



# Vítězslav Jarý

**Date of birth:** 26/06/1985 | **Nationality:** Czech | **Phone number:** (+420) 220318440 (Work) | **Phone number:** (+420) 724539175 (Mobile) | **Email address:** [jary@fzu.cz](mailto:jary@fzu.cz) | **Website:** <https://www.fzu.cz/lide/ing-vitezslav-jary-phd> |

**Facebook:** <https://www.facebook.com/vitezslav.jary> | **Whatsapp Messenger:** +420724539175 |

**Address:** Cukrovarnická , 10/112, 16200, Prague 6, Czechia (Work) |

**Address:** Běluňská, 1842/2, 19300, Horní Počernice (okres Hlavní město Praha), Czechia (Home)

## About me:

I obtained my PhD in Nuclear Chemistry in 2014 and I have been employed at the Institute of Physics of the Czech Academy of Sciences since 2008 as a researcher. Currently, I am the head of Luminescence and scintillation material group (10-15 people). Here I try to exploit my abilities to lead people and to plan effectively, always enforce the Win/Win strategy. I am fluent in Czech, English, and Spanish languages. I am cheerful, creative, non-conflicting, open minded person who can learn quickly new things.

## WORK EXPERIENCE

10/2007 – CURRENT Praha, Czechia

**RESEARCHER IN SOLID STATE PHYSICS** INSTITUTE OF PHYSICS OF THE CZECH ACADEMY OF SCIENCES IN PRAGUE

Measurements of optical and scintillation properties of new materials which can find usage for ionizing radiation detectors or solid state white LED lightning. Evaluation of experimentally obtained results and their physical interpretation and publication activity. Physics of scintillation and luminescent materials, design and study of characteristics of new material systems in the form of bulk single crystals and ceramics, thin crystalline films and (nano)powders and composites.

**Business or Sector** Professional, scientific and technical activities | **Department** Optical Materials |

**Address** 1999/2 Na Slovance, 182 21, Praha, Czechia | **Email** [jary@fzu.cz](mailto:jary@fzu.cz) | **Website** [www.fzu.cz](http://www.fzu.cz)

## EDUCATION AND TRAINING

10/2010 – 09/2014 Prague, Czechia

**PHD STUDY PROGRAMME** Czech Technical University in Prague

**Address** Břehová 78/7, Prague, Czechia | **Website** <https://www.fjfi.cvut.cz/en/> |

**Field of study** Chemistry , Physical sciences not further defined | **National classification** PhD study programme |

**Thesis** Thermally induced ionization and quenching processes in novel oxide and sulfide scintillation materials

01/10/2008 – 01/09/2010 Prague, Czechia

**MASTER STUDY PROGRAMME** Czech Technical University in Prague

**Address** Břehová 78/7, Prague, Czechia | **Website** <https://www.fjfi.cvut.cz/en/> |

**Field of study** Chemistry , Physical sciences not further defined |

**Thesis** Fast Luminescence Phosphors Based on the Pb and Ce-doped SrHfO<sub>3</sub> and Ternary Sulphides

**Address** Břehová 78/7, Prague, Czechia | **Website** <https://www.fjfi.cvut.cz/en/> |**Field of study** Chemistry , Physical sciences not further defined |**Thesis** Luminescence centres for new phosphors based on complex hafnates and sulfides

## ● LANGUAGE SKILLS

Mother tongue(s): **CZECH**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
<b>ENGLISH</b>	C1	C1	C1	C1	C1
<b>FRENCH</b>	B1	B1	B1	B1	B1
<b>SPANISH</b>	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## ● DIGITAL SKILLS

Microsoft Office | Social Media | Zoom | Skype | Google Docs | Facebook | Good listener and communicator | Decision-making | Organizational and planning skills | Team-work oriented | Motivated | Written and Verbal skills | Critical thinking | Reliability | Responsibility | WhatsApp | Gmail | Flexibility | Internet user | Strategic Planning | Creativity | Teamwork

## ● ADDITIONAL INFORMATION

### PUBLICATIONS

#### Overall Publications Activity – 2023

In February 2023, according to Scopus.com database, I am the author or co-author of 95 impacted publications with the overall citation of 1363, h index = 23.

**Link** <https://www.scopus.com/results/authorNamesList.uri?st1=Jarý&st2=Vítězslav&origin=searchauthorlookup>

### DRIVING LICENCE

**Driving Licence:** B

### CONFERENCES AND SEMINARS

12/07/2009 – 17/07/2009 – Krakow, Poland

**LUMDETR 2009** Poster presentation: *Photoluminescence of Pb<sup>2+</sup>-doped SrHfO<sub>3</sub>*.

03/09/2009 – 05/09/2009 – Pisa, Italy

**ISLNOM 2009** Poster presentation: *Luminescence of rare earth ion doped ternary CsLnS<sub>2</sub> compounds.*

12/07/2010 – 16/07/2010 – Pecs, Hungary

**EURODIM 2010** Poster presentation: *Thermally-induced ionization of Ce<sup>3+</sup> and Pb<sup>2+</sup> excited states in the SrHfO<sub>3</sub> microcrystalline phosphor.*

07/12/2010 – 11/12/2010 – Lyon, France

**EIW 2010** Oral presentation: *Influence of yttrium content on the Ce<sub>Lu1</sub> and Ce<sub>Lu2</sub> luminescence characteristics in (Lu<sub>1-x</sub>Y<sub>x</sub>)<sub>2</sub>SiO<sub>5</sub>:Ce single crystals.*

14/05/2011 – 26/05/2011 – Zdar nad Sazavou, Czech Republic

**Interdisciplinary meeting of young biologists, biochemists and chemists** Oral presentation: *Preparation, structural and optical properties of RE-doped RbLnS<sub>2</sub> compounds.*

12/09/2011 – 16/09/2011 – Giessen, Germany

**SCINT 2011** Oral presentation: *Influence of yttrium content on the Ce1 and Ce2 luminescence characteristics in  $(Lu_{1-x}Y_x)_2SiO_5:Ce$  single crystals.*

10/09/2012 – 14/09/2012 – Halle, Germany

**LUMDETR 2012** Oral presentation: *Luminescence properties of non-stoichiometric strontium zirconate powder phosphor.*

14/04/2013 – 19/04/2013 – Shanghai, China

**SCINT 2013** Poster presentation: *Luminescence of  $RE^{3+}$ -doped  $KLnS_2$  ( $RE = Pr, Sm, Tb, Tm, Ln = La, Gd, Lu$ ).*

23/09/2013 – 27/09/2013 – Kharkiv, Ukraine

**ASM 2013** Oral presentation: *New phosphor family: RE-doped ternary sulfides  $ALnS_2$  ( $A = Rb, K; Ln = La, Gd, Lu$ ).*

13/05/2014 – 17/05/2014 – San Sebastian, Spain

**PRE 14** Oral presentation: *Luminescence characteristics of doubly doped  $KLuS_2:Eu&RE$  ( $RE = Pr, Sm, Ce$ ).*

16/09/2014 – 19/09/2014 – Olomouc, Czech Republic

**Conference of Czech and Slovak Physicists** Oral presentation: *Thermally induced ionization and quenching processes in novel oxide and sulfide scintillation materials.*

05/03/2015 – 07/03/2015 – Hakodate, Japan

**5th International Symposium on Functional Materials** Invited oral presentation:  *$Ce^{3+}$ -doped silicate-based scintillators.*

11/10/2015 – 15/10/2015 – Phoenix, Arizona, USA

**ECS 2015** Invited oral presentation: *Structural, optical and paramagnetic properties of Eu-doped ternary sulfides  $ALnS_2$  ( $A = Na, K, Rb; Ln = La, Gd, Lu, Y$ ).*

02/10/2016 – 07/10/2016 – Honolulu, Hawaii, USA

**ECS 2016 Prime** Oral presentation: *Tunable  $Eu^{2+}$  emission in  $K_xNa_{1-x}LuS_2$  phosphors for circadian LEDs.*

27/08/2017 – 01/09/2017 – Joao Pessoa, Brazil

**ICL 2017** Oral presentation: *Optical Properties of  $Eu^{2+}$ -doped YAG Phosphor.*

09/09/2018 – 14/09/2018 – Prague, Czech Republic

**LUMDETR 2018** Oral presentation:  *$Eu^{2+}$ -doped  $AREs_2$  sulfides – novel multifunctional optical materials.*  
Poster presentation: *Luminescence characteristics of InGaN/GaN heterostructures and their temperature dependences.*

30/09/2018 – 04/10/2018 – Cancún, Mexico

**AiMES 2018** Invited oral presentation:  *$Eu^{2+}$ -Doped  $K_xNa_{1-x}LuS_2$  Ternary Sulfides: Application and Perspectives in White LEDs.*

29/09/2019 – 04/10/2019 – Sendai, Japan

**SCINT 2019** Oral presentation: *Scintillation and Optical Properties of InGaN/GaN Multiple Quantum Wells Structures with Different Thickness.*

12/09/2021 – 17/09/2021 – Bydgoszcz, Poland

**LUMDETR 2021** Oral presentation: *Modification of optical properties of the GaN nanostructures via annealing in various atmospheres.*

29/08/2022 – 02/09/2022 – Beograd, Serbia

**ICOM 2022** Oral presentation: *Optical properties of InGaN epitaxial layers doped by Si and Ge.*

24/11/2022 – 25/11/2022 – CERN

**78th CCC General Meeting** Oral presentation: *Efficient & ultrafast scintillation of  $KLuS_2:Pr^{3+}$  phosphor: Candidate for fast timing applications.*

## PROJECTS

01/11/2015 – 31/10/2017

**Technology Agency of the Czech Republic: System of effective exploitation of IoP outcomes in the application sphere** Project manager of a sub-project: Smart solid-state lighting.

01/07/2018 – 30/06/2023

**SOLID21 - Solid state physics for the 21st century** Key worker in Research Program 3 (Photonics and Energy conversions) and Research Activity 1 (Phosphors for solid-state lightings).

SOLID21 - Solid state physics for the 21st century (registration number CZ.02.1.01/0.0/0.0/16\_019/0000760).

**Link** <https://www.fzu.cz/en/solid21-solid-state-physics-for-the-21st-century>

01/01/2023 – CURRENT

**Czech Science Foundation: Advanced inorganic nanocomposites for distributed sensors of harmful radiation** Co-investigator of the project, together with Institute of Photonics and Electronics, Czech Academy of Sciences and Faculty of Chemical Technology, University of Chemical Technology, Prague, Czech Republic.

## **HONOURS AND AWARDS**

08/07/2011

**Henry Becquerel Price in nuclear sciences – Areva S.A., French Embassy in Prague** Henry Becquerel Price in nuclear sciences in 2011

22/11/2012

**Czech Ministry of Education, Youth and Sports Price – Ministry of Education, Youth and Sports of the Czech Republic** Czech Ministry of Education, Youth and Sports Price in 2012

03/10/2013

**UniCredit Bank scholarship for Czech PhD students – UniCredit Bank** Obtaining the UniCredit Bank scholarship for Czech PhD students in 2013.

19/06/2014

**Jean-Marie Lehn Price in chemistry – Solvay, French Embassy in Prague** Jean-Marie Lehn Price in chemistry in 2014

19/06/2014

**3rd place in the Milan Odehnal Price in physics – The Union of Czech Mathematicians and Physicists** 3<sup>rd</sup> place in the Milan Odehnal Price in physics in 2014

07/12/2015

**Czech Head - Doctorandus Price in technical sciences – ČEZ, Czech Head** Czech Head - Doctorandus Price in technical sciences

24/11/2015

**Rector's Awards of Czech Technical University in Prague – Czech Technical University in Prague** Rector's Awards of Czech Technical University in Prague

06/06/2017

**Otto Wichterle Price – Czech Academy of Sciences** Otto Wichterle Price

## **FOREIGN WORK EXPERIENCE**

15/09/2011 – 01/10/2011

**Working exchange experience at the Institute of Physics, University of Tartu, Tartu (Estonia)**

---

Delayed Recombination Integrals Measurements for inorganic single crystal materials.

01/04/2012 – 29/06/2012

**Three months stay at the Université Claude Bernard Lyon 1, Lyon (France)**

---

Thermal conductivity measurements; Luminescence of Solids.

18/11/2013 – 27/11/2013

**Working exchange experience at the Institute of Applied Physics “N.Carrara” of CNR, Firenze (Italy)**

---

Laser induced decays in inorganic single crystal materials.

28/02/2015 – 15/03/2015

**Working exchange experience at Tohoku University, Sendai (Japan)**

---

Measurements of scintillation decays and light yield in Sendai, Japan (Tohoku University in Sendai).

28/08/2016 – 31/08/2016

**Working exchange experience at Université catholique de Louvain, Louvain (Belgium)**

---

Numerical modeling of electronic and band structures of ternary sulfides compounds.

01/09/2016 – 03/11/2016

**Two months stay at the Université Claude Bernard Lyon 1, Lyon (France)**

---

Soft X-ray decays measurements, CCD camera measurements for inorganic single crystal materials.

24/06/2017 – 23/07/2017

**One month stay at the University of Milano-Bicocca, Milan (Italy)**

---

Measuring thermoluminescence properties of inorganic scintillating materials, IR spectra of Tm<sup>3+</sup> and Yb<sup>3+</sup>-doped compounds.

03/12/2017 – 15/12/2017

**Working experience at the Université Claude Bernard Lyon 1, Lyon (France)**

---

Soft X-ray as an excitation source for measuring the decays of GaN compounds.

24/06/2018 – 23/07/2018

**Working experience at the Université Claude Bernard Lyon 1, Lyon (France)**

---

Soft X-ray as an excitation source for measuring the decays of GaN compounds.

28/11/2018 – 07/12/2018

**Working experience at CERN**

---

Measuring the scintillation light yield of GaN/InGaN nanostructures by using <sup>55</sup>Fe electron source.

01/12/2019 – 07/12/2019

**Working experience at CERN**

---

Measuring the scintillation light yield of GaN/InGaN nanostructures by using <sup>55</sup>Fe electron source.

26/09/2022 – 30/09/2022

**Working experience at University of Gent, Gent (Belgium)**

---

Cathodoluminescence measurement in SEM to characterize Eu<sup>2+</sup>-doped (K;Na)LuS<sub>2</sub> phosphors.

## **HOBBIES AND INTERESTS**

**Travelling** I like to travel, meet new people, new places and new cultures

**Sport** Recreational sport: Tennis, Zumba Fitness, Sauna, Walking in nature

**Culture** I like going out to theatres, cinemas, especially to not-main-stream productions.

**Board games** I am a real lover of playing various board games, including escape rooms, pub quizzes and many other related activities.