

# FAHRETTIN SARCAN

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### International Researcher IDs

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Publons / Web Of Science ResearcherID: AAE-7233-2020

ScopusID: 55521747300

Yoksis Researcher ID: 54563



### Academic Titles / Tasks

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Associate Professor  
2022 - Continues

Istanbul University, Faculty of Science, Department of Physics

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Assistant Professor  
2021 - 2022

Istanbul University, Faculty of Science, Department of Physics

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Researcher  
2020 - 2021

University of York, Faculty of Science, Department of Physics

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Research Assistant PhD  
2014 - 2021

Istanbul University, Faculty of Science, Department of Physics

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Researcher  
2019 - 2019

University of York, Faculty of Science , Department of Physics

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Expert  
2013 - 2013

Istanbul University, Faculty of Science, Department of Physics

### Published journal articles indexed by SCI, SSCI, and AHCI

1. Enhancement of light emission characteristic of a GaAs-based Gunn light emitting diode with a quasi-cavity  
MUTLU S., KALYON G., SARCAN F., ERBAŞ Ö. G., EROL A.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.169, 2024 (SCI-Expanded)
2. Ultraviolet-Ozone Treatment: An Effective Method for Fine-Tuning Optical and Electrical Properties of Suspended and Substrate-Supported MoS<sub>2</sub>  
Sarcan F., Armstrong A. J., Bostan Y. K., Kus E., Mckenna K. P., Erol A., Wang Y.  
NANOMATERIALS, vol.13, no.23, 2023 (SCI-Expanded)
3. Relation between thermal quenching of photoluminescence and negative capacitance on InGaN/GaN multiple quantum wells in p-i-n structure

- ÖZDEMİR O., Baş H., AYARCI KURUOĞLU N., BOZKURT K., Aydin M., SARCAN F., EROL A., Alshehri B., Dogheche K., Dogheche E.
- JOURNAL OF LUMINESCENCE, vol.257, 2023 (SCI-Expanded)
4. Determination of band tail widths in MOCVD grown InGaN single layer within GaN based p-i-n LED structure through photo-induced measurements  
ÖZDEMİR O., BOZKURT K., AYARCI KURUOĞLU N., Baş H., SARCAN F., EROL A., Alshehri B., Dogheche K., Dogheche E.  
JOURNAL OF LUMINESCENCE, vol.255, 2023 (SCI-Expanded)
  5. Understanding the impact of heavy ions and tailoring the optical properties of large-area monolayer WS<sub>2</sub> using focused ion beam  
Sarcan F., Fairbairn N., Zotev P., Severs-Millard T., Gillard D. J., Wang X., Conran B., Heuken M., Erol A., Tartakovskii A., et al.  
npj 2D Materials and Applications, vol.7, no.23, pp.1-7, 2023 (SCI-Expanded)
  6. A novel NiO-based p-i-n ultraviolet photodiode  
Sarcan F., Doğan U., Althumali A., Vasili H. B., Lari L., Kerrigan A., Kuruoğlu F., Lazarov V. K., Erol A.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.934, 2023 (SCI-Expanded)
  7. Surface acoustic wave quasi-Bessel beams generated by symmetrically tilted interdigital transducers  
Uluğ B., Kuruoglu F., Yalcin Y., Erol A., Sarcan F., Şahin A., Çiçek A.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.55, no.22, 2022 (SCI-Expanded)
  8. PREVENTIVE EFFECTS OF MATRIX-METALLOPROTEINASE INHIBITORS ON DENTAL EROSION  
KORUYUCU M., İLİSULU S. C., SARCAN F., KURUOĞLU F., EROL A., SEYMEN F.  
FLUORIDE - QUARTERLY REPORTS, vol.55, no.2, pp.11, 2022 (SCI-Expanded)
  9. Effects of annealing temperature on a ZnO thin film-based ultraviolet photodetector  
Dogan U., SARCAN F., Koc K. K., KURUOĞLU F., EROL A.  
PHYSICA SCRIPTA, vol.97, no.1, 2022 (SCI-Expanded)
  10. Temperature-dependent sandwich and in-plane optical characterization of ternary chalcogenide TiSbS<sub>2</sub>  
Sarcan F., Aydin M., Kuruoğlu F., Dönmez Ö., Yıldırım S., Erol A.  
Materials Science and Engineering B: Solid-State Materials for Advanced Technology, vol.272, 2021 (SCI-Expanded)
  11. Photoluminescence characteristic of as-grown and thermally annealed n-and p-type modulation-doped Ga(0.68)In(0.32)N(x)As(1-x)/GaAs quantum well structures  
Donmez O., Sarcan F., Erol A., Ungan F., Sari H.  
THIN SOLID FILMS, vol.732, 2021 (SCI-Expanded)
  12. Determination of the acoustic phonon-hot carriers interaction in n- and p-type modulation-doped GaInNAs/GaAs quantum wells  
Dönmez Ö., Sarcan F., Erol A.  
Physica B: Condensed Matter, vol.612, 2021 (SCI-Expanded)
  13. Nitrogen induced localised-state ensemble effect on multi quantum well GaInNAs with low indium concentration  
Nordin M. S., Samad M. I. A., SARCAN F., Mohamad K. A., Alias A., Vickers A. J.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.54, no.24, 2021 (SCI-Expanded)
  14. In vitro comparison of titanium surface conditioning via boron-compounds and sand-blasting acid-etching  
Zboun M., Arisan V., Topcuoglu N., Kuruoğlu F., Sener L., Sarcan F.  
SURFACES AND INTERFACES, vol.21, 2020 (SCI-Expanded)
  15. ZnO nanoparticles-based vacuum pressure sensor  
SARCAN F.  
NANOTECHNOLOGY, vol.31, no.43, 2020 (SCI-Expanded)
  16. Ultraviolet Photodetector Based on Mg0.67Ni0.33O Thin Film on SrTiO<sub>3</sub>  
SARCAN F., Orchard S., Kuerbanjiang B., Skeparovski A., Lazarov V. K., EROL A.

17. **Dilute nitride resonant-cavity light emitting diode**  
Sarcan F., Wang Y., Krauss T. F., Erucar T., Erol A.  
OPTICS AND LASER TECHNOLOGY, vol.122, 2020 (SCI-Expanded)
18. **A study on the voltage-dependent response of a GaInNAs-based pin photodetector with a quasi-cavity**  
SARCAN F., NUTKU F., Nordin M. S., Vickers A. J., EROL A.  
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, pp.1-6, 2018 (SCI-Expanded)
19. **A study of electric transport in n- and p-type modulation-doped GaInNAs/GaAs quantum well structures under a high electric field**  
Sarcan F., Mutlu S., Cokduyugulular E., Donmez Ö., Erol A., Puustinen J., Guina M.  
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, no.6, 2018 (SCI-Expanded)
20. **Temporal Response of Dilute Nitride Multi-Quantum-Well Vertical Cavity Enhanced Photodetector**  
Nordin M. S., Sarcan F., Güneş M., Boland-Thoms A., Erol A., Vickers A. J.  
JOURNAL OF ELECTRONIC MATERIALS, vol.47, no.1, pp.655-661, 2018 (SCI-Expanded)
21. **Effect of thermal annealing and nitrogen composition on quantum transport in GaInNAs alloy based modulation doped quantum well structures**  
Nutku F., Donmez Ö., Cokduyugulular E., Sarcan F., Kuruoglu F., Mutlu S., Yildirim S., Erol A.  
JOURNAL OF ALLOYS AND COMPOUNDS, vol.695, pp.404-409, 2017 (SCI-Expanded)
22. **Characterization of temperature dependent operation of a GaInNAs-based RCEPD designed for 1.3 mu m**  
Sarcan F., Nordin M. S., Kuruoglu F., Erol A., Vickers A. J.  
SUPERLATTICES AND MICROSTRUCTURES, vol.102, pp.27-34, 2017 (SCI-Expanded)
23. **Dilute nitride resonant cavity enhanced photodetector with internal gain for the lambda similar to 1.3 mu m optical communications window**  
Balkan N., Erol A., Sarcan F., Al-Ghraibawi L. F. F., Nordin M. S.  
SUPERLATTICES AND MICROSTRUCTURES, vol.86, pp.467-471, 2015 (SCI-Expanded)
24. **Quantum oscillations and interference effects in strained n- and p-type modulation doped GaInNAs/GaAs quantum wells**  
Sarcan F., Nutku F., Donmez Ö., Kuruoglu F., Mutlu S., Erol A., Yildirim S., Arikan M. C.  
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.48, no.30, 2015 (SCI-Expanded)
25. **Negative and positive magnetoresistance in GaInNAs/GaAs modulation-doped quantum well structures**  
Nutku F., Donmez Ö., Sarcan F., Erol A., Puustinen J., Arikan M. C., Guina M.  
APPLIED PHYSICS A-MATERIALS SCIENCE & PROCESSING, vol.118, no.3, pp.823-829, 2015 (SCI-Expanded)
26. **Analytic modeling of temperature dependence of 2D carrier mobility in as-grown and annealed GaInNAs/GaAs quantum well structures**  
Donmez Ö., Sarcan F., Lisesivdin S. B., Vaughan M. P., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.  
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.29, no.12, 2014 (SCI-Expanded)
27. **Magnetotransport study on as-grown and annealed n- and p-type modulation-doped GaInNAs/GaAs strained quantum well structures**  
Donmez Ö., Sarcan F., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.  
NANOSCALE RESEARCH LETTERS, vol.9, 2014 (SCI-Expanded)
28. **Bismuth-induced effects on optical, lattice vibrational, and structural properties of bulk GaAsBi alloys**  
Sarcan F., Donmez Ö., Kara K., Erol A., Akalin E., Arikan M. C., Makhloufi H., Arnoult A., Fontaine C.  
NANOSCALE RESEARCH LETTERS, vol.9, 2014 (SCI-Expanded)
29. **Influence of nitrogen on hole effective mass and hole mobility in p-type modulation doped GaInNAs/GaAs quantum well structures**  
Sarcan F., Donmez Ö., Erol A., Gunes M., Arikan M. C., Puustinen J., Guina M.  
APPLIED PHYSICS LETTERS, vol.103, no.8, 2013 (SCI-Expanded)

30. **Excitation energy-dependent nature of Raman scattering spectrum in GaInNAs/GaAs quantum well structures**  
Erol A., Akalin E., Sarcan F., Dommez Ö., Akyuz S., Arikan C. M., Puustinen J., Guina M.  
NANOSCALE RESEARCH LETTERS, vol.7, 2012 (SCI-Expanded)
31. **An analysis of Hall mobility in as-grown and annealed n- and p-type modulation-doped GaInNAs/GaAs quantum wells**  
Sarcan F., Donmez Ö., Gunes M., Erol A., Arikan M. C., Puustinen J., Guina M.  
NANOSCALE RESEARCH LETTERS, vol.7, 2012 (SCI-Expanded)

## Articles Published in Other Journals

1. **A quasi-cavity enhanced Light Emitting Diode**  
Sarcan F.  
İğdır Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.10, no.4, pp.1-6, 2020 (Peer-Reviewed Journal)
2. **İstanbul Üniversitesi Gözlemevi Odak Düzlemi Aygıtı Test ve Karakterizasyon Laboratuvarı**  
Aliş S., Güver T., Erol A., Ege E., Kay B., Yelkenci F. K., Yeşilyaprak C., Keskin O., Yerli S. K., Sarcan F., et al.  
Turkish Journal of Astronomy and Astrophysics, vol.1, no.2, pp.755-757, 2020 (Conference Book)

## Refereed Congress / Symposium Publications in Proceedings

1. **Optical and Electrical Properties of MBE Grown CuNiO and MgNiO Alloys**  
Doğan Ü., Sarcan F., Althumali A., Kerrigan A., Lazarov V. K., Erol A.  
International Graduate Research Symposium – IGRS'22, İstanbul, Turkey, 1 - 03 June 2022, vol.1, no.1, pp.1
2. **Defect engineering of two-dimensional transition metal dichalcogenides**  
Sarcan F., Wang Y., Erol A.  
International Two-Dimensional Nanomaterials Conference , İstanbul, Turkey, 25 - 27 May 2022, pp.1
3. **Few-layer MoTe 2 -based Photodetector**  
Sarcan F., Wang Y.  
6th INTERNATIONAL APPLIED SCIENCE CONGRESS, Van, Turkey, 21 - 23 May 2021, pp.1
4. **OPTICAL AND STRUCTURAL CHARACTERISATION OF TERNARY CHALCOGENIDE TLSBSE2**  
Aydın M., Kuruoğlu F., Sarcan F., Dönmez Ö., Yıldırım S., Erol A.  
International Marmara Sciences Congress (Autumn) 2020, Kocaeli, Turkey, 4 - 05 December 2020, pp.49
5. **Dilute Nitride-based Resonant Cavity Light Emitter for Optical Communication**  
SARCAN F., Wang Y., Krauss T., Eruçar T., EROL A.  
42. PIERS Photonics & Electromagnetics Research Symposium, Xiamen, China, 17 - 20 December 2019, pp.200
6. **Vertical Cavity based Optoelectronics devices for 1.3 um wavelength applications**  
SARCAN F., EROL A.  
Intertanional Eurasian Conference on Science, Engineering and Technology, Ankara, Turkey, 22 - 23 November 2019, pp.1
7. **GaInNAs-based Resonant Cavity Light Emitter and Phototector for Optical Communication at 1.3 um**  
SARCAN F., EROL A., Wang Y., Eruçar T., Krauss T.  
IV. Uluslararası Bilimsel ve Mesleki Çalışmalar Kongresi – Mühendislik, Ankara, Turkey, 7 - 10 November 2019, pp.1
8. **Investigation of the preventive effects of matrix-metalloproteinase inhibitors on dental erosion: In vitro study.**  
KORUYUCU M., İlisu C., SARCAN F., KURUOĞLU F., SEYMEN F.  
11th EAPD Interim Seminar and Guideline Workshop, Crete, Greece, 3 - 04 May 2019, vol.1, pp.1
9. **GaInNAs-based vertical cavity devices for 1.3 μm applications**  
SARCAN F., EROL A.

- International Eurasian Conference on Science, Engineering Technology, Ankara, Turkey, 22 - 23 November 2018,  
pp.180
10. **Recent Developments at İstanbul University Observatory**  
Güver T., Aliş S., Erol A., Ege E., Tüysüz M., Fişek S., Kaptan S., Kay B., Sarcan F., Yelkenci F. K., et al.  
34. Uluslararası Fizik Kongresi - TFD, Muğla, Turkey, 5 - 09 September 2018
11. **ELECTRONIC TRANSPORT IN n-type MODULATION DOPED GaInAs/GaAs and GaInNAs/GaAs QUANTUM WELL STRUCTURES**  
Rajhi A., Aydin M., ÇOKDUYGULULAR E., ÇETINKAYA Ç., DÖNMEZ Ö., YILDIRIM S., SARCAN F., EROL A.  
Türk Fizik Derneği 34. Uluslararası Fizik Kongresi, Muğla, Turkey, 5 - 09 September 2018, pp.161
12. **Characterization of GaInNAs-based IR Emitters**  
SARCAN F., Eruçar T., EROL A.  
Türk Fizik Derneği 34. Uluslararası Fizik Kongresi, Muğla, Turkey, 5 - 09 September 2018, pp.267
13. **A Comparison Of Characteristics of Heterojunction pin Solar Cells Based On Dilute Bismide And Dilute Nitride Alloys**  
Muhammedgulyev A., SARCAN F., Göksel Ö., KINACI B., DÖNMEZ Ö., ÇELEBİ Y. G., EROL A.  
International Conference On Condensed Matter And Materials science, Adana, Turkey, 11 - 15 October 2017, pp.25
14. **Characterization Of Heterojunction pin solar Cells Based On Dilute Bismide And Dilute Nitride**  
Muhammedgulyev A., SARCAN F., KINACI B., DÖNMEZ Ö., EROL A.  
8th International Workshop on Bismuth-Containing Semiconductors, Marburg, Germany, 23 July 2017 - 26 July 2016, pp.97
15. **Comparative Study of Multi Quantum Well Photodetector Characterization Based on GaInNAs for 1um Wavelength**  
Nordin M. S., Mohmad A. R., SARCAN F., EROL A., Boland-Thoms A., Vickers A. J.  
UK Semiconductor, Sheffield, United Kingdom, 12 - 15 July 2017, pp.71
16. **GaInNAs(sb) Multi Quantum well Vertical Cavity Enhanced Photodetector**  
Nordin M. S., SARCAN F., Evans M., EROL A., Boland-Thoms A., Vickers A. J.  
Semiconductor And Integrated Opto- Electronics Conference, Cardiff, United Kingdom, 18 - 20 April 2017, pp.103
17. **Comparative Study of Multi Quantum Well GaInNAs Photodetector Characterisation**  
Nordin M. S., SARCAN F., EROL A., Boland-Thoms A., Vickers A. J.  
The Physics Of Optoelectronic Materials And Devices, Essex, United Kingdom, 27 - 28 March 2017, pp.10
18. **Design Issues and Characterization of a GaInNAs-based Resonance Cavity Enhanced Photodetector**  
SARCAN F., Nordin M. S., KURUOĞLU F., EROL A., Vickers A. J.  
Nanophotonic and Micro/Nano Optic International Conference, Paris, France, 7 - 09 December 2016, pp.133
19. **INVESTIGATION OF ELECTRONIC TRANSPORT PROPERTIES IN GaInNAs/GaAs QUANTUM WELL STRUCTURES**  
NUTKU F., DÖNMEZ Ö., Çokduygulular E., SARCAN F., KURUOĞLU F., MUTLU S., YILDIRIM S., EROL A.  
Turkish Physical Society 32nd International Physics Congress, Muğla, Turkey, 6 - 09 September 2016, vol.32, pp.129
20. **Investigation of Electronic Transport Properties in GaInNAs/GaAs Quantum Well Structures**  
NUTKU F., DÖNMEZ Ö., ÇOKDUYGULULAR E., SARCAN F., KURUOĞLU F., MUTLU S., YILDIRIM S., EROL A.  
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2016, pp.125
21. **Electronic transport properties of p-type GaInNAs/GaAs quantum well structures**  
MUTLU S., ÇOKDUYGULULAR E., ÇETINKAYA Ç., SARCAN F., DÖNMEZ Ö., EROL A.  
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2016, pp.125
22. **GaInNAs Based Resonance Cavity Enhanced Photodetector For Optical Communication Wavelength**  
SARCAN F., Nordin M. S., EROL A., Vickers A. J.  
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi, Muğla, Turkey, 6 - 09 September 2016, pp.106
23. **Temperature and electric field dependence of localization in modulation doped GaInNAs/GaAs quantum well structures**  
YILDIRIM S., EROL A., SARCAN F., NUTKU F., KURUOĞLU F., DÖNMEZ Ö.  
9th International Physics Conference of the Balkan Physical Union-BPU9, İstanbul, Turkey, 24 - 27 August 2015,

vol.9, pp.161

24. **Weak Localization and Weak Antilocalization in n- and p-type Modulation Doped GaInNAs/GaAs Quantum Wells**  
NUTKU F., SARCAN F., DÖNMEZ Ö., KURUOĞLU F., MUTLU S., EROL A., YILDIRIM S., ARIKAN M. Ç.  
İstanbul Üniversitesi Dünya Teknoloji, İnovasyon ve Girişimcilik Konferansı, İSTANBUL, TÜRKİYE, 28-30 Mayıs 2015, İstanbul, Turkey, 28 - 30 May 2015, pp.80
25. **Dilute Nitride Resonant Cavity Enhanced Photodetector With Internal Gain For Operation At 1.286 um**  
Balkan N., EROL A., SARCAN F., Nordin M. S.  
Spie Optics And Optoelectronics, Prague, Czech Republic, 13 - 16 April 2015, pp.48
26. **Magnetoresistance in n- and p-type Gainnas Gaas Modulation Doped Quantum Well Structures**  
NUTKU F., SARCAN F., DÖNMEZ Ö., EROL A., ARIKAN M. Ç.  
Türk Fizik Derneği 31.Uluslararası Fizik Kongresi, Muğla, Bodrum., Muğla, Turkey, 21 - 25 July 2014, pp.137
27. **Analytic Modeling Of Temperature Dependence of 2D Carrier Mobility In As Grown And Annealed GaInNAs/GaAs Quantum Well Structures**  
DÖNMEZ Ö., SARCAN F., Vaughan M., EROL A., Güneş M., ARIKAN M. Ç., Puustinen J., ARIKAN M. Ç.  
Türk Fizik Derneği 31. Uluslararası Fizik Kongresi,, Muğla, Turkey, 21 - 25 July 2014, pp.143
28. **Optical Properties of GaAsBi Ternary Alloy**  
SARCAN F., EROL A., ARIKAN M. Ç., Fontaine C.  
Novel Gain Materials And Devices Based On III-V-N/Bi Compounds,, İstanbul, Turkey, 24 - 26 September 2013, pp.41
29. **Investigation of GaBiAs Alloy Using Raman spectroscopy**  
AKALIN E., EROL A., SARCAN F., ARIKAN M. Ç., Fontaine C.  
Novel Gain Materials And Devices Based On III-V-N/Bi Compounds, İstanbul, Turkey, 24 - 26 September 2013, pp.47
30. **Thermal Annealing And Nitrogen Induced Effects On Electronic Transport in n- and p-type Modulation Doped GaInNAs GaAs Quantum Well Structures**  
DÖNMEZ Ö., SARCAN F., EROL A., Güneş M., ARIKAN M. Ç., Puustinen J., Guina M.  
Novel Gain Materials And Devices Based On III-V-N/Bi Compounds, İstanbul, Turkey, 24 - 26 September 2013, pp.40
31. **Effect of Alloy and Interface Roughness Scatterings On The Carrier Mobility in n- and p-type Modulation Doped GaInNAs/GaAs Quantum Well Structures**  
SARCAN F., DÖNMEZ Ö., Vaughan M. P., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
17th European Molecular Beam Epitaxy Workshop, Levi, Finland, 10 - 13 March 2013, pp.246
32. **Investigation Of Nitrogen Dependent In Plane Electron And Hole Effective Masses In GaInNAs/GaAs Quantum Well**  
SARCAN F., DÖNMEZ Ö., Vaughan M. P., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
17th European Molecular Beam Epitaxy Workshop, Levi, Finland, 10 - 13 March 2013, pp.300
33. **An Analysis Of Scattering Mechanisms In As Grown And Annealed N And P Type Modulation Doped Gainnas Gaas Quantum Wells**  
SARCAN F., DÖNMEZ Ö., Güneş M., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
Türk Fizik Derneği 29. Uluslararası Fizik Kongresi,, Muğla, Turkey, 5 - 08 September 2012, pp.139
34. **An Analysis of Hall Mobility In As Grown And Annealed n- and p-type Modulation Doped GaInNAs/GaAs quantum Wells**  
SARCAN F., DÖNMEZ Ö., Güneş M., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
International Conference On Superlattices, Nanostructures and Nanodevices, Dresden, Germany, 22 - 27 July 2012, pp.359
35. **A Comprehensive Study Of Optical Characterization of n- and p-type As Grown And Annealed Modulation Doped Gaas Gainnas Qw Structures**  
DÖNMEZ Ö., SARCAN F., EROL A., ARIKAN M. Ç., Ungan F., KAsapoğlu E., Sarı H., Puustinen J., Guina M.  
International Conference On Superlattices, Nanostructures and Nanodevices, Dresden, Germany, 22 - 27 July 2012

36. **A Comparative Study On Electronic Transport Properties of n- and p-type Modulation Doped Gainas Gaas And Dilute Nitride GaInNAs/GaAs Quantum Well**  
 Güneş M., DÖNMEZ Ö., SARCAN F., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
 European Materials Research Society, Strasbourg, France, 14 - 18 May 2012, pp.16
37. **Effect of Thermal Annealing On Optical And Electronic Transport Properties in n- and p-type Modulation Doped GaInNAs/GaAs Quantum Wells**  
 SARCAN F., DÖNMEZ Ö., Güneş M., EROL A., ARIKAN M. Ç., Puustinen J., Guina M.  
 European Materials Research Society, Paris, France, 14 - 18 May 2012, pp.14
38. **Electronic Transport Properties Of The GaInNAs/GaAs p-type As Grown And Annealed Modulation Doped Quantum Well Structures,**  
 EROL A., SARCAN F., Güneş M., ARIKAN M. Ç., Puustinen J., Guina M.  
 13th International Conference On Transparent Optical Networks, Stockholm, Stockholm, Sweden, 26 July - 30 June 2011, pp.19

## Patent

Sarcan F., Erol A., Highly Selective Resonant Cavity Enhanced Photodetector, Patent, CHAPTER G Physics, The Invention Registration Number: TR201505193B , Standard Registration, 2017

## Metrics

Publication: 71  
 Citation (WoS): 185  
 Citation (Scopus): 202  
 H-Index (WoS): 9  
 H-Index (Scopus): 10

## Congress and Symposium Activities

42, Photonics & Electromagnetics Research Symposium, Attendee, Xiamen, China, 2019  
 Nanophotonic and Micro/Nano Optic International Conference, Attendee, Paris, France, 2016  
 Türk Fizik Derneği 32. Uluslararası Fizik Kongresi, Attendee, Muğla, Turkey, 2016  
 Türk Fizik Derneği 31.Uluslararası Fizik Kongresi,, Attendee, Turkey, 2014  
 Novel Gain Materials And Devices Based On III-V-N/Bi Compounds,, Attendee, İstanbul, Turkey, 2013  
 Türk Fizik Derneği 29. Uluslararası Fizik Kongresi, Attendee, Muğla, Turkey, 2012  
 International Conference On Superlattices, Nanostructures and Nanodevices, Attendee, Dresden, Germany, 2012  
 European Materials Research Society, Attendee, Strasbourg, France, 2012  
 "New Frontiers in Optical Technologies", 6th International Summer School,, Attendee, Tampere, Finland, 2011  
 13th International Conference On Transparent Optical Networks, Attendee, Stockholm, Sweden, 2011  
 "Theoretical Techniques in Semiconductor Research" COST Action MP0805 Training School, Attendee, İstanbul, Turkey, 2011

## Research Areas

Metallurgical and Materials Engineering, Material science and engineering, Material Characterization, Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Optical Properties, Spectroscopy of Matter, Electronic transport in condensed matter, Natural Sciences, Engineering and Technology