

Prof. Dr. MUSTAFA ALEVLİ

Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: A-2006-2013

ScopusID: 6506787393

Yoksis Araştırmacı ID: 183000

Eğitim Bilgileri

Doktora, Georgia State University, Physics & Astronomy, Amerika Birleşik Devletleri 2004 - 2008

Yüksek Lisans, Georgia State University, Physics&Astronomy, Amerika Birleşik Devletleri 2001 - 2004

Yüksek Lisans, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YL) (Tezli), Türkiye 1998 - 2001

Lisans, Marmara Üniversitesi, Fen - Edebiyat Fakültesi, Fizik Bölümü, Türkiye 1994 - 1998

Yaptığı Tezler

Doktora, Growth and characterization of indium nitride layers grown by high-pressure chemical vapor deposition, Georgia State University, Physics & Astronomy, 2005

Yüksek Lisans, Titanyum atomunun toplam ve kısmi fotoiyonlaşma tesir kesiti hesapları, Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YL) (Tezli), 2001

Yüksek Lisans, Cut off wavelength dependence on doping concentration for highly doped p-type GaAs detector structures, Georgia State University, Physics&Astronomy, 2001

Araştırma Alanları

Baskı Devreler, İnce Film, Kalın Film ve Hibrid Tümüleşik Devreler, Dönüştürücüler ve Algılama Aygıtları , Nanoteknoloji, Optik ve Fotonik, Aydınlatma Teknolojisi , Yenilenebilir Enerji, Dielektrik Malzeme ve Aygıtlar , Optik Malzeme ve Aygıtlar , Optoelektronik Malzeme ve Aygıtlar , Yarı İletken Malzeme ve Aygıtlar , Güneş Enerjisi, Fizik, Atomik Özellikler ve Fotonla Etkileşmeler, Moleküler Özellikler ve Fotonla Etkileşmeler, Disiplinlerarası Fizik ve İlgili Bilim ve Teknoloji Alanları, Optik, Yoğun Madde 1:Yapısal, Mekanik ve Termal Özellikler

Akademik Unvanlar / Görevler

Prof. Dr., Marmara Üniversitesi, Fen - Edebiyat Fakültesi, Fizik Bölümü, 2019 - Devam Ediyor

Doç. Dr., Marmara Üniversitesi, Fen - Edebiyat Fakültesi, 2013 - 2019

Yrd. Doç. Dr., Marmara Üniversitesi, Fen - Edebiyat Fakültesi, Fizik Bölümü, 2011 - 2013

Uzman, İhsan Doğramacı Bilkent Üniversitesi, Ulusal Nanoteknoloji Uygulama Ve Araştırma Merkezi, 2010 - 2011

Öğretim Görevlisi Dr., University of Nevada, Las Vegas, Harry Reid Center For Enviromental Studies, 2010 - 2010

Öğretim Görevlisi, Georgia State University, College Of Arts And Sciences, Physics And Astronomy, 2008 - 2010

Araştırma Görevlisi, Georgia State University, College Of Arts & Sciences, Physics & Astronomy, 2001 - 2008
Araştırma Görevlisi, Marmara Üniversitesi, Fen - Edebiyat Fakültesi, Fizik Bölümü, 1998 - 2001

Akademik İdari Deneyim

Marmara Üniversitesi, Fen Bilimleri Enstitüsü, Fizik (YI) (Tezli) (İngilizce), 2011 - Devam Ediyor

Yönetilen Tezler

Alevli M., Optical Properties of Group III Nitride Thin films grown by hollow cathode plasma assisted atomic layer deposition, Doktora, N.Güngör(Öğrenci), 2019

ALEVLİ M., Optical properties of group III-nitride thin films grown by hollow cathode plasma assisted atomic layer deposition, Doktora, N.Güngör(Öğrenci), 2019

ALEVLİ M., Plazma ile etkilendirilmiş atomik katman büyütme yöntemi ile büyütülen AlN ince filmlerin optik özellikleri, Yüksek Lisans, N.GÜNGÖR(Öğrenci), 2013

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- I. **Incorporation Mechanism of Potassium in FAPbI₃ Perovskite Solar Cell Materials**
ALEVLİ M., Gungor N., KAVAK P., ŞAHİN N., Corcor A., Topal I., ESMER K., ÇAKMAKÇI E., DEĞER C., YAVUZ İ.
Journal of Physical Chemistry C, cilt.128, sa.7, ss.2759-2766, 2024 (SCI-Expanded)
- II. **Oxygen incorporation in AlN films grown by plasma-enhanced atomic layer deposition**
Gungor N., ALEVLİ M.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.40, sa.2, 2022 (SCI-Expanded)
- III. **Effect of N-2/H-2 plasma on the growth of InN thin films on sapphire by hollow-cathode plasma-assisted atomic layer deposition**
ALEVLİ M., Gungor N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.38, sa.6, 2020 (SCI-Expanded)
- IV. **Visible/infrared refractive index and phonon properties of GaN films grown on sapphire by hollow-cathode plasma-assisted atomic layer deposition**
Gungor N., ALEVLİ M.
Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, cilt.37, sa.5, 2019 (SCI-Expanded)
- V. **Role of film thickness on the structural and optical properties of GaN on Si (100) grown by hollow-cathode plasma-assisted atomic layer deposition**
Gungor N., ALEVLİ M.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.36, sa.2, 2018 (SCI-Expanded)
- VI. **Influence of N-2/H-2 and N-2 plasma on binary III-nitride films prepared by hollow-cathode plasma-assisted atomic layer deposition**
ALEVLİ M., Gungor N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.36, sa.1, 2018 (SCI-Expanded)
- VII. **Enhancement in c-Si solar cells using 16 nm InN nanoparticles**
Chowdhury F. I., Alnuaimi A., Alkis S., ORTAÇ B., Akturk S., ALEVLİ M., Dietz N., OKYAY A. K., Nayfeh A.
MATERIALS RESEARCH EXPRESS, cilt.3, sa.5, 2016 (SCI-Expanded)
- VIII. **Comparison of trimethylgallium and triethylgallium as "Ga" source materials for the growth of ultrathin GaN films on Si (100) substrates via hollow-cathode plasma-assisted atomic layer deposition**
ALEVLİ M., Haider A., Kizir S., Leghari S. A., BIYIKLI N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.34, sa.1, 2016 (SCI-Expanded)

- IX. **Substrate temperature influence on the properties of GaN thin films grown by hollow-cathode plasma-assisted atomic layer deposition**
ALEVLİ M., Gungor N., Haider A., Kizir S., Leghari S. A., BIYIKLI N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.34, sa.1, 2016 (SCI-Expanded)
- X. **Enhancement of polycrystalline silicon solar cells efficiency using indium nitride particles**
Alkis S., Chowdhury F. I., ALEVLİ M., Dietz N., Yalızay B., Akturk S., Nayfeh A., OKYAY A. K.
JOURNAL OF OPTICS, cilt.17, sa.10, 2015 (SCI-Expanded)
- XI. **A Near-Infrared Range Photodetector Based on Indium Nitride Nanocrystals Obtained Through Laser Ablation**
Tekcan B., Alkis S., ALEVLİ M., Dietz N., ORTAÇ B., BIYIKLI N., OKYAY A. K.
IEEE ELECTRON DEVICE LETTERS, cilt.35, sa.9, ss.936-938, 2014 (SCI-Expanded)
- XII. **Enhanced memory effect via quantum confinement in 16nm InN nanoparticles embedded in ZnO charge trapping layer**
El-Atab N., Cimen F., Alkis S., Orta B., ALEVLİ M., Dietz N., OKYAY A. K., Nayfeh A.
APPLIED PHYSICS LETTERS, cilt.104, sa.25, 2014 (SCI-Expanded)
- XIII. **Thermal stability of InN epilayers grown by high pressure chemical vapor deposition**
Acharya A. R., Gamage S., Senevirathna M. K. I., ALEVLİ M., Bahadır K., Melton A. G., Ferguson I., Dietz N., Thoms B. D.
APPLIED SURFACE SCIENCE, cilt.268, ss.1-5, 2013 (SCI-Expanded)
- XIV. **Generation of InN nanocrystals in organic solution through laser ablation of high pressure chemical vapor deposition-grown InN thin film**
Alkis S., ALEVLİ M., Burzhuev S., Vural H. A., OKYAY A. K., ORTAÇ B.
JOURNAL OF NANOPARTICLE RESEARCH, cilt.14, sa.8, 2012 (SCI-Expanded)
- XV. **Structural properties of AlN films deposited by plasma-enhanced atomic layer deposition at different growth temperatures**
Alevli M., Ozgit C., Donmez I., Biyikli N.
PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, cilt.209, ss.266-271, 2012 (SCI-Expanded)
- XVI. **Optical properties of AlN thin films grown by plasma enhanced atomic layer deposition**
Alevli M., Ozgit C., Donmez I., BIYIKLI N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.30, sa.2, 2012 (SCI-Expanded)
- XVII. **Self-limiting low-temperature growth of crystalline AlN thin films by plasma-enhanced atomic layer deposition**
Ozgit C., Donmez I., ALEVLİ M., BIYIKLI N.
THIN SOLID FILMS, cilt.520, sa.7, ss.2750-2755, 2012 (SCI-Expanded)
- XVIII. **Atomic layer deposition of GaN at low temperatures**
Ozgit C., Donmez I., ALEVLİ M., BIYIKLI N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.30, sa.1, 2012 (SCI-Expanded)
- XIX. **The Influence of Growth Temperature on the Properties of AlN Films Grown by Atomic Layer Deposition**
ALEVLİ M., Ozgit C., Donmez i.
ACTA PHYSICA POLONICA A, cilt.120, 2011 (SCI-Expanded)
- XX. **The influence of N-2/H-2 and ammonia N source materials on optical and structural properties of AlN films grown by plasma enhanced atomic layer deposition**
ALEVLİ M., Ozgit C., Donmez I., BIYIKLI N.
JOURNAL OF CRYSTAL GROWTH, cilt.335, sa.1, ss.51-57, 2011 (SCI-Expanded)
- XXI. **Optical properties of InN grown on templates with controlled surface polarities**
Kirste R., Wagner M., Schulze J., Strittmatter A., Collazo R., Sitar Z., ALEVLİ M., Dietz N., Hoffmann A.
PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, cilt.207, sa.10, ss.2351-2354, 2010 (SCI-Expanded)
- XXII. **The influence of the group V/III molar precursor ratio on the structural properties of InGaN layers grown by HPCVD**

DURKAYA G., BUEGLER M., ATALAY R., Senevirathna I., ALEVLÍ M., HÍTZEMANN O., KAÍSER M., KIRSTE R., HOFFMANN A., DIETZ N.

PHYSICA STATUS SOLIDI A-APPLICATIONS AND MATERIALS SCIENCE, cilt.207, sa.6, ss.1379-1382, 2010 (SCI-Expanded)

- XXIII. **Optical characterization of InN layers grown by high-pressure chemical vapor deposition**
ALEVLÍ M., ATALAY R., DURKAYA G., Weesekera A., Perera A. G. U., Dietz N., Kirste R., Hoffmann A.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.26, sa.4, ss.1023-1026, 2008 (SCI-Expanded)
- XXIV. **Desorption of hydrogen from InN(0001) over-bar observed by HREELS**
Bhatta R., Thoms B. D., ALEVLÍ M., Dietz N.
SURFACE SCIENCE, cilt.602, sa.7, ss.1428-1432, 2008 (SCI-Expanded)
- XXV. **The influence of substrate polarity on the structural quality of InN layers grown by high-pressure chemical vapor deposition**
Dietz N., ALEVLÍ M., ATALAY R., DURKAYA G., Collazo R., Tweedie J., Mita S., Sitar Z.
APPLIED PHYSICS LETTERS, cilt.92, sa.4, 2008 (SCI-Expanded)
- XXVI. **Surface electron accumulation in indium nitride layers grown by high pressure chemical vapor deposition**
Bhatta R., Thoms B., ALEVLÍ M., Dietz N.
SURFACE SCIENCE, cilt.601, sa.19, 2007 (SCI-Expanded)
- XXVII. **Carrier concentration and surface electron accumulation in indium nitride layers grown by high pressure chemical vapor deposition**
Bhatta R. P., Thoms B. D., Weerasekera A., Perera A. G., ALEVLÍ M., Dietz N.
JOURNAL OF VACUUM SCIENCE & TECHNOLOGY A, cilt.25, sa.4, ss.967-970, 2007 (SCI-Expanded)
- XXVIII. **Performance improvements of ultraviolet/infrared dual-band detectors**
Perera A., Ariyawansa G., Rinzan M., Stevens M., ALEVLÍ M., Dietz N., Matsik S., Asghar A., Ferguson I., Luo H., et al.
INFRARED PHYSICS & TECHNOLOGY, cilt.50, ss.142-148, 2007 (SCI-Expanded)
- XXIX. **Characterization of InN layers grown by high-pressure chemical vapor deposition**
ALEVLÍ M., DURKAYA G., Weerasekera A., Perera A. G. U., Dietz N., Fenwick W., Woods V., Ferguson I. F.
APPLIED PHYSICS LETTERS, cilt.89, sa.11, 2006 (SCI-Expanded)
- XXX. **GaN/AlGaN ultraviolet/infrared dual-band detector**
Ariyawansa G., Rinzan M. B., ALEVLÍ M., Strassburg M., Dietz N., Perera A. G. U., Matsik S. G., Asghar A., Ferguson I., Luo H., et al.
APPLIED PHYSICS LETTERS, cilt.89, sa.9, 2006 (SCI-Expanded)
- XXXI. **Surface structure, composition, and polarity of indium nitride grown by high-pressure chemical vapor deposition**
Bhatta R. P., Thoms B. D., ALEVLÍ M., Woods V., Dietz N.
APPLIED PHYSICS LETTERS, cilt.88, sa.12, 2006 (SCI-Expanded)
- XXXII. **The Fermi level dependence of the optical and magnetic properties of Ga_{1-x}Mn_xN grown by metal-organic chemical vapour deposition**
Strassburg M., Kane M., Asghar A., Song Q., Zhang Z. J., Senawiratne J., ALEVLÍ M., Dietz N., Summers C. J., Ferguson I.
JOURNAL OF PHYSICS-CONDENSED MATTER, cilt.18, sa.9, ss.2615-2622, 2006 (SCI-Expanded)
- XXXIII. **The characterization of InN growth under high-pressure CVD conditions**
Dietz N., ALEVLÍ M., Woods V., Strassburg M., Kang H., Ferguson I.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, cilt.242, sa.15, ss.2985-2994, 2005 (SCI-Expanded)
- XXXIV. **The effects of light heavy hole transitions on the cutoff wavelengths of far infrared detectors**
Perera A. G. U., Matsik S. G., Rinzan M. B., Weerasekera A., ALEVLÍ M., Liu H., Buchanan M., Zvonkov B., Gavrilenko V.
Infrared Physics, cilt.44, ss.347-353, 2003 (SCI-Expanded)
- XXXV. **Equation of state of alkane and alkylbenzene liquids: A test of the group contributions of scaling parameters for physical and chemical mixtures**
Yahsi U., Kuzeci S., Alevli M.
INTERNATIONAL JOURNAL OF THERMOPHYSICS, cilt.23, sa.2, ss.501-512, 2002 (SCI-Expanded)

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Critical Layer Thickness of GaN Thin Films on sapphire grown by hollow-cathode plasma assisted atomic layer deposition**
ALEVLİ M., Gungor N.
European Materials Research Society Spring 2018, Fransa, 18 - 22 Haziran 2018
- II. **Optical properties of GaN and InN on quartz grown by hollow-cathode plasma-assisted atomic layer deposition**
Gungor N., ALEVLİ M.
ICG Annual meeting, 22 - 25 Ekim 2017
- III. **Critical Thickness on Optical Properties at UV VIS and Infrared Region of GaN Thin Films Grown by Hollow Cathode Assisted Atomic Layer Deposition**
Gungor N., ALEVLİ M.
Fotonik 2016 /18. ulusal optik, Elektro Optik Fotonik Çalıştayı, Ankara, Türkiye, 23 Eylül 2016
- IV. **THE ROLE OF THICKNESS ON INFRARED OPTICAL PROPERTIES OF GALLIUM NITRIDE THIN FILMS GROWN BY HOLLOW CATHODE PLASMA ASSITED ATOMIC LAYER DEPOSITION**
Gungor N., ALEVLİ M., Kızır S., Haider A., BIYIKLI N.
Turkish Physical Society 32nd International Physics Congress, Bodrum, Türkiye, 6 - 09 Eylül 2016
- V. **Infrared dielectric functions phonon modes and band gap properties of plasma assisted ALD grown In_xGa_{1-x}N films**
ALEVLİ M., Gungor N., Haider A., Kızır S., BIYIKLI N.
The 16th International Conference on Atomic Layer Deposition, Dublin, İrlanda, 24 - 27 Temmuz 2016
- VI. **The Role of Film Thickness on the Visible UV and Infrared Optical Properties of GaN Films Grown By Hollow Cathode Plasma Assisted Atomic Layer Deposition**
ALEVLİ M., Gungor N., Haider A., Kızır S., BIYIKLI N.
The 16th International Conference on Atomic Layer Deposition, Dublin, İrlanda, 24 - 27 Temmuz 2016
- VII. **Influence of N₂ H₂ and N₂ Plasma on Binary III Nitride Films Prepared by Hollow Cathode Plasma Assisted Atomic Layer Deposition**
ALEVLİ M., Gungor N., Ozgit Akgun C., Haider A., Kızır S., BIYIKLI N.
The 16th International Conference on Atomic Layer Deposition, Dublin, İrlanda, 24 - 27 Temmuz 2016
- VIII. **Effect of Substrate Temperature and Ga source Precursor on Growth and Material Properties of GaN Grown by Hollow Cathode Plasma Assisted Atomic Layer Deposition**
Haider A., Kızır S., Deminsky P., Tsymbalenko O., Leghari S. A., BIYIKLI N., ALEVLİ M., Gungor N.
36th IEEE International Conference on Electronics and Nanotechnology (ELNANO), Kyiv, Ukrayna, 19 - 21 Nisan 2016, ss.132-134
- IX. **Hollow Cathode Plasma Assisted Atomic Layer Deposition of Wurtzite InN and In_xGa_{1-x}N Thin Films with Low Impurity Content**
Haider A., Kızır S., Ozgit Akgun C., Goldenberg E., ALEVLİ M., OKYAY A. K., BIYIKLI N.
American Vacuum Society 62nd international symposium, 18 - 23 Ekim 2015
- X. **Comparison Studies of GaN Grown with Trimethylgallium and Triethylgallium for Optoelectronic Applications**
ALEVLİ M., Heider A., Gungör N., Kızır S., Sabri A., OKYAY A. K., BIYIKLI N.
American vacuum Society 62 nd International Meeting, San-Jose, Kostarika, 18 - 23 Ekim 2015
- XI. **Comparison of Trimethylgallium and Triethylgallium as Ga Source Materials for the Growth of Ultra thin GaN Films via Hollow cathode Plasma assisted ALD**
ALEVLİ M., Gungör N., Özgüt Akgün Ç., Haider A., Kızır S., Leghari S., Alkis S., OKYAY A. K., BIYIKLI N.
American Vacuum Society, Portland, Amerika Birleşik Devletleri, 28 Haziran - 01 Temmuz 2015
- XII. **Substrate Temperature Influence on the Properties of GaN Thin Films Grown by Hollow cathode Plasma assisted Atomic Layer Deposition**
ALEVLİ M., Gungör N., Ozgit Akgun C., Kızır S., Haider A., Leghari S., Alkis S., OKYAY A. K., BIYIKLI N.
American Vacuum Society 15th Conference on Atomic Layer deposition, Portland, Amerika Birleşik Devletleri, 28 -

01 Haziran 2015, ss.370

- XIII. **Enhanced Light Scattering with Energy Downshifting Using 16 nm Indium Nitride Nanoparticles for Improved Thin film a Si N i P Solar Cells**
Chowdhury F. I., İslam K., Alkis S., ORTAÇ B., ALEVLİ M., Dietz N., OKYAY A. K., Nayfeh A.
227th Electro Chemical Society meeting, Chicago, Amerika Birleşik Devletleri, 24 - 28 Mayıs 2015, cilt.66, ss.9-16
- XIV. **Effect of reactor pressure on optical and electrical properties of InN films grown by high-pressure chemical vapor deposition**
Alevli M., Gungor N., Alkis S., Ozgit-Akgun C., Donmez I., Okyay A. K., Gamage S., Senevirathna I., Dietz N., Bıyıklı N.
5th International Symposium on Growth of III-Nitrides (ISGN), Georgia, Amerika Birleşik Devletleri, 18 - 22 Mayıs 2014, cilt.12, ss.423-429
- XV. **Growth temperature - Phase stability relation in In_{1-x}Ga_xN epilayers grown by high-pressure CVD**
Durkaya G., Alevli M., Buegler M., Atalay R., Gamage S., Kaiser M., Kirste R., Hoffmann A., Jamil M., Ferguson I., et al.
2009 MRS Fall Meeting, Boston, MA, Amerika Birleşik Devletleri, 30 Kasım - 04 Aralık 2009, cilt.1202, ss.277-282
- XVI. **Optical and structural properties of InN grown by HPCVD**
Buegler M., Alevli M., Atalay R., Durkaya G., Senevirathna I., Jamil M., Ferguson I., Dietz N.
9th International Conference on Solid State Lighting, San Diego, CA, Amerika Birleşik Devletleri, 3 - 05 Ağustos 2009, cilt.7422
- XVII. **Properties of InN layers grown by high pressure CVD**
Alevli M., Durkaya G., Kirste R., Weesekara A., Perera U., Fenwick W., Woods V., Ferguson I. T., Hoffmann A., Dietz N.
2006 MRS Fall Meeting, Boston, MA, Amerika Birleşik Devletleri, 27 Kasım - 01 Aralık 2006, cilt.955, ss.291-296
- XVIII. **Properties of InN grown by high-pressure CVD**
Alevli M., Durkaya G., Woods V., Haboek U., Kang H., Senawiratne J., Strassburg M., Ferguson I. T., Hoffmann A., Dietz N.
2005 Materials Research Society Fall Meeting, Boston, MA, Amerika Birleşik Devletleri, 28 Kasım - 02 Aralık 2005, cilt.892, ss.77-82
- XIX. **The growth of InN and related alloys by high-pressure CVD**
Dietz N., Alevli M., Kang H., Straßburg M., Woods V., Ferguson I. T., Moore C. E., Cardelino B. H.
Operational Characteristics and Crystal Growth of Nonlinear Optical Materials II, San Diego, CA, Amerika Birleşik Devletleri, 31 Temmuz - 01 Ağustos 2005, cilt.5912, ss.1-8

Desteklenen Projeler

Alevli M., TÜBİTAK Projesi, Atomik Katman Büyütme Yöntemi İle Kaplanan GaN Galyum Nitrat İnce Filmlerinin Optik Karakterizasyonu, 2014 - 2015

Metrikler

Yayın: 54

Atıf (WoS): 780

Atıf (Scopus): 860

H-İndeks (WoS): 15

H-İndeks (Scopus): 16