



Detailed Curriculum Vitae

Professor Sefer Bora Lisesivdin,
BSc (Engineering), MSc, PhD, SMIEEE

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Contact information

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Group web: <https://lrgresearch.org>

Education

2008	Ph.D. Physics, Gazi University, Ankara, Turkey Dissertation: Electron and Magneto Transport Properties of AlGaIn/GaN Based High Electron Mobility Transistors (HEMTs) Advisor: Prof. Dr. Mehmet Kasap
2005	M.Sc. Advanced Technologies, Gazi University, Ankara, Turkey Thesis: Transport Properties of InGaAs/GaAs and AlGaAs/GaAs Semiconductors Grown by MBE Advisor: Assoc. Prof. Dr. Mehmet Kasap
2002	B.Sc (Eng). Physics Engineering, Hacettepe University, Ankara Turkey Senior Project: Development of X-Ray Data Analysis Software for Windows Systems

Research interests

Experimental and numerical (with calculating self-consistent solutions of Schroedinger-Poisson equations) investigation of electron and magnetotransport properties, strain, persistent photoconductivity, hot-electron transport properties, Shubnikov de Hass parameters and quantum parameters of 2 dimensional gas (2DEG) of III-V group semiconductor materials including, GaAs, GaN, InGaIn, TiO₂ bulks and AlGaIn/GaN, AlGaIn/(AlN)/GaN, AlGaIn/(AlN)/GaN/AlN, AlInN/AlN/GaN/AlN and AlInN/AlN/InGaIn/AlN heterostructures, MgZnO/ZnO, BeZnO/ZnO heterostructures.

Ab initio calculations of wide band gap semiconductors MgO, GaN, MgZnO, diamond and low dimensional structures like graphene, graphene nanoribbons, black phosphorus, 2D structures with kagome lattice structure, effects of defects and impurities on these systems.

Development of open-source scientific softwares: (1) [Aestimo 1D](#) – One-dimensional (1D) self-consistent Schrödinger-Poisson solver for semiconductor heterostructures. (2) [gpaw-tools](#) – Collection of python scripts that use ASE and GPAW for performing Density Functional Theory (DFT) calculations.

Optical properties and ODMR measurements of NV- centers in Diamond.

Scholarships / fellowships / awards / certificate of appreciations

2022	Certificate of appreciation about having high quality publications, Gazi University, Faculty of Science, Ankara, Turkey.
2021	Certificate of appreciation about having outsourced project, Gazi University Rectorate, Ankara, Turkey.
2019	Leaders in Innovation Fellowship, Royal Academy of Engineering, United Kingdom,
2017	Duty Award, Gazi University Faculty of Science, Ankara, Turkey.
2016	Turkish Academy of Sciences, Distinguished Young Scientist Award
2015	IEEE Senior Membership
2015	SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
2015	Duty Award, Gazi University Faculty of Science, Ankara, Turkey.
2014	Turkish Physical Union Prof. Dr. Sevket Erk Outstanding Young Scientist Award.
2014	SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
2014	SCI-indexed Citation Award, Gazi University, Ankara, Turkey.
2013	TUBITAK 2219 scholarship for postdoc research (6 months).
2007-present	20 publications are promoted through TUBITAK Incentive Program for International Scientific Publications.
2010, 2012	SCI-indexed Publication Award, Gazi University, Ankara, Turkey.
2008-2009	Postdoc fellowship for postdoc studies.
2007-2008	TUBITAK 2214 scholarship for PhD research (6 months).
2007	Progetto Lagrange PhD Scholarship, Politecnico di Torino, Italy (not used due to family issues).
2005-2008	Several project scholarship for M.Sc. and Ph.D. studies.

Grants & project memberships

Earned grants as a project investigator (PI) or project co-investigator (co-PI)

2022-2023	University Research Grant, 7619, Ga ₂ O ₃ /Cu ₂ O p-n junction production and related computational studies with p-type Cu ₂ O semiconductor thin films grown by MistCVD, PI, Budget: 109 830 TL (approximately 6 900 Euros)
2018-2019	TUBITAK 1512, 2180227, Production of Compact USB Fiber-coupled UV-VIS-NIR Optical Spectrometer for Industrial and Scientific Purposes, CEO and PI, Budget, 149 846 TL no-return grant (approximately 24 500 Euros)
2017-2020	TUBITAK 1001,116F197, Investigation of Growth Behaviors and 2DEG Properties of of MgZnO/ZnO Heterostructures grown by USPECVD Method, PI, Budget, 359 810 TL (approximately 88 600 Euros)
2014-2016	Joint grant of Scientific and Technological Research Council of Turkey and RFBR of Russia, 113F364, Modification of properties of two-dimensional electronic gas using insitu surface passivation of AlGa _N /Ga _N heterostructures by molecular beam epitaxy, PI, Budget: 282 910 TL (approximately 97 500 Euros)
2012-2013	University Research Grant, 05-2012/13, Numerical optimization of Mg _x Zn _{1-x} O/ZnO and Be _x Zn _{1-x} O/ZnO based heterostructure transistors, PI, Budget: 14 889 TL (approximately 6 500 Euros)
2012-2013	University Research Grant, 05-2012/14, Investigation of the effects of transition metal palladium on electronical, structural and optical properties of graphene nanoribbons, PI, Budget: 14 955 TL (approximately 6 500 Euros)

Project memberships

2010-2012	TUBITAK 1002 Support Project, 209T051, MOVPE growth and characterization of epitaxial germanium for infrared photovoltaic and sensor applications, Researcher, Budget: 25k TL (approximately 11k Euros)
2009-2012	TUBITAK 1007 Research Project, 107A012, Researcher, Budget: 4.7 M TL (approximately 2M Euros)
2008-2012	Military Related Research Project, SAVS020, Scholar, Budget: 5.8M TL (approximately 2.5M Euros)
2008-2010	TUBITAK 1001 Research Project, 108T018, Epitaxial growth and characterization of infrared AlGaAs laser diode materials, Scholar, Budget: 358 400 TL (approximately 156k Euros)
2008-2010	TUBITAK (Turkey) – ANCS (Romania) Joint Research Project, TBAG-U/220 (107A584), Studies on synthesis and characterization of TiO ₂ thinfilm nanostructures which have applications in ecological physics, Scholar, Budget: 58k TL (approximately 25k Euros)
2006-2009	Military Related Research Project, SAVM005, Researcher, Budget: 4.7 M TL (approximately 2M Euros)
2006-2007	TUBITAK 1007 Research Project, 105A005, Scholar, Budget: 5.5M TL (approximately 2.4M Euros)

Professional appointments

2019-2020	Visiting Researcher, Institute for Quantum Optics, University of Ulm, Ulm, Germany (3 months)
2018-cont.	Full Professor, Department of Physics, Faculty of Science, Gazi University, Ankara Turkey
2013	Visiting Researcher, School of Computer Science and Electronics Engineering, University of Essex, Colchester, UK.
2011-2018	Associate Professor, Department of Physics, Faculty of Science, Gazi University, Ankara Turkey
2009-2011	Assistant Professor, Department of Physics, Faculty of Science and Arts, Gazi University, Ankara Turkey
2008-2009	Post-doctoral Researcher, Nanotechnology Research Center, Bilkent University, Ankara, Turkey http://www.nanotam.bilkent.edu.tr

Research experience

2019-2020	Visiting Researcher, Institute for Quantum Optics, University of Ulm, Ulm, Germany (3 months)
2013	Visiting Researcher, Department of Computing and Electronic Systems University of Essex, Colchester, UK (6 months)
2008-2009	Post-doctoral Researcher, Nanotechnology Research Center, Bilkent University, Ankara, Turkey http://www.nanotam.bilkent.edu.tr
2007-2008	Research Student, Department of Computing and Electronic Systems University of Essex, Colchester, UK (6 months)

Teaching experience

These courses correspond to more than 2300 students as of this CV's writing time.

Institute of Science, Gazi University, Ankara, Turkey

- Instructor, Fiz 5026 Physics of Low-dimensional Semiconductors
 - 2021/2, 2021/1, 2020/2, 2020/1, 2017/2, 2017/1, 2016/2, 2013/2, 2013/1
- Instructor, Fiz 5024 Micro and Nanofabrication Methods

- 2021/2, 2021/1, 2020/2, 2020/1, 2019/2, 2018/2, 2018/1, 2017/1, 2016/2, 2016/1, 2015/2, 2015/1, 2014/2, 2014/1, 2013/2, 2013/1, 2012/1

Faculty of Science, Gazi University, Ankara, Turkey

- Instructor, Fiz 1123 Introduction to Nanotechnology
 - 2021/1, 2020/1, 2018/1, 2017/1, 2016/1, 2015/1, 2014/1
- Advisor, Fiz 413 Research Project
 - 2021/1, 2018/1, 2014/1, 2013/1, 2012/1 (2 students)
- Advisor, Fiz 414 Research Project
 - 2018/2, 2014/2, 2011/2
- Instructor, Enf 102 Basic Computer Usage and Fortran Language
 - 2011/2 (2 groups)

Faculty of Science and Arts, Gazi University, Ankara, Turkey

- Advisor, Fiz 413 Research Project
 - 2011/1, 2009/1 (2 students)
- Advisor, Fiz 414 Research Project
 - 2009/2 (2 students)

Faculty of Engineering, Gazi University, Ankara, Turkey

- Instructor, Fiz 104, Physics II
 - 2016/2 (2 groups), 2015/2 (2 groups), 2014/2 (2 groups), 2013/2 (4 groups), 2011/2 (3 groups), 2009/2 (2 groups)
- Instructor, Fiz 103 Physics I
 - 2013/1 (3 groups), 2012/1 (2 groups), 2011/1 (3 groups)
- Instructor, Fiz 156 Physics Lab. (Mechanics)
 - 2011/2, 2009/2

Faculty of Dentistry, Gazi University, Ankara, Turkey

- Instructor, Fzk 111 Physics
 - 2012/1

Faculty of Science at Polatlı, Gazi University, Polatlı, Ankara, Turkey

- Instructor, Fiz 315 Properties of Matter
 - 2012/1

Faculty of Technology, Gazi University, Ankara, Turkey

- Instructor, Fiz 104, Physics II
 - 2020/2 (2 groups), 2019/2 (2 groups), 2018/2, 2017/2,
- Instructor, Fiz 103, Physics I
 - 2020/1 (2 groups),
- Instructor, Fiz 101 Physics I
 - 2014/1 (2 groups), 2011/1

Faculty of Technical Education, Gazi University, Ankara, Turkey

- Instructor, Fiz 101 Physics I
 - 2011/1, 2009/1 (4 groups)
- Instructor, Fiz 102 Physics II
 - 2009/2

Turkish Military Academy, National Defense University, Ankara, Turkey

- Instructor, Physics
 - 2018/1

Atılım University, Ankara, Turkey

- Instructor, Physics 101
 - 2020/2

Professional activities

2019	Scientific Committee Member, VIII. ADIM Physics Days, 12-15 September, Bilecik, Turkey.
2018	Scientific Committee Member, VII. ADIM Physics Days, 23-25 May, Aydin, Turkey.
2017	Scientific Committee Member, VI. ADIM Physics Days, 19-21 July, Balıkesir, Turkey.
2015	Scientific Committee Member, 1st International Conference on Organic Electronic Material Technologies (OEMT-2015) 25-28 March Elazığ, Turkey.
2015	Scientific Committee Member, 2nd International Nanoscience and Nanotechnology for Next Generation (NaNONG) 29-31 October Antalya, Turkey.
2011-2014	Member of board of management of the Photonics Research Center at Gazi University, Ankara, Turkey. http://fotonik.gazi.edu.tr
2004	Member of organizing group of 11 th Condensed Matter Ankara Meeting at Gazi University, Ankara, Turkey.

Professional services

Editorial Board Member

- PLOS ONE (*SCI-indexed*) (2013-2016, 2019-continue)
- Advances in Condensed Matter Physics (*SCI-indexed*) (2019-continue)
- Advances in OptoElectronics (*ESCI-indexed*) (2019)

Issue Editor (SCI-indexed) (2016)

- Advances in Materials Science and Technology “Recent Progress in Group III-Nitride Electronic and Optoelectronic Devices”

Reviewer (SCI-indexed)

- Journal of Physics and Chemistry of Solids
- Journal of Physics D – Applied Physics,
- Semiconductor Science and Technology,
- Superlattices and Microstructures,
- Journal of Materials Science: Materials in Electronics
- Journal of Materials Science: Materials in Electronics
- Nanotechnology,
- Diamond and Related Materials,
- Applied Physics Letters,
- Physica E : Low-dimensional Systems and Nanostructures,
- Physica B : Condensed Matter,
- AIP Advances,
- Computational Materials Science,
- Synthetic Metals,

Professional affiliations

2005-present	Senior Member , IEEE (Institute of Electrical and Electronics Engineers)
2005-present	Senior Member , IEEE Electron Devices Society
2006	Member, IEEE Communications Society
2006	Member, SPIE (Society of Photographic Instrumentation Engineers)

Member, Hacettepe University Alumni

Seminars

- 12/2014 “Elektriksel Olarak Pompalanan Seyreltik Azotlu Dikey Kaviteli Yarıiletken Optik Yükselteç” Physics Department, Istanbul University, Istanbul, Turkey.
- 05/2008 “AlGaIn/GaN-temelli Yüksek Elektron Hareketliliğine Sahip Transistörlerin (HEMTs) Elektron ve Manyeto-iletim Özelliklerinin İncelenmesi (in Turkish)”, Department of Physics, Akdeniz University, Antalya, Turkey.
- 02/2008 “Investigation of 2DEG parameters in AlGaIn/GaN based heterostructures using QMSA technique” Department of Computing and Electronic Systems, University of Essex, Colchester, UK.

Attended courses and workshops

- 01/2006 I. Adaligeli, “Solid State Educational Workshop 2006.1 : The Theory of Spin Transport (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
- 01/2006 J. Schliemann, “Solid State Educational Workshop 2006.1 : Rashba and Spin-Hall Effects in Quantum Dots (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
- 01/2006 E.V. Sukhorukov, “Solid State Educational Workshop 2006.1 : The Physics of Quantum Shot Noise (1 Week)” Feza Gürsey Institute, Istanbul, Turkey.
- 03-04/2005 R. Gerhardt, “Solid State Educational Workshop 2004.3-2: Magnetotransport in low-dimensional systems (3 Weeks)”, Bilkent University, Ankara, Turkey.

Publications

Cites and h-index

<u>Index name</u>	<u>Total cite</u>	<u>h-index</u>
<i>Web of Science</i>	951	16
<i>Google Scholar</i>	1209	18

Books and Book Chapters

- 2 S.B. Lisesivdin, B. Sarikavak-Lisesivdin, E. Ozbay “Chapter 18: The Effects of the Interaction of Transition Metals on the Electronic Properties of the Graphene Nanosheets and Nanoribbons” Graphene Science Handbook Vol.3, CRCPress, Taylor&Francis, (2016).
- 1 E. L. Wolf, M. Medikonda, (Transl. eds: B. Sarikavak-Lisesivdin, S.B. Lisesivdin) “Nanoteknoloji Devrimini Anlamak” Nobel Press, (2014).

SCI-Articles

- 79 P. Narin, E. Kutlu-Narin, G. Atmaca, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Ozbay “A structural analysis of ultrathin barrier (In)AlN/GaN heterostructures for GaN-based high-frequency power electronics” *Surf. Interface Anal.* **54**, 576 (2022).
- 78 S.B. Lisesivdin, B. Sarikavak-Lisesivdin “gpaw-tools – higher-level user interaction scripts for GPAW calculations and interatomic potential based structure optimization” *Comput. Mater. Sci.* **204**, 111201 (2022).

- 77 E. Kutlu-Narin, P. Narin, S.B. Lisesivdin, B. Sarikavak-Lisesivdin, "Investigation of Structural and Optical Properties of ZnO Thin Films Grown on Different Substrates by Mist-CVD Enhanced with Ozone Gas Produced by Corona Discharge Plasma" *Adv. Condens. Mat. Phys.* **2021**, 1130829 (2021).
- 76 S. Mutlu, A. Erol, E. Arslan, E. Ozbay, S.B. Lisesivdin, E. Tiras. "A novel hot carrier-induced blue light-emitting device." *J. Alloys Comp.* **881**, 160511 (2021).
- 75 E. Kutlu, P. Narin, A. Yildiz, S.B. Lisesivdin "Effect of magnesium content and growth temperature on structural and optical properties of USCVD-grown MgZnO films" *Appl. Phys. A* **127**, 367 (2021).
- 74 F. Sonmez, S. Ardali, S.B. Lisesivdin, T. V. Malin, V. G. Mansurov, K. S. Zhuravlev, E. Tiras "The effect of barrier layers on 2D electron effective mass in Al_{0.3}Ga_{0.7}N/AlN/GaN heterostructures" *J. Phys.: Condens. Matt.* **33**, 255501 (2021).
- 73 P. Narin, E. Kutlu-Narin, S.B. Lisesivdin "Growth dynamics of mist-CVD grown ZnO Nanoplatelets" *Physica B* **614**, 413028 (2021).
- 72 F. Sonmez, S. Ardali, G. Atmaca, S.B. Lisesivdin, T. Malin, V. Mansurov, K. Zhuravlev, E. Tiras "The effect of passivation layer, doping and spacer layer on electron-longitudinal optical phonon momentum relaxation time in Al_{0.3}Ga_{0.7}N/AlN/GaN heterostructures" *Mater. Sci. Semicond. Process.* **122**, 105449 (2021).
- 71 H. Hebal, Z. Koziol, S.B. Lisesivdin, R. Steed "General-purpose open-source 1D self-consistent Schrödinger-Poisson Solver: Aestimo 1D" *Comput. Mater. Sci.* **186**, 110015 (2021).
- 70 B.Sarikavak-Lisesivdin, S.B.Lisesivdin, E.Ozbay, F.Jelezko "Structural parameters and electronic properties of 2D carbon allotrope: Graphene with a kagome lattice structure" *Chem. Phys. Lett.* **760**, 138006 (2020).
- 69 E. Kutlu, P. Narin, A. Yildiz, S.B. Lisesivdin "Effects of Annealing under Different Atmospheres on Structural and Optical Properties of USCVD grown ZnO Nanostructures" *Mater. Sci. Eng. B* **254**, 114506 (2020).
- 68 R. Ibrahim, P. Narin, S.B. Lisesivdin, E. Ozbay "Investigation of electronic and optical properties of wurtzite MgZnO using GGA + U formalism", *Philos. Mag. Lett.* **99**, 424 (2019).
- 67 P. Narin, J. M. All Abbas, G. Atmaca, E. Kutlu, S.B. Lisesivdin, E. Ozbay "Ab initio study of electronic properties of armchair graphene nanoribbons passivated with heavy metal elements" *Solid State Commun.* **296**, 8 (2019).
- 66 P. Narin, E. Arslan, M. Ozturk, M. Ozturk, S.B. Lisesivdin, E. Ozbay "Scattering analysis of ultrathin barrier (< 7 nm) GaN-based heterostructures" *Appl. Phys. A: Mater. Sci. Process.* **125**, 278 (2019).
- 65 J. M. All Abbas, P. Narin, E. Kutlu, S.B. Lisesivdin, E. Ozbay "Electronic properties of Zigzag ZnO nanoribbons with Hydrogen and Magnesium passivations" *Physica B* **556**, (2019).
- 64 J.-H. Lee, J.-M. Ju, G. Atmaca, J.-G. Kim, S.-H. Kang, Y. S. Lee, S.-H. Lee, J.-W. Lim, H.-S. Kwon, S.B. Lisesivdin, J.-H. Lee "High Figure-of-Merit (V₂BR/RON) AlGaIn/GaN Power HEMT With Periodically C-Doped GaN Buffer and AlGaIn Back Barrier" *IEEE J. Electron Dev. Soc.* **6**, 1179 (2018).

- 63 Ö. Ömeroğlu, E. Kutlu, P. Narin, S.B. Lisesivdin, E. Ozbay "Electronic Properties of Graphene Nanoribbons Doped with Zinc, Cadmium, Mercury Atoms" *Physica E* **104**, 124 (2018).
- 62 G. Atmaca, P. Narin, E. Kutlu, T. V. Malin, V. G. Mansurov, K. S. Zhuravlev, S.B. Lisesivdin, E. Ozbay, "Negative Differential Resistance Observation and a New Fitting Model for Electron Drift Velocity in GaN-Based Heterostructures" *IEEE Trans. Electron Dev.* **65**, 950 (2018).
- 61 P. Narin, E. Kutlu, G. Atmaca, A. Atilgan, A. Yildiz. S.B. Lisesivdin, "Structural and optical properties of hexagonal ZnO nanostructures grown by ultrasonic spray CVD" *Optik* **168**, 86 (2018).
- 60 E. Kutlu, P. Narin, S.B. Lisesivdin, E. Ozbay "Electronic and optical properties of black phosphorus doped with Au, Sn and I atoms" *Philos. Mag.* **98**, 155 (2018).
- 59 P. Narin, E. Kutlu, G. Atmaca, S.B. Lisesivdin, E. Ozbay "A first principles investigation of the effect of aluminum, gallium and indium impurities on optical properties of β -Si₃N₄ structure" *Optik* **147**, 115 (2017).
- 58 J. M. Al Abbas, P. Narin, G. Atmaca, E. Kutlu, B. Sarikavak-Lisesivdin, S.B. Lisesivdin "The effect of doping in different layers on 2DEG for ultrathin-barrier AlN/GaN heterostructures" *Optoelectron. Adv. Mater.-Rapid Comm.* **11**, 328 (2017).
- 57 J. M. Al Abbas, G. Atmaca, P. Narin, E. Kutlu, B. Sarikavak-Lisesivdin, S.B. Lisesivdin "A Comparative Study of AlGa_N and InGa_N Back-Barriers in Ultrathin-Barrier AlN/GaN Heterostructures" *J. Elec. Mater.* **46**, 5278 (2017).
- 56 E. Kutlu, P. Narin, G. Atmaca, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Ozbay "Electronic structure of β -Si₃N₄ crystals with substitutional icosagen group impurities" *J. Optoelectron. Adv. Mater.* **19**, 278 (2017).
- 55 P. Narin, E. Kutlu, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Özbay "Electronic properties of Li-doped zigzag graphene nanoribbons" *Physica E* **84**, 543 (2016).
- 54 E. Kutlu, P. Narin, G. Atmaca, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Özbay "Effect of substitutional As impurity on electrical and optical properties of β -Si₃N₄ Structure" *Mater. Res. Bull.* **83**, 128 (2016).
- 53 G. Atmaca, S. Ardali, E. Tiras, T. Malin, V. G. Mansurov, K. S. Zhuravlev, S.B. Lisesivdin "Scattering analysis of 2DEG mobility in undoped and doped AlGa_N/AlN/GaN heterostructures with an *in situ* Si₃N₄ passivation layer" *Solid-State Electron.* **118**, 12 (2016).
- 52 I. Kara, Y. Sarikavak, S.B. Lisesivdin, M. Kasap "Evaluation of Morphological and Chemical Differences of Gunshot Residues in Different Ammunitions Using SEM/EDS Technique" *Environ. Foren.* **17**, 68 (2016).
- 51 G. Atmaca, P. Narin, B. Sarikavak-Lisesivdin, S.B. Lisesivdin "Two Dimensional Electron Gas in a Hybrid GaN/InGa_N/ZnO Heterostructure with Ultrathin InGa_N Channel Layer" *Physica E* **79**, 67 (2016).
- 50 G. Atmaca, S. Ardali, P. Narin, E. Kutlu, S.B. Lisesivdin, T. Malin, V. Mansurov, K. Zhuravlev, E. Tiras "Energy relaxation of hot electrons by LO phonon emission in AlGa_N/AlN/GaN heterostructure with in situ Si₃N₄ passivation" *J. Alloys Compounds* **659**, 90 (2016).

- 49 S. Ardali, G. Atmaca, S.B. Lisesivdin, T. Malin, V. Mansurov, K. Zhuravlev, E. Tiras "The variation of temperature dependent carrier concentration and mobility in AlGa_N/AlN/GaN heterostructure with SiN passivation" *Phys. Stat. Sol. B* **252**, 1960 (2015).
- 48 B. Sarikavak-Lisesivdin, S.B. Lisesivdin, N. Balkan, G. Atmaca, P. Narin, H. Cakmak, E. Ozbay "Energy relaxation of electrons in InGa_N quantum wells" *Metall. Mater. Trans. A* **46**, 1565 (2015).
- 47 G. Atmaca, P. Narin, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, M. Kasap "Electron Transport Properties of Two Dimensional Electron Gas in Be_xZn_{1-x}O/ZnO Heterostructures" *Philos. Mag.* **95**, 79 (2015).
- 46 G. Atmaca, P. Tasli, G. Karakoc, E. Yazbahar and S.B. Lisesivdin "Numerical Investigation of the 2DEG Properties of AlGa_N/AlN/GaN HEMT Structures with InGa_N/Ga_N MQW Back-Barrier Structure" *Physica E* **65**, 110 (2015).
- 45 O. Donmez, F. Sarcan, S.B. Lisesivdin, M. P. Vaughan, A. Erol, M. Gunes, M. C. Arikan, J. Puustinen and M. Guina, "Analytic modeling of temperature dependence of 2D carrier mobility in as-grown and annealed GaInNAs/GaAs quantum well structures" *Semicond. Sci. Technol.* **29**, 125009 (2014).
- 44 S.B. Lisesivdin, G. Atmaca, E. Arslan, S. Cakmakyapan, O. Kazar, S. Butun, Jawad-ul-Hassan, E. Janzén and E. Ozbay "Extraction and scattering analyses of 2D and bulk carriers in epitaxial graphene-on-SiC structure" *Physica E* **63**, 87 (2014).
- 43 E. Arslan, S. Cakmakyapan, O. Kazar, S. Bütün, S.B. Lisesivdin, N.A. Cinel, G. Ertas, S. Ardali, E. Tiras, J. Ul-Hassan, E. Janzén and E. Özbay "SiC substrate effects on electron transport in the epitaxial Graphene layer" *Electron. Mater. Lett.* **10**, 387 (2014).
- 42 S.B. Lisesivdin, N.A. Khan, S. Mazzucato, N. Balkan, M.J. Adams, V.-M. Korpijärvi, M. Guina, G. Mezosi and M. Sorel "Optical gain in 1.3 μ m electrically-driven dilute nitride VCISOAs" *Nanoscale Res. Lett.* **9**, 22 (2014).
- 41 K. Elibol, G. Atmaca, P. Tasli, S.B. Lisesivdin "A Numerical Study on Subband Structure of In_xAl_{1-x}N/Ga_N-Based HEMT Structures with Low-Indium ($x < 0.10$) Barrier Layer" *Solid State Commun.* **162**, 8 (2013).
- 40 A. F. Kuloglu, B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Ozbay "First-principles calculations of Pd-terminated symmetrical armchair graphene nanoribbons" *Comp. Mater. Sci.* **68**, 18 (2013).
- 39 B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Ozbay "The Effect of In_xGa_{1-x}N Back-barriers on the Dislocation Densities in Al_{0.31}Ga_{0.69}N/AlN/GaN/ In_xGa_{1-x}N/GaN Heterostructures ($0.05 \leq x \leq 0.14$)" *Cur. Appl. Phys.* **13**, 224 (2013).
- 38 B. Sarikavak-Lisesivdin, S.B. Lisesivdin, E. Ozbay "Ab initio study of Ru-terminated and Ru-doped armchair graphene nanoribbons" *Mol. Phys.* **110**, 2295 (2012).
- 37 E. Tiras, O. Celik, S. Mutlu, S. Ardali, S.B. Lisesivdin, E. Ozbay "Temperature dependent energy relaxation time in AlGa_N/AlN/GaN heterostructures" *Superlat. Microstruct.* **51**, 733 (2012).
- 36 O. Celik, E. Tiras, S. Ardali, S.B. Lisesivdin, E. Ozbay "Determination of the LO phonon energy by using electronic and optical methods in AlGa_N/Ga_N" *Cent. Eur. J. Phys.* **10**, 485 (2012).

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Advising

PhD

- 5 M.T. Haliloglu, (Gazi University, Institute of Science, Advanced Technologies), *2021 - present*. Advisor.
- 4 M. Yesiltepe, (Gazi University, Institute of Science, Advanced Technologies), *2021 - present*. Advisor.
- 3 E. Kutlu, (Ankara University, Institute of Science, Physics Engineering), *2018- present*. Second Advisor.
- 2 P. Narin, (Gazi University, Institute of Science, Physics), Investigation of structural and optical properties of ZnO and MgZnO crystals grown by USCVD *2015 - 2021*. Advisor.
- 1 G. Atmaca, (Gazi University, Institute of Science, Physics), Investigations of Low-field Transport and Hot-electron Transport in Passivated AlGaIn/GaN HEMTs with Si₃N₄ *2013 - 2018*. Advisor.

MSc

- 13 P. Turhan, (Gazi University, Institute of Science, Physics), *2020 - present*. Advisor.
- 12 K. B. Sönmez, (Gazi University, Institute of Science, Advanced Technologies), RF Magnetron Sputter System and Passive Circuit Element Resistor Production and Characterization *2016 - 2019*. Advisor.
- 11 M. T. Haliloğlu, (Gazi University, Institute of Science, Advanced Technologies), Back Side Via Hole Etching Application of SiC for GaN-based Field Effect Transistors *2016 - 2019*. Advisor.
- 10 O. Omeroglu, (Gazi University, Institute of Science, Physics), Investigation of the Electronic Properties of Zn, Cd and Hg-doped Graphene Sheets with Ab-Initio Methods, *2016 - 2018*. Advisor.
- 9 R. Ibrahim, (Gazi University, Institute of Science, Physics), Investigation of Electronic and Optical Properties of Wurtzite MgZnO with First Principles Calculations, *2016 - 2018*. Advisor.
- 8 M. Ozturk, (Gazi University, Institute of Science, Physics), Electrical Characteristics and Scattering Analysis of Ultrathin Barrier GaN-Based High Electron Mobility Transistors, *2015 - 2018*. Advisor.
- 7 J. M. M. J. Al-Abbas, (Gazi University, Institute of Science, Physics), Simulation and optimization of GaN-based ultrathin barrier high electron mobility transistors, *2014 - 2016*. Advisor.
- 6 E. Kutlu, (Gazi University, Institute of Science, Physics), Investigation of the effects of Cadmium Doping on Electronic and Optical Properties of Graphene Nanoribbons, *2014 - 2016*. Advisor.
- 5 A. F. Kuloglu, (Gazi University, Institute of Science, Physics), Investigation of Electronic Properties of Pa-terminated Graphene Nanoribbons, *2010-2012*. Advisor.

- 4 G. Atmaca, (Gazi University, Institute of Science, Physics), Numerical Investigation of the 2-Dimensional Carriers in AlQn/AlN/GaN-Based (Q=Ga, In) Transistors with Multi-Quantum Well Back-Barriers, 2010-2012. Advisor.
- 3 K. Elibol, (Gazi University, Institute of Science, Physics), Investigation of Magnetoconductivity and Surface Properties of Exfoliated and Epitaxially Grown Graphene Samples, 2010-2012. Advisor.
- 2 G. Karakoc, (Gazi University, Institute of Science, Physics), Investigating the Electron Transport Properties of AlInN/AlN/(InGaN)/GaN Heterostructures with InGaN Quantum Wells. 2009-2012. Advisor.
- 1 C. Gunes, (Gazi University, Institute of Science, Physics), Electron and magnetotransport investigation of two dimensional electron gas in ultrathin barrier GaN-based heterostructures. 2009-2012. Advisor.

Personal information and other experience

Birth date: September 12th, 1979

Social Status: Married and have a son.

- | | |
|-----------|---|
| 2018-2020 | CEO, Biarsis Ltd. Company manufacturing UV-Vis Spectrometers and light sources. Successful acquisition of company is completed at September 2020, http://www.biarsis.com/ , Ankara, Turkey. |
| 2010-2011 | Completed the <u>one-year full-time long</u> military service as Assistant Professor Air Defence Second Lieutenant at Turkish Army Forces, 8. Corps, Air Defence Battalion which is located at Ercis, Van, Turkey. |

-End of CV-

Last update: April 24th, 2022.

Hereby, I am confirming that all information listed on this CV is correct at this date.