

CURRICULUM VITAE OF MAŽENA MACKOIT SINKEVIČIENĖ



Personal information

- Date of Birth: 1991-05-22
- Telephone: +37067935705
- Nationality: Lithuanian (EU)
- E-mail: mazena.mackoit@ftmc.lt , marzena.mackojc@gmail.com

Scientific experience



- 2018-02-01– now **Solid State Physics course Assistant**
Vilnius university
Lectures, laboratory work
- 2016-01-01– now **Junior Researcher**
Electronic Structure Theory Group
Center for Physical Sciences and Technology (CPST)
Materials for single photon emitters.
Density functional theory and electronic structure methods.
- 2015-11-02–2015-12-31 **Engineer**
Semiconductor Physics Institute
Center for Physical Sciences and Technology
Theory of point defects in semiconductors for quantum information processing.
Ab-initio calculations.
- 2012-09-01–2015-01-10 **Technician**
Vilnius University, Institute of Applied Research
Luminescence spectroscopy group
Luminescence properties of group III-nitride semiconductors: GaN, AlGaIn-GaN, InGaIn.

Education

- 2016-10-01- 2019-xx-xx **PhD in Physics**
Center for Physical Sciences and Technology (CPST).
- 2014-09-01–2016-06-21 **Master of Science in Physics, Magna Cum Laude diploma**
Faculty of Physics, Vilnius University. Course: Materials and Technology of Optoelectronics. Thesis: "*Theoretical study of boron and nitrogen vacancies in h-BN*". Supervisor: dr. A. Alkauskas.
- 2010-09-01–2014-06-30 **Bachelor of Science in Physics, Cum Laude diploma**
Faculty of Physics, Vilnius University. Course: Applied Physics
Thesis: "*Nonequilibrium carrier dynamics in GaN epilayers with different equilibrium carrier densities*". Supervisor: prof. habil. dr. G. Tamulaitis.
- 2003-09-01–2010-05-31 **Middle School, Certificate with Honors**
Juzefo Ignacijaus Kraševskio middle school, Vilnius.

Publications

- Z. Shotan, H. Jayakumar, C. R. Conside, M. Mackoitis, H. Fedder, J. Wrachtrup, A. Alkauskas, M. W. Doherty, V. M. Menon, and C. A. Meriles "Photo-induced modification of single-photon emitters in hexagonal boron nitride", **ACS Photonics** **3** (12), 2490–2496 (2016).
- L. Weston, D. Wickramaratne, M. Mackoitis, A. Alkauskas, and C. G. Van de Walle, "Native point defects and impurities in hexagonal boron nitride", **Phys. Rev. B** **97**, 214104 (2018).

Conferences

- M. Mackoitis, L. Weston, D. Wickramaratne, L. Razinkovas, M. W. Doherty, C. G. Van de Walle, A. Alkauskas, "Optical properties of boron vacancy-related defects in hexagonal boron nitride", International conference Advanced Properties and Processes in Optoelectronic Materials and Systems **APROPOS-16**, Vilnius, Lithuania (October 10-12, 2018).
- M. Mackoitis, L. Weston, D. Wickramaratne, L. Razinkovas, M. W. Doherty, C. G. Van de Walle, A. Alkauskas, "Optical properties of boron vacancy-related defects in hexagonal boron nitride", **E-MRS Fall Meeting**, Warsaw, Poland (September 16-21, 2018).
- M. Mackoitis, L. Weston, D. Wickramaratne, A. Alkauskas, C. G. Van de Walle, A. Alkauskas, "Native point defects and impurities in h-BN", **Humboldt Kolleg** Controlling quantum matter: From ultracold atoms to solids, Vilnius, Lithuania (July 29- August 2, 2018).
- M. Mackoitis, L. Weston, D. Wickramaratne, M. W. Doherty, C. G. Van de Walle, A. Alkauskas, "Optical properties of single photon sources in h-BN", 7th European Physical Society Young Minds Leadership **EPS-YM Meeting**, Czech Technical University in Prague, Prague, Czech Republic (May 3-5, 2018).
- L. Weston, D. Wickramaratne, M. Mackoitis, A. Alkauskas, C. G. Van de Walle, "Native point defects in hexagonal boron nitride", 61st Scientific Conference of Physics and Natural Sciences "Open Readings", Vilnius (2018).
- M. Mackoitis, L. Weston, D. Wickramaratne, M. W. Doherty, C. G. Van de Walle, A. Alkauskas, "Optical properties of point defects in h-BN", **Infobalt** contest for Young Scientists, Vilnius (2018).
- M. Mackoitis, L. Weston, D. Wickramaratne, M. W. Doherty, C. G. Van de Walle, A. Alkauskas, "Point defects as single photon sources in h-BN", **Lithuanian Academy of Sciences** 8th Conference of Young Scientists "Physical and Technological Sciences Interdisciplinary Research", Lithuanian Academy of Sciences (2018).
- M. Mackoitis, A. Alkauskas "Optical properties of native point defects in h-BN", 7th Center for Physical Sciences and Technology PhD students and young scientists conference "**FizTech'17**", Vilnius (2017).
- L. Weston, D. Wickramaratne, M. Mackoitis, A. Alkauskas, C. G. Van de Walle, "Native point defects and impurities in hexagonal boron nitride", **E-MRS Fall Meeting**, Warsaw, Poland (2017).
- M. Mackoitis, A. Alkauskas, L. Weston, D. Wickramaratne, M. W. Doherty, C. G. Van de Walle, „Optical properties of boron vacancies and boron vacancy complexes in hexagonal boron nitride“, 42nd **Lithuanian National Conference of Physics**, NFTMC (2017).
- M. Mackoitis, A. Alkauskas, "Optical properties of boron vacancies and boron vacancy complexes in hexagonal boron nitride", Deutsche Physikalische Gesellschaft **DPG conference**, Dresden (2017).
- H. Jayakumar, Z. Shotan, C. Conside, M. Mackoitis, H. Fedder, J. Wrachtrup, A. Alkauskas, M. Doherty, V. Menon, C. Meriles, "Optical spectroscopy and photo modification of individual single-photon emitters in hexagonal boron nitride", **APS March Meeting** 2017, New Orleans, Louisiana, USA (2017).
- M. Mackoitis, "Photo-induced modification of single-photon emitters in hexagonal boron nitride", Project "Metrology at the Nanoscale with Diamonds" **MyND Workshop**, Ryga, Latvia (2017).

- M. Mackoitis, A. Alkauskas "Photo-induced modification of single-photon emitters in hexagonal boron nitride", **Lithuanian Academy of Sciences** 7th Conference of Young Scientists "Physical and Technological Sciences Interdisciplinary Research", Lithuanian Academy of Sciences (2017).
- M. Mackoitis, A. Alkauskas "Photo-induced modification of single-photon emitters in hexagonal boron nitride", 6th Center for Physical Sciences and Technology PhD students and young scientists conference "**FizTech'16**", Vilnius (2016).
- M. Mackoitis, A. Alkauskas, "First-principles calculations of point defects in h-BN", **The Coins** International Conference of Natural and Life Sciences, Joint Life Sciences Centre, Vilnius (2016).
- M. Mackoitis, A. Alkauskas, "Ab-initio studies of point defects in h-BN", 59th Scientific Conference of Physics and Natural Sciences "**Open Readings**", Vilnius (2016).
- M. Mackoitis, A. Alkauskas, "Theoretical study of boron and nitrogen vacancies in h-BN", 18th International Conference-School **Advanced Materials and Technologies**, Palanga (2016).
- M. Mackoitis, G. Tamulaitis, "Nonequilibrium carrier dynamics in GaN epilayers with different equilibrium carrier densities", 57th Scientific Conference of Physics and Natural Sciences "**Open Readings**", Vilnius (2014).

Projects

- 2015–2018 The Research Council of Lithuania project „Metrology at the Nanoscale with Diamonds” (MyND) (Nr. 2215, Nr. M-ERA.NET-1/2015, FTMC: 3500-P302).
- 2014 TEMPUS project “Development of Training for Improving Education in Energy Efficiency” (Grant Nr. 530379-TEMPUS-1-2012-1-LVTEMPUS-JPCR).
- 2014 The Research Council of Lithuania project "Enhancement of light emission efficiency in wide-band-gap nitride semiconductors" (MIP-054/2012, 2012-2015). Institute of Applied Research, Division of Semiconductor Optoelectronics, Luminescence spectroscopy group, Technician.
- 2012 Students’ Scientific Practice (SMP 030/SMP12-090, project Nr. VP1-3.1-ŠMM-01-V-02-003, The Research Council of Lithuania) “Luminescence studies of different profiles InGaN QWs”.

Awards

- **Finalist of Graduate Student Award - EMRS 2018 Fall Meeting** (2018).
- **Scholarship of the Lithuanian Academy of Sciences** for academic achievements (2018).
- **INFOBALT scholarship** for Young Scientist award 3rd place (2018).
- **The Best Young Scientist Award** (2018) - work was selected during the Conference of Young Scientists of the Lithuanian Academy of Sciences.
- European Physical Society Young Minds „**Best Activity Award**“ (2017).
- International **Dr. Karl Mey Scholarship** for the participation in the *Deutsche Physikalische Gesellschaft* (DPG) Spring Meeting of the Condensed Matter Section in Dresden (2017).
- **Vilnius University Rector's acknowledgement** for outstanding achievements in science and studies (2016).
- **Best Oral Presentation Award** in 59th Scientific Conference of Physics and Natural Sciences *Open Readings*, topic: "Ab-initio studies of point defects in h-BN" (2016).
- **Best Poster Presentation Award** in 57th Scientific Conference of Physics and Natural Sciences *Open Readings*, topic: "Nonequilibrium carrier dynamics in GaN epilayers with different equilibrium carrier densities" (2014).
- **Honorary Diploma** in *Lithuanian Mathematical olympiad*, Vilnius, City tour (2010).
- **3rd place** in *Lithuanian Physics Olympiad*, Vilnius, City tour (2009).

Activities

- European Physics Society (EPS) Young Minds Section of Vilnius, **President** (2016 - now).
- Lithuanian Physical Society, **Member**.
- SPIE. Chapter, Vilnius University, **Member**.

Organized conferences

- 14th annual national conference “**Lasers: Science and Technology**”, local organizing committee (2018).
- **Humboldt Kolleg** “*Controlling quantum matter: From ultracold atoms to solids*“, local organizing committee (2018).
- 61st International Scientific Conference for Students of Physics and Natural Sciences “**Open Readings**”, organizing committee (2018).
- “**11th Lithuanian II day championship**”, organizing committee (2018).
- 42nd **Lithuanian National Conference of Physics**, NFTMC, organizing committee (2017)
- 7th Center for Physical Sciences and Technology PhD Students and Young Scientists conference “**FizTech’17**“, head of the organizing committee (2017).
- 60th International Scientific Conference for Students of Physics and Natural Sciences “**Open Readings**”, organizing committee (2017).
- “**10th Lithuanian II day championship**”, organizing committee (2017).
- 3 years of “**Sunrise Valley Semiconductor Physics Seminars**”, organizing committee (2015-2018).
- 6th Center for Physical Sciences and Technology PhD Students and Young Scientists conference “**FizTech’16**“, head of the organizing committee (2016).
- **Created web page for Puntukas** electronic structure theory group (admin).



PUNTUKAS ELECTRONIC STRUCTURE THEORY GROUP

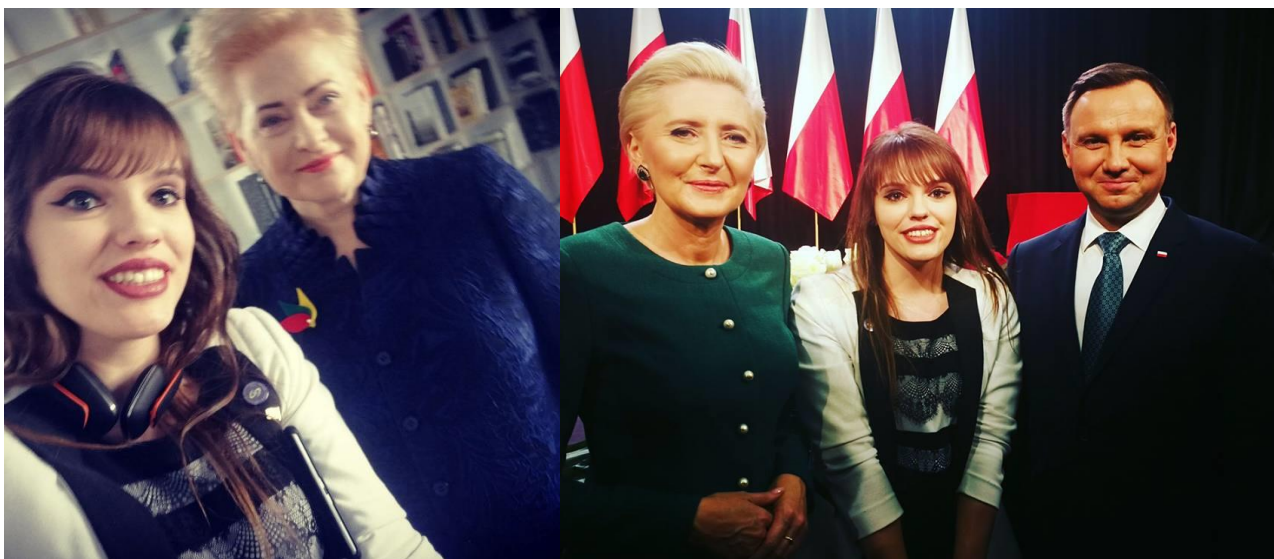
- 2015-2017 **admin of page** on twitter and facebook „Physics in Lithuania: news, discoveries, events, scientific publications.”



Science popularization

- <https://www.lrt.lt/mediateka/irasas/1013685505/misija-vilnija-2018-02-20#wowzaplaystart=708000&wowzaplayduration=237000>
- <https://www.ziniuradijas.lt/laidos/man-20-keli/mazena-fizike-poete-ir-lietuvos-ateitis?video=1>
- <https://www.youtube.com/watch?v=-Sfy6KUAraE&t=126s>
- <http://zw.lt/wilno-wilenszczyzna/laureat-nagrody-nobla-na-litwie-wsrod-organizatorow-polska-fizyczna-z-wilna/>
- <http://124.lt/pl/spoleczenstwo/item/235871-siostry-agnieszka-i-marzena-mackojc-pomiedzy-liryka-a-nauka>
- <http://124.lt/lt/visuomene/item/235787-moterys-vyru-dominuojamame-pasaulyje-seserys-mackoit-tarp-lyrikos-ir-mokslo>
- <http://www.epsnews.eu/2017/10/60th-international-conference-for-students-of-physics-and-natural-sciences-open-readings/#>
- <http://www.bernardinai.lt/straipsnis/2017-01-12-pasauliniai-mokslo-milzinai-atvyksta-i-lietuva/154066>
- <http://naujienos.vu.lt/konferencija-open-readings-2017-suburs-pasaulio-mokslininku-elita/>
- <http://www.lrt.lt/naujienos/mokslas-ir-it/1/160038/pasauliniai-mokslo-milzinai-atvyksta-i-lietuva>

<https://www.vz.lt/laisvalaikis/akiraciai/2017/05/27/25-eriu-mokslininke-zino-kaip-griauti-steriotipus>



Meeting with President of the Republic of Lithuania D. Grybauskaite and with President of Poland A. Duda and A. Kornhauser-Duda.



Meeting with Mayor of Vilnius Remigijus Šimašius (Open Readings conference, 2018).



The Best Young Scientist Award (Lithuanian Academy of Sciences, 2018).



With Prof. Gediminas Juzeliūnas (Vilnius University) and Prof. Wolfgang Ketterle (Massachusetts Institute of Technology, Nobel Prize in Physics 2001), assisting during the public lecture.