

Asst. Prof. İSMAİL ALTUNTAŞ

Personal Information

Email: ialtuntas@cumhuriyet.edu.tr

Web: <https://avesis.cumhuriyet.edu.tr/ialtuntas>

Education Information

Doctorate, Sivas Cumhuriyet University, Fen Fakültesi, Fizik Bölümü, Turkey 2013 - 2018

Postgraduate, Sivas Cumhuriyet Üniversitesi, Fen Fakültesi, Fizik Bölümü, Turkey 2009 - 2013

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Safir alıtış üzerine mavi LED yapısının büyütülmesi ve yapısal karakterizasyonu, Sivas Cumhuriyet University, Fen Bilimleri Enstitüsü, Physicis, 2018

Postgraduate, Safir alıtış üzerine büyütülen GaN heteroyapılarının Hall sistemi ile elektriksel karakterizasyonu, Sivas Cumhuriyet Üniversitesi, Fen Fakültesi, Fizik Bölümü, 2013

Research Areas

Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Sivas Cumhuriyet University, Mühendislik Fakültesi, Nanoteknoloji Mühendisliği, 2018 - Continues

Research Assistant, 2011 - 2018

Courses

Nanomalzemelerde Karakterizasyon Yöntemleri - I, Undergraduate, 2018 - 2019

Mühendisler için Karmaşık Analiz (İngilizce), Undergraduate, 2019 - 2020

Vakum Tekniğı ve Teknolojisi, Postgraduate, 2019 - 2020

Mühendisler için Termodinamik - I (İngilizce), Undergraduate, 2019 - 2020

İş Güvenliğı ve Sağığı, Undergraduate, 2018 - 2019

Düşük Boyutlu Sistemler, Undergraduate, 2018 - 2019

Nanomalzemelerde Karakterizasyon Yöntemleri - II, Undergraduate, 2019 - 2020

Nanomalzemelerin Üretim Yöntemleri - II, Undergraduate, 2018 - 2019

Uzmanlık Alan Dersi, Postgraduate, 2019 - 2020

İş Sağığı ve Güvenliğı - I, Undergraduate, 2019 - 2020

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- I. **ZnO/Al₂O₃ layered structures deposited by RF magnetron sputtering on glass: growth characteristics, optical properties, and microstructural analysis**
ŞENADIM TÜZEMEN E., ÖZER A., DEMİR İ., ALTUNTAŞ İ., ŞİMŞİR M.
JOURNAL OF THE AUSTRALIAN CERAMIC SOCIETY, 2021 (Journal Indexed in SCI)
- II. **Influence of the PLE growth temperature on quality of MOVPE grown AlN/Si (111)**
Altuntas İ., Kocak M. N., Yolcu G., Budak H. F., Kasapoğlu A. E., Horoz S., Gür E., Demir İ.
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.127, no.105733, pp.105733, 2021 (Journal Indexed in SCI Expanded)
- III. **Distributed contact flip chip InGaN/GaN blue LED; comparison with conventional LEDs**
Genc M., Sheremet V., Elci M., Kasapoglu A. E., Altuntas İ., Demir İ., Egin G., Islamoglu S., GÜR E., Muzafferoglu N., et al.
SUPERLATTICES AND MICROSTRUCTURES, vol.128, pp.9-13, 2019 (Journal Indexed in SCI)
- IV. **Microstructural Evolution of MOVPE Grown GaN by the Carrier Gas**
Demir İ., Altuntas İ., Kasapoglu A. E., Mobtakeri S., Guer E., Elagoz S.
SEMICONDUCTORS, vol.52, no.16, pp.2030-2038, 2018 (Journal Indexed in SCI)
- V. **Comprehensive growth and characterization study on highly n-doped InGaAs as a contact layer for quantum cascade laser applications**
DEMİR İ., ALTUNTAŞ İ., Bulut B., Ezzedini M., ERGÜN Y., ELAGÖZ S.
SEMICONDUCTOR SCIENCE AND TECHNOLOGY, vol.33, no.5, 2018 (Journal Indexed in SCI)
- VI. **InGaN stress compensation layers in InGaN/GaN blue LEDs with step graded electron injectors**
Sheremet V., Gheshlaghi N., Sozen M., Elci M., Sheremet N., Aydinli A., Altuntas İ., Ding K., Avrutin V., Ozgur U., et al.
SUPERLATTICES AND MICROSTRUCTURES, vol.116, pp.253-261, 2018 (Journal Indexed in SCI)
- VII. **Simulation of Highly Reflective GaN/Al_xGa_{1-x}N Distributed Bragg Reflector Structure for UV-Blue LEDs**
Alaydin B. Ö., Altuntas İ., Tuzemen E., Elagoz S.
JOURNAL OF NANOELECTRONICS AND OPTOELECTRONICS, vol.13, no.3, pp.387-393, 2018 (Journal Indexed in SCI)
- VIII. **The effects of two-stage HT-GaN growth with different V/III ratios during 3D-2D transition**
ALTUNTAŞ İ., DEMİR İ., KASAPOĞLU A. E., Mobtakeri S., GÜR E., ELAGÖZ S.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.51, no.3, 2018 (Journal Indexed in SCI)
- IX. **Two-step passivation for enhanced InGaN/GaN light emitting diodes with step graded electron injectors**
Sheremet V., Genc M., Gheshlaghi N., Elci M., Sheremet N., Aydinli A., Altuntas İ., Ding K., Avrutin V., Ozgur U., et al.
SUPERLATTICES AND MICROSTRUCTURES, vol.113, pp.623-634, 2018 (Journal Indexed in SCI)
- X. **The role of ITO resistivity on current spreading and leakage in InGaN/GaN light emitting diodes**
Sheremet V., Genc M., Elci M., Sheremet N., Aydinli A., Altuntas İ., Ding K., Avrutin V., Ozgur U., Morkoc H.
SUPERLATTICES AND MICROSTRUCTURES, vol.111, pp.1177-1194, 2017 (Journal Indexed in SCI)
- XI. **Growth kinetics of O-polar Be_xMg_{1-x}Zn_{1-x-y}O alloy: Role of Zn to Be and Mg flux ratio as a guide to growth at high temperature**
Ullah M. B., Avrutin V., Nakagawara T., Hafiz S., Altuntas İ., Ozgur U., Morkoc H.
JOURNAL OF APPLIED PHYSICS, vol.121, no.18, 2017 (Journal Indexed in SCI)
- XII. **The hydrostatic pressure and temperature effects on hydrogenic impurity binding energies in GaAs/In_xGa_{1-x}As/GaAs square quantum well**
Baser P., Altuntas İ., Elagoz S.
SUPERLATTICES AND MICROSTRUCTURES, vol.92, pp.210-216, 2016 (Journal Indexed in SCI)

- XIII. **Structural and electrical properties of nitrogen-doped ZnO thin films**
Tuzemen E., Kara K., ELAGÖZ S., TAKCI D. K. , ALTUNTAŞ İ., ESEN R.
APPLIED SURFACE SCIENCE, vol.318, pp.157-163, 2014 (Journal Indexed in SCI)

Articles Published in Other Journals

- I. **The GaN Epilayer Grown by MOVPE: Effect of The Different Nucleation Layer Temperatures**
Altuntaş İ., Elagöz S.
International Journal of Innovative Engineering Applications, vol.5, no.1, pp.6-10, 2021 (Other Refereed National Journals)
- II. **XRD and photoluminescence measurements of GaN grown on dome shaped patterned sapphire with different NH₃ flow rates**
Altuntaş İ.
Cumhuriyet Science Journal, vol.42, no.1, pp.184-190, 2021 (Other Refereed National Journals)
- III. **The Effect of Si (111) Substrate Surface Cleaning on Growth Rate and Crystal Quality of MOVPE Grown AlN**
Pertikel İ., Altuntaş İ., Demir İ.
Gazi University Journal of Science, vol.1, pp.1, 2021 (Journal Indexed in ESCI)
- IV. **In concentration dependence of shallow impurity binding energy under the hydrostatic pressure**
BAŞER P., ALTUNTAŞ İ., ELAGÖZ S.
Marmara Üni fen bilimleri dergisi, vol.23, no.4, pp.171-180, 2011 (Other Refereed National Journals)

Refereed Congress / Symposium Publications in Proceedings

- I. **Si (111) Alttaşı Üzerine Büyütülmüş AlN İnce Filmlerin Spektroskopik Elipsometri Tekniği İle Optik Karakterizasyonu**
Karakuş İ., Altuntaş İ., Demir İ.
9. Uluslararası Bilimsel Araştırmalar Kongresi, Fen ve Mühendislik Bilimleri, Ankara, Turkey, 12 - 13 December 2020, pp.125
- II. **Çekirdeklenme Tabakası Sıcaklığının MOCVD Yöntemi İle Büyütülen AlN İnce Filmlerin Kristal Kalitesi Üzerindeki Etkisi**
Şimşek İ., Yolcu G., Koçak M. N. , Altuntaş İ., Demir İ.
9. Uluslararası Bilimsel Araştırmalar Kongresi, Fen ve Mühendislik Bilimleri, Ankara, Turkey, 12 - 13 December 2020, pp.417-426
- III. **MOVPE PALE Tekniği ile Safir Üzerine Si Katkılı AlN'in Epitaksiyel Büyütülmesi ve Karakterizasyonu**
Pürlü K. M. , Perkitel İ., Altuntaş İ., Demir İ.
9. Uluslararası Bilimsel Araştırmalar Kongresi, Fen ve Mühendislik Bilimleri, Ankara, Turkey, 12 - 13 December 2020, pp.167
- IV. **Annealing effect on optical and electrical properties of p-GaN**
ALTUN D., ALTUNTAŞ İ., DEMİR İ., GÜR E., ELAGÖZ S.
International Eurasian Conference on Science, Engineering and Technology (EurasianSciEnTech 2018), 22 - 23 November 2018
- V. **Defect Reduction in GaN Epilayer With Different V/III Ratio Grown On Patterned Sapphire Substrate**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , Bulut B., ELAGÖZ S.
International Congress on Engineering and Architecture (ENAR-2018), 14 - 16 November 2018
- VI. **Growth and characterization of epitaxially grown GaN layer on patterned sapphire substrate**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , Bulut B., ELAGÖZ S.
Lasers Optics Photonics and Atomic Plasma Science, 16 - 17 July 2018
- VII. **Pulsed MOVPE Growth of High Quality AlGaIn epilayers for Ultraviolet LED Applications**

DEMİR İ., McClintock R., KOÇAK Y., ALTUNTAŞ İ., KASAPOĞLU A. E. , GÜR E., ELAGÖZ S., Razeghi M.

European Conference on Laser Optics Photonics, 16 - 17 July 2018

- VIII. **Comprehensive comparison of epitaxially grown GaN layer grown on conventional sapphire and patterned sapphire substrate**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , Bulut B., ELAGÖZ S.
19th World Congress on Materials Science and Engineering, 11 - 13 July 2018
- IX. **EFFECT OF V/III RATIO ON C-PLANE GAN LAYERS WITH TWO STAGES HT-GAN**
ALTUNTAŞ İ., DEMİR İ., ELAGÖZ S.
4th International Conference on Engineering and Natural Sciences (ICENS), 2 - 06 May 2018
- X. **GROWTH AND CHARACTERIZATION STUDY ON STRAIN BALANCED QUANTUM CASCADE LASER STRUCTURES**
DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S.
4th International Conference on Engineering and Natural Sciences (ICENS), 2 - 06 May 2018
- XI. **The Effects of Two Stages GaN Growth with Different V/III Ratios During 3D-2D Transition**
ALTUNTAŞ İ., DEMİR İ., ELAGÖZ S.
8th International Conference and Exhibition on LASERS, OPTICS PHOTONICS, Las Vegas, United States Of America, 15 - 17 November 2017
- XII. **High quality nitride materials (AlN and AlGaN) on Si and sapphire substrates and UV-LED applications**
DEMİR İ., Li H., Robin Y., McClintock R., ALTUNTAŞ İ., ELAGÖZ S., Zekentes K., Razeghi M.
8th International Conference and Exhibition on Lasers, Optics Photonics, LasVegas, United States Of America, 15 - 17 November 2017, vol.4, pp.149
- XIII. **The Influences of Carrier Gas Flow on Crystal Quality of GaN**
DEMİR İ., ALTUNTAŞ İ., Bulut B., ELAGÖZ S.
Turkish Physical Society 33rd International Physics Congress, Bodrum/Muğla, Turkey, 6 - 10 September 2017
- XIV. **Simulation of Highly Reflective GaN/Al_xGa_{1-x}N DBR Structure for UV-Blue LEDs**
ALAYDİN B. Ö. , ALTUNTAŞ İ., ŞENADIM TÜZEMEN E., ELAGÖZ S.
4th INTERNATIONAL CONFERENCE ON MATERIALS SCIENCE AND NANOTECHNOLOGY FOR NEXT GENERATION (MSNG2017), 28 - 01 June 2017
- XV. **Using Source Delay Technique to Grow High Quality InAlAs/InGaAs superlattices by MOCVD**
DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S.
17th European Workshop on Metalorganic Vapour Phase Epitax (EW-MOVPE17), Greonable, France, 18 - 21 June 2017
- XVI. **Growth of High Quality InGaN/GaN Multi Quantum Well via MOCVD and Introducing a Technique for Precise Thickness Determination**
ALTUNTAŞ İ., DEMİR İ., ELAGÖZ S.
17th European Workshop on Metalorganic Vapour Phase Epitax (EW-MOVPE17), Greonable, France, 18 - 21 June 2017
- XVII. **STUDY OF DEFECTS IN GAN EPILAYER GROWN ON PATTERNED SAPPHIRE SUBSTRATE**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , BULUT B., ERKUŞ M., ÇETİNKAYA A. O. , ELAGÖZ S.
III International Conference on Engineering and Natural Science (ICENS), Budapest, Hungary, 3 - 07 May 2017
- XVIII. **Improved GaN Quality by Two Stages Ammonia Flow**
DEMİR İ., ALTUNTAŞ İ., BULUT B., KIZILBULUT A. A. , ELAGÖZ S.
III International Conference on Engineering and Natural Science (ICENS), Budapest, Hungary, 3 - 07 May 2017
- XIX. **Structural Comparison of Epitaxially Grown GaN Layer on Conventional Sapphire and Patterned Sapphire Substrates**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , BULUT B., ELAGÖZ S.
III International Conference on Engineering and Natural Science (ICENS), Budapest, Hungary, 3 - 07 May 2017
- XX. **Optical Comparison of MOCVD Grown GaN Layers on Flat and Patterned Sapphire Substrates**
DEMİR İ., ALTUNTAŞ İ., KIZILBULUT A. A. , BULUT B., ELAGÖZ S.
III International Conference on Engineering and Natural Science (ICENS), Budapest, Hungary, 3 - 07 May 2017

- XXI. **High Quality InGaAs InAlAs Superlattices Growth by MOCVD**
DEMİR İ., Alaydın B. Ö. , ALTUNTAŞ İ., ELAGÖZ S.
3th International Nanoscience and Nanotechnology for Next Generation, 20 - 23 October 2016
- XXII. **The Effects of Carrier Gas on 3D 2D Transition of GaN**
ALTUNTAŞ İ., DEMİR İ., KIZILBULUT A. A. , BULUT B., ELAGÖZ S.
3th International Nanoscience and Nanotechnology for Next Generation, Antalya, Turkey, 20 - 23 October 2016
- XXIII. **High Quality InGaAs/InAlAs Superlattices Growth by MOCVD**
DEMİR İ., ALAYDIN B. Ö. , ALTUNTAŞ İ., ELAGÖZ S.
3th NANOSCIENCE NANOTECHNOLOGY FOR NEXT GENERATION, 1 - 03 October 2016
- XXIV. **AMMONIA PRE FLOW EFFECTS IN GROWTH OF EPITAXIAL GAN ON SAPPHIRE SUBSTRATE**
BULUT B., DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S.
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi (TFD32), Muğla/Bodrum, Turkey, 6 - 09 September 2016
- XXV. **EFFECT OF RECRYSTALLIZATION TIME ON TWO STEP MOCVD GROWN GAN**
ALTUNTAŞ İ., DEMİR İ., ELAGÖZ S.
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi (TFD32), Muğla/Bodrum, Turkey, 6 - 09 September 2016
- XXVI. **THE EFFECTS OF NUCLEATION LAYER THICKNESS ON QUALITY OF GAN FILM**
KIZILBULUT A. A. , DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S.
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi (TFD32), Muğla/Bodrum, Turkey, 6 - 09 September 2016
- XXVII. **A systematical study of nucleation layer growth temperature effects of GaN Buffer Layer**
ALTUN D., DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S., ŞENADIM TÜZEMEN E.
TFD32, Türk Fizik Derneği 32. Uluslararası Fizik Kongresi 6-9 Eylül 2016, Muğla Bodrum, 6 - 09 September 2016
- XXVIII. **Effect of Recrystallization Time on Two Steps MOCVD Grown GaN**
ALTUNTAŞ İ., DEMİR İ., ELAGÖZ S.
Turkish Physical Society 32nd International Physics Congress, Muğla, Turkey, 6 - 09 September 2016
- XXIX. **A SYSTEMATICAL STUDY OF NUCLEATION LAYER GROWTH TEMPERATURE EFFECTS OF GaN BUFFER LAYER**
ALTUN D., DEMİR İ., ŞENADIM TÜZEMEN E., ALTUNTAŞ İ., ELAGÖZ S.
Türk Fizik Derneği 32. Uluslararası Fizik Kongresi (TFD32), 6 - 09 September 2016
- XXX. **Determine The refractive Index of Wurtzite GaN On Sapphire By Spectroscopic Ellipsometry**
KIZILBULUT A. A. , DEMİR İ., ALTUNTAŞ İ., ELAGÖZ S.
16th International Balkan Workshop on Applied Physics and Materials Science (IBWAP 2016), Constanta, Romania, 6 - 09 July 2016
- XXXI. **Hydrgenic Impurity Dround Srare in GaAs GaInAs Single Quantum Well Structures**
BAŞER P., ALTUNTAŞ İ., ELAGÖZ S.
9th International Physics Conference of The Balkan Physical Union-BPU9, 24 - 27 August 2015
- XXXII. **Structural and electrical properties of nitrogen doped ZnO thin films**
ŞENADIM TÜZEMEN E., KARA K., ELAGÖZ S., TAKCI D. K. , ALTUNTAŞ İ.
Nanotr-9-Erzurum, 24 - 28 June 2013
- XXXIII. **Specular reflectance spectra of GaAs on Ge substrate grown by MOCVD**
KIZILBULUT A. A. , ŞENADIM TÜZEMEN E., DEMİR İ., ALTUNTAŞ İ., DİDEM B., KARKI H. D. , ELAGÖZ S.
Nanotr-9-Erzurum, 24 - 28 June 2013

Citations

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