

Curriculum Vitae

Name, surname, degree:	Mgr. Maksym Buryi, Ph.D.
Main employer:	Institute of Physics of the Czech Academy of Sciences in Prague, Cukrovarnická 10/112 162 00 Prague 6
Employment position:	Scientist at the Department of Optical materials, Division of solid-state physics. Field of knowledge – EPR spectroscopy
Second employer:	Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Department of Solid-State Physics
Employment position:	External teacher
ORCID ID	https://orcid.org/0000-0002-7529-255X
ResearcherID	H-1176-2014
<i>h</i>-index (SCOPUS)	16
Education:	
Secondary school	
1993-2003	Bar, Vinnyca region, Ukraine
Higher education	
2007	Bachelor's degree at Radiophysical department in Kiev National Taras Shevchenko University, Ukraine
2009	Master's degree at Radiophysical department in Kiev National Taras Shevchenko University, Ukraine.
Doctoral fellowship	
2009-2014	Ph.D. in physics in Czech Technical University in Prague, Faculty of nuclear sciences and physical engineering, Department of solid-state engineering. Thesis title: "The study of point defects, processes of trapping and transfer of charge in wide band-gap single crystals of aluminum perovskites, tungstates, orthosilicates and molybdates".
Work experience:	
2007-2009	Department of radiospectroscopy, Institute of new materials, Kiev, Ukraine. Engineer.
2010-2014	Department of optical materials, Division of solid-state physics, Institute of Physics of the Czech Academy of

	Sciences in Prague. Doctoral fellow.
2014-2018	Department of optical materials, Division of solid-state physics, Institute of Physics of the Czech Academy of Sciences in Prague. Postdoctoral fellow.
2018-	Department of optical materials, Division of solid state physics, Institute of Physics of the Czech Academy of Sciences in Prague. Scientist.
2019-	Czech Technical University, Faculty of Nuclear Sciences and Physical Engineering, Department of Solid-State Physics. External teacher
Scientific interests:	EPR and TSL spectroscopies of point defects and trap states in insulators and semiconductors.
Language skills:	Ukrainian (mother tongue); fluent English, Russian, Czech; reading knowledge of German, Italian
Member of project teams:	
Ended 2011-2021	<p>Czech Science Foundation (CSF) Project GA AV IAA100100810 a Research plan AVOZ10100521,</p> <p>Technology Agency of Czech Republic (TACR) Project TA01011017</p> <p>ESF project No. 8678,</p> <p>CSF Project P204/12/0805,</p> <p>CSF Project CZ.2. 13/3.1.00/22132,</p> <p>Project SGS10/297/OHK4/3T/14,</p> <p>Grant Agency of CTU in Prague, grant No. SGS 13/2180HK43TT/14,</p> <p>Ministry of Education, Youth and Sports (MEYS) Projects Nos. LM2011029 and LO1409,</p> <p>CSF Project No. 13-11473S,</p> <p>CSF Project No. 15-18300Y,</p> <p>European project H2020 ASCIMAT No. 690599,</p> <p>CSF Project No. 17-09933S,</p>

MEYS Projects SAFMAT No. LM2015088 and No. LO1409,

CSF Project No. 18-14789S,

CSF Project No. 18-17555Y,

MEYS Project OP VVV SAFMAT No. CZ.02.1.01/0.0/0.0/16_013/0001406,

CSF Project No. 19-02858J,

Actual 2020-

CSF Project No. 20-12885S

Principal investigator:

Actual 2020-2022

CSF Project No. 20-05497Y,

Mobility project No. NASB-20-03 awarded by Czech Academy of Sciences

Internships:

3.10.2016-2.12.2016

Dipartimento di Scienza dei Materiali, Università di Milano–Bicocca. Study of point defects, processes of trapping and transfer of charge in lead molybdates and sulphides by thermally stimulated luminescence and radioluminescence

25.9.2017-1.3.2018

Dipartimento di Scienza dei Materiali, Università di Milano–Bicocca. Study of point defects, processes of trapping and transfer of charge in lead and sodium molybdates and ceramic garnets by thermally stimulated luminescence and radioluminescence

16.9-16.11.2018
Dipartimento di Scienza dei Materiali, Università di Milano–Bicocca. Study of point defects, processes of trapping and transfer of charge in crystalline cesium hafnium chloride and yttrium aluminum garnets doped with Ga as well as in zinc oxide nanorods and other nanoparticles by thermally stimulated luminescence and radioluminescence

Participation at international conferences:

20-23.9.2021
Oral talk „Investigation of GaN thin films by electrically detected magnetic resonance and luminescence techniques“ at the conference ADEPT 2021 in Podbanské, Slovakia

12.-17.9.2021
Oral talk „Optical and magnetic properties of epitaxially grown GaN:Ge(Si) thin films“ at the conference LUMDETR 2021 in Bydgoszcz, Poland

18.-21.11.2019
Poster presentation „Influence of precursors and growth conditions on defect states in ZnO nanorods“ at the conference SURFINT-SREN VI in Florence, Italy

30.9 – 4.10.2019
Oral talk „Undoped And Eu, Na Co-doped LiCaAlF₆ Single Crystals: Paramagnetic Centers, Charge Trapping And Energy Transfer Properties“ and poster presentation „Trapping Of Charge And Recombination Centers Investigation In Cs₂HfCl₆ Single Crystals“ at the conference SCINT 2019 in Sendai, Japan

10.-14.6.2019
Poster presentation „Point defects origin and local structure in LiCaAlF₆ single crystals“ at the conference RAD 2019 in Herceg Novi, Montenegro

9.-14.9.2018
Oral talk „Charge trapping and energy transfer in Y(Lu)₃Al₅O₁₂:Eu,(Fe) ceramics: EPR and TSL study“ and poster presentation „Luminescence centers in cerium doped Y₃Al₅O₁₂ nanocrystals“ at the conference LUMDETR 2018 in Prague, Czech Republic

8.-13.7.2018
Poster presentation „Permanent and irradiation-induced point defects in molybdenum rich PbMoO₄ and their participation in charge trapping processes“ at the conference EURODIM 2018 in Bydgoszcz, Poland

18.-22.9.2017
Oral talk “Charge trapping processes and energy transfer studied in lead molybdate by electron paramagnetic resonance and thermally stimulated luminescence” at the conference SCINT 2017

in Chamonix, France

10.-15.7.2016

Poster presentation “Europium and magnesium doped lutetium and yttrium ceramic garnets: EPR study of stable Eu^{2+} ions and X-ray induced charge traps creation” at the conference ICDIM 2016 in Lyon, France

20.-25.9.2015

Poster presentation „Electron paramagnetic resonance study of exchange coupled Ce^{3+} ions in Lu_2SiO_5 single crystal scintillator“ at the conference LUMDETR 2015 in Tartu, Estonia

5.-10.7.2015

Poster presentation „Electron paramagnetic resonance study of Exchange interactions between Ce^{3+} ions in YAlO_3 single crystal scintillator“ at the conference EUROMAR 2015 in Prague, Czech Republic

13.-19.7.2014

Poster presentation “EPR study of a charge-trapping in $\alpha\text{-ZnMoO}_4$ single crystal scintillator” at the conference EURODIM 2014 in Canterbury, Great Britain

Summer schools:

12.-13.4.2018

ASCIMAT workshop - From fundamental physics towards applications. Oral talk „Combined EPR and TSL study of charge trapping processes and energy transfer studied in lead molybdate“, Prague, Czech Republic

14.-17.7.2017

SCINT Summer School - Scintillating Materials and their Applications. Oral talk „Electron paramagnetic resonance as a tool for the point defects origin and localization determination“ and poster presentation „Characterization of activation dopants and charge traps in scintillators and light emitting materials by EPR spectroscopy“. Chamonix, France

12.-13.9.2016

ASCIMAT summer school on advanced scintillator materials. Poster presentation „Characterization of activation dopants and charge traps in scintillators and light emitting materials by EPR spectroscopy“. Milan, Italy

Participation at domestic conferences:

20.-22.10.2021

Poster presentation „Transformation of ZnO-based structures under heavy Mo doping: defect states and luminescence“ at the conference NANOCON 2021

in Brno, Czech Republic

- 7.-11.9.2020 Oral talk (keynote lecture) „ZnO nanorods heavily doped with Mo/Er. The effect of post-deposition treatment on defect states and luminescence” at the conference DMSRE 30, Pavlov, Czech Republic
- 3.-7.9.2018 Oral talk „Charge trapping phenomena in Cs₂HfCl₆ single crystals: electron paramagnetic resonance and thermally stimulated luminescence study” at the conference DMSRE 28, Pavlov, Czech Republic
- 8.-12.9.2014 Oral talk “EPR investigation of Ce³⁺, Er³⁺, Nd³⁺ impurity centers in Y_{0.7}Lu_{0.3}AlO₃ single crystals” at the conference DMSRE 24, Lednice, Czech Republic
- 5.-9.9.2012 Oral talk “Electron paramagnetic resonance study of Lu₂SiO₅ and Y₂SiO₅ scintillators doped by cerium” at the conference DMSRE 22, Lednice, Czech Republic
- 11.-12.2.2010 Oral talk “Electron paramagnetic resonance” at winter special and educative seminar, Rokytnice nad Jizerou, Czech Republic

Pedagogical activities:

- 9.2021- Teaching of a new course of lectures entitled "Practical aspects of the study of point defects" in full-time study at the Department of Solid-State Engineering, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague
- 9.2019- Teaching of a new lecture course entitled "Solid State Resonance Spectroscopy" in full-time study at the Department of Solid-State Engineering, Faculty of Nuclear Sciences and Physical Engineering, Czech Technical University in Prague
- 1.2022- Participation at the program “Otevřená věda” (“Open Science” in English) of the Czech Academy of Sciences as a tutor

Awards:

- 27.4.2021 The Academy of Sciences of the Czech Republic awarded the Otto Wichterle Prize for outstanding results in the field of inanimate nature sciences

