{106}\text{CdWO}_4$ crystal scintillator, Phys. Rev. C 85 (2012) 044610.
57. D.M. Chernyak et al., Random coincidence of $2\nu 2\beta$ decay events as a background source in bolometric $0\nu 2\beta$ decay experiments, Eur. Phys. J. C 72 (2012) 1989.
58. F.A. Danevich, Development of crystal scintillators from enriched isotopes for double β decay experiments, IEEE Trans. Nucl. Sci. 59 (2012) 2207.

59. P.G. Bizzeti et al., Response of CdWO₄ crystal scintillator for few MeV ions and low energy electrons. Nucl. Instr. Meth. A 696 (2012) 144.
60. F.A. Danevich et al., Search for α decay of ¹⁵¹Eu to the first excited level of ¹⁴⁷Pm using underground γ -ray spectrometry. Eur. Phys. J. A 48 (2012) 157.
61. P. Belli et al., Radioactive contamination of ⁷LiI(Eu) crystal scintillators. Nucl. Instr. Meth. A 704 (2013) 40.
62. F. Cappella et al., On the potentiality of the ZnWO₄ anisotropic detectors to measure the directionality of dark matter. Eur. Phys. J. C 73 (2013) 2276.
63. P. Belli et al., First search for double- β decay of ¹⁸⁴Os and ¹⁹²Os, Eur. Phys. J. A 49 (2013) 24.
64. P. Belli et al., Search for 2 β decays of ⁹⁶Ru and ¹⁰⁴Ru by ultra-low background HPGe γ spectrometry at LNGS: final results, Phys. Rev. C 87 (2013) 034607.
65. L. Cardani et al., Development of a Li₂MoO₄ scintillating bolometer for low background physics. JINST 8 (2013) P10002.
66. D.M. Chernyak et al., Optical, luminescence and thermal properties of radiopure ZnMoO₄ crystals used in scintillating bolometers for double beta decay search. Nucl. Instr. Meth. A 729 (2013) 856.
67. F.A. Danevich et al., Optimization of light collection from crystal scintillators for cryogenic experiments. Nucl. Instr. Meth. A 741 (2014) 41.
68. D.M. Chernyak et al., Rejection of randomly coinciding events in ZnMoO₄ scintillating bolometers. Eur. Phys. J. C 74 (2014) 2913.
69. L. Berge et al., Purification of molybdenum, growth and characterization of medium volume ZnMoO₄ crystals for the LUMINEU program. JINST 9 (2014) P06004.
70. F.A. Danevich et al., Impact of geometry on light collection efficiency of scintillation detectors for cryogenic rare event searches. Nucl. Instr. Meth. B 336(2014)26.
71. P. Belli et al., Investigation of rare nuclear decays with BaF₂ crystal scintillator contaminated by radium. Eur. Phys. J. A 50(2014)134.
72. P. Belli et al., Search for double beta decay of ¹³⁶Ce and ¹³⁸Ce with HPGe gamma detector. Nucl. Phys. A 930(2014)195.
73. A.S. Barabash et al., Enriched Zn¹⁰⁰MoO₄ scintillating bolometers to search for 0 ν 2 β decay of ¹⁰⁰Mo with the LUMINEU experiment. Eur. Phys. J. C 74 (2014) 3133.
74. G.B. Kim et al., A CaMoO₄ crystal low temperature detector for the AMoRE neutrinoless double beta decay search, Adv. High En. Physics (2015) 817530, 8 p.
75. E. Armengaud et al., Development and underground test of radiopure ZnMoO₄ scintillating bolometers for the LUMINEU 0 ν 2 β project, JINST 10 (2015) P05007, 19 p.
76. D.M. Chernyak et al., Effect of tungsten doping on ZnMoO₄ scintillating bolometer performance, Optical Materials 49 (2015) 67-74.
77. T.B. Bekker et al., Aboveground test of an advanced Li₂MoO₄ scintillating bolometer to search for neutrinoless double beta decay of ¹⁰⁰Mo, Astroparticle Physics 72 (2016) 38-45.
78. P. Belli et al., Search for 2 β decay of ¹⁰⁶Cd with an enriched ¹⁰⁶CdWO₄ crystal scintillator in coincidence with four HPGe detectors, Phys. Rev. C 93 (2016) 045502.
79. A.S. Barabash et al., Improvement of radiopurity level of enriched ¹¹⁶CdWO₄ and ZnWO₄ crystal scintillators by recrystallization, Nucl. Instrum. Meth. A 833 (2016) 77-81.
80. A.S. Barabash et al., First test of an enriched ¹¹⁶CdWO₄ scintillating bolometer for neutrinoless double-beta-decay searches, Eur. Phys. J. C 76 (2016) 487.

81. V.Ya. Degoda et al., Long time phosphorescence in ZnMoO₄ crystals, *J. Lumin.* 181 (2017) 269-276.
82. V.Ya. Degoda et al., Thermally stimulated luminescence in ZnMoO₄ crystals, *J. Lumin.* 183 (2017) 424-432.
83. D.M. Chernyak et al., Rejection of randomly coinciding events in Li₂¹⁰⁰MoO₄ scintillating bolometers using light detectors based on the Neganov-Luke effect, *Eur. Phys. J C* 77 (2017) 3.
84. V.Ya. Degoda et al., Temperature dependence of luminescence intensity in ZnMoO₄ crystals *Materials Research Bulletin* 89 (2017) 139-149.
85. P.Belli et al., New limits on 2ε , $\varepsilon\beta^+$ and $2\beta^+$ decay of ¹³⁶Ce and ¹³⁸Ce with deeply purified cerium sample, *Eur. Phys. J. A* 53 (2017) 172, 8 p.
86. F.A. Danevich, Radiopure tungstate and molybdate crystal scintillators for double beta decay experiments, *Int. J Mod. Phys. A* 32 (2017) 1743008.
87. E. Armengaud et al., Development of ¹⁰⁰Mo-containing scintillating bolometers for a high-sensitivity neutrinoless double-beta decay search, *Eur. Phys. J. C* 77 (2017) 785.
88. F.A. Danevich et al., Growth and characterization of a Li₂Mg₂(MoO₄)₃ scintillating bolometer, *Nucl. Instr. Meth. A* 889 (2018) 89-96.
89. A. Giuliani, F.A. Danevich, V.I. Tretyak, A multi-isotope $0\nu\beta\beta$ bolometric experiment, *Eur. Phys. J. C* 78 (2018) 272.
90. P. Belli et al., First search for 2ε and $\varepsilon\beta^+$ decay of ¹⁶²Er and new limit on 2β decay of ¹⁷⁰Er to the first excited level of ¹⁷⁰Yb, *J. Phys. G* 45 (2018) 095101.
91. A.S. Barabash et al., Final results of the Aurora experiment to study 2β decay of ¹¹⁶Cd with enriched ¹¹⁶CdWO₄ crystal scintillators, *Phys. Rev. D* 98 (2018) 092007.
92. P. Belli et al., New development of radiopure ZnWO₄ crystal scintillators, *Nucl. Inst. Meth. A* 935 (2019) 89.
93. P. Belli et al., First search for 2ε and $\varepsilon\beta^+$ processes in ¹⁶⁸Yb, *Nucl. Phys. A* 990 (2019) 64.
94. P. Belli et al., Experimental searches for rare alpha and beta decays, *Eur. Phys. J. A* 55 (2019) 140 (review).
95. V. Alenkov et al., First results from the AMoRE-Pilot neutrinoless double beta decay experiment, *Eur. Phys. J. C* 79 (2019) 791.
96. P. Belli et al., First direct search for 2ε and $\varepsilon\beta^+$ decay of ¹⁴⁴Sm and $2\beta^-$ decay of ¹⁵⁴Sm, *Eur. Phys. J. C* 55 (2019) 201.
97. A. Aliane et al., First test of a Li₂WO₄(Mo) bolometric detector for the measurement of coherent neutrino-nucleus scattering, *Nucl. Instr. Meth. A* 949 (2020) 162784
98. F.A. Danevich et al., First search for α decays of naturally occurring Hf nuclides with emission of γ quanta, *Eur. Phys. J. A* 56 (2020) 5
99. I.C. Bandac et al., The $0\nu 2\beta$ -decay CROSS experiment: preliminary results and prospects, *JHEP* 01 (2020) 018
100. E. Armengaud et al., The CUPID-Mo experiment for neutrinoless double-beta decay: performance and prospects, *Eur. Phys. J. C* 80 (2020) 44
101. F.A. Danevich et al., First search for 2ε and $\varepsilon\beta^+$ decay of ¹⁷⁴Hf, *Nucl. Phys. A* 996 (2020) 121703
102. V.Ya. Degoda et al., Luminescence of Li₂W_{1-0.05}Mo_{0.05}O₄ crystal under X-ray excitation, *Optik* 206 (2020) 164273
103. E. Armengaud et al., Precise measurement of $2\nu\beta\beta$ decay of ¹⁰⁰Mo with the CUPID-Mo detection technology, *Eur. Phys. J. C* 80 (2020) 674

104. P. Belli et al., Search for α decay of naturally occurring osmium nuclides accompanied by γ quanta, *Phys. Rev. C* 102 (2020) 024605
105. F.A. Danevich et al., Decay scheme of ^{50}V , *Phys. Rev. C* 102 (2020) 024319
106. P. Belli et al., Search for double beta decay of ^{106}Cd with an Enriched $^{106}\text{CdWO}_4$ crystal scintillator in coincidence with CdWO_4 scintillation counters, *Universe* 6 (2020) 182
107. K. Blaum et al., Neutrinoless double-electron capture, *Rev. Mod. Phys.* 92 (2020) 045007.
108. A. Armatol et al. (the CUPID Collaboration), Characterization of cubic $\text{Li}_2^{100}\text{MoO}_4$ crystals for the CUPID experiment, *Eur. Phys. J. C* 81 (2021) 104
109. A. Armatol et al. (the CUPID Collaboration), A CUPID $\text{Li}_2^{100}\text{MoO}_4$ scintillating bolometer tested in the CROSS underground facility, *JINST* 16 (2021) P02037
110. R. Huang et al. (CUPID-Mo collaboration), Pulse shape discrimination in CUPID-Mo using principal component analysis, *JINST* 16 (2021) P03032
111. E. Armengaud et al., New limit for neutrinoless double-beta decay of ^{100}Mo from the CUPID-Mo experiment, *Phys. Rev. Lett.* 126 (2021) 181802.
112. I.C. Bandac et al., Phonon-mediated crystal detectors with metallic film coating capable of rejecting α and β events induced by surface radioactivity, *Appl. Phys. Lett.* 118 (2021) 184105
113. P. Belli et al., New experimental limits on double-beta decay of osmium, *J. Phys. G: Nucl. Part. Phys.* 48 (2021) 08510
114. P. Belli et al., The half-life of ^{212}Po , *Eur. Phys. J. A* 57 (2021) 215
115. A. Armatol et al. (the CUPID Collaboration), Novel technique for the study of pileup events in cryogenic bolometers, *Phys. Rev. C* 104 (2021) 015501
116. F.A. Danevich et al., New limits on double-beta decay of ^{190}Pt and ^{198}Pt , *Eur. Phys. J. C* 82 (2022) 29, 12 p.
117. P. Belli et al., Optical, luminescence, and scintillation properties of advanced ZnWO_4 crystal scintillators, *Nucl. Instrum. Meth. A* 1029 (2022) 166400
118. V. Ya. Degoda et al., Luminescence of ZnWO_4 crystals under X-ray excitation, *J. Lumin.* 249 (2022) 119028
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