Curriculum Vitae
Roman S. Boiko

Main Affiliation

Current Position: Associated professor
Department: Organic, physical and colloid chemistry and chemistry of pesticides
Organization: National University of Life and Environmental Sciences of Ukraine
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Joint Affiliation

Current Position: Senior scientific researcher
Department: Lepton Physics Department
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Personal Information

Full name: Roman Sergiyovych Boiko
Date of birth: December 31, 1978
Place of birth: Skorohodove, Chernigiv region, Ukraine
Citizenship: Ukraine
Family status: Married, two children

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Education

1996-2001: Kiev National Taras Shevchenko University, Chemical Faculty.
Degree: Diploma in inorganic chemistry

2006: Kiev National Taras Shevchenko University
Dissertation: “Synthesis, structure and properties of double phosphates of

alkaline metals, gallium and indium"
Degree: Kandidat nauk (equiv. PhD, Chemistry)

Professional Employment

2001-2002: Ukrainian Army (solder)
2003-2006: Engineer, competitor for scientific degree, Kiev National Taras Shevchenko University.
2007-till now: Associate Professor, National University of Life and Environmental Sciences of Ukraine
2007-2009: leading engineer, Institute for Nuclear Research, Ukraine
2010-2012: Scientific researcher, Institute for Nuclear Research, Ukraine
2013- till now: Senior scientific researcher, Institute for Nuclear Research, Ukraine

Teaching Activity

Lectures and studies in National University of Life and Environmental Sciences of Ukraine. I give courses of lecture in General Chemistry, Organic Chemistry, Analytical Chemistry and Physical Chemistry.

Research Activity

Investigation of interactions and crystals' formations in molten salts. Search for new crystalline luminescence materials.
Purification and investigation of inorganic compounds. Search for methods of purification and obtaining of radio pure inorganic materials.

International collaborations

AMoRE collaboration (search for double β decay of ^{100}Mo with $CaMoO_4$cryogenic scintillating bolometers)
LUMINEU (searchfor 0ν2β decay of ^{100}Mo by using cryogenic $ZnMoO_4$ scintillating bolometers)
DAMA group (R&D and small experiments)

Main publications

1. Boyko R.S. et al., Luminescent probes for some radioactive waste confinement phosphates. Functional materials 11 (2004) 147.
2. Boyko R.S., Chukova O.V., Gomenyuk O.V., Nagornyi P.G., Nedilko S.G., Origin of red luminescence of sodium titanium phosphate crystals. Phys. Stat. Sol 1 (2005) 712.
3. R. Bojko at al., Electronic structure and optical properties of Ti-doped phosphate crystals. Mat. Sc. and Eng.: B 144 (2007) 7
4. R. Boyko at al., Luminescent spectroscopy of sodium titanium orthophosphate crystals

doped with samarium and praseodymium ions. Optical Materials 30 (2008) 684
5. R. Bojko at al., The electronic structure and optical properties of ABP_2O_7 (A = Na, Li) double phosphates. Optical Materials 30 (2008) 687
6. R. Bojko at al., Luminescence properties of $CsAlP_2O_7$ crystals doped with chromium ions under VUV and UV excitation. Optical Materials 30 (2008) 693
7. R. Bojko, V. Boyko, S. Nedilko, Yu. Hizhnyi, O. Chukova and P. Nagornyi., Luminescent monitoring of metal dititanium triphosphates as promising materials for radioactive waste confinement. J. of Nucl. Mat. 385 (2009) 479
8. P. Belli at al., Development of enriched ^{106}CdWO4 crystal scintillators to search for double β decay processes in ^{106}Cd. Nucl. Instr. Meth. A 615 (2010) 301-306
9. P. Belli at al., New observation of 2β 2ν decay of ^{100}Mo to the 0^+_1 level of ^{100}Ru in the ARMONIA experiment. Nucl. Phys. A 846 (2010) 143-156
10. H.J. Kim at al., Neutrino-less double beta decay experiment using $Ca^{100}MoO_4$ scintillation crystals. IEEE Trans. Nucl. Sci. 57 (2010) 1475-1480
11. Yu. Hizhnyi at al., Spectroscopic Studies of Polycrystalline $NaAl(MoO_4)_2:Cr^{3+}$ Compound as New Material for Micro- and Nano-Sized Cryogenic Fluorescence Thermometer. Sensor Letters 8 (2010) 1-6
12. A.S. Barabash at al., Low background detector with enriched $^{116}CdWO_4$ crystal scintillators to search for double b decay of ^{116}Cd. JINST 06 (2011) P08011
13. R.S.Boiko at al., Ultrapurification of archaeological lead. Inorganic Materials 47 (2011) 645-648.
14. P.Belli at al., First results of the experiment to search for 2β decay of ^{106}Cd with the help of $^{106}CdW0_4$ crystal scintillators. Nucl. Phys. At. Energy 12 (2011) 124-128.
15. P.Belli et al., Search for double-β decay processes in ^{106}Cd with the help of a $^{106}CdWO_4$ crystal scintillator.Phys. Rev. C 85 (2012) 044610, 12 p.
16. L.Berge et al., Purification of molybdenum, growth and characterization of medium volume $ZnMoO_4$ crystals for the LUMINEU program. JINST 09 (2014) P06004, 18 p.
17. P.Belli et al., Search for double beta decay of ^{136}Ce and ^{138}Ce with HPGe gamma detector.Nucl. Phys. A 930(2014)195-208.
18. E.Armengaud et al, Development and underground test of radiopure $ZnMoO_4$ scintillating bolometers for the LUMINEU 0ν2β project. JINST 10 (2015) P05007, 19 p.

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