

Kişisel Bilgiler

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Eğitim Bilgileri

Post Doktora, Ohio State University, Electrical And Computer Engineering, Amerika Birleşik Devletleri 2016 - 2017

Doktora, Ohio State University, Electrical And Computer Engineering, Amerika Birleşik Devletleri 2011 - 2016

Yüksek Lisans, Ohio State University, Electrical And Computer Engineering, Amerika Birleşik Devletleri 2009 - 2011

Lisans, Gaziantep Üniversitesi, Elektrik - Elektronik Muh., Türkiye 2003 - 2008

Yabancı Diller

Almanca, A1 Başlangıç

İngilizce, C1 İleri

Yaptığı Tezler

Doktora, Nanoscale Electron Transport Engineering for GaN Optoelectronic Devices, Ohio State University, Electrical And Computer Engineering, Faculty Of Engineering, 2016

Yüksek Lisans, N-Polar III-Nitride Optoelectronic Devices, Ohio State University, Electrical And Computer Engineering, Faculty Of Engineering, 2011

Araştırma Alanları

Elektrik-Elektronik Mühendisliği, Enerji, Aydınlatma Teknolojisi, Metalurji ve Malzeme Mühendisliği, Malzeme Bilimi ve Mühendisliği, Yarıiletken ve Süperiletken Malzemeler, Nanomalzemeler, Mühendislik ve Teknoloji

Akademik Unvanlar / Görevler

Yrd.Doç.Dr., Yıldız Teknik Üniversitesi, Metalurji Ve Malzeme Mühendisliği, 2018 - Devam Ediyor

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayınlanan Makaleler

- **Simulation of beta-Ga₂O₃ vertical Schottky diode based photodetectors revealing average hole mobility of 20cm²V⁻¹s⁻¹)**
AKYOL F.
JOURNAL OF APPLIED PHYSICS, cilt.127, 2020 (SCI İndekslerine Giren Dergi)
- **Tunnel-injected sub 290 nm ultra-violet light emitting diodes with 2.8% external quantum efficiency**
Zhang Y., Jamal-Eddine Z., Akyol F., Bajaj S., Johnson J. M., Calderon G., ALLERMAN A. A., MOSELEY M. W., ARMSTRONG A. M., Hwang J., et al.
APPLIED PHYSICS LETTERS, cilt.112, 2018 (SCI İndekslerine Giren Dergi)
- **High Al-Content AlGa_N Transistor With 0.5 A/mm Current Density and Lateral Breakdown Field Exceeding 3.6 MV/cm**
Bajaj S., ALLERMAN A., ARMSTRONG A., Razzak T., Talesara V., Sun W., Sohel S. H., Zhang Y., Lu W., Arehart A. R., et al.

IEEE ELECTRON DEVICE LETTERS, cilt.39, ss.256-259, 2018 (SCI İndekslerine Giren Dergi)

- **Ultralow-voltage-drop GaN/InGaN/GaN tunnel junctions with 12% indium content**

Akyol F., Zhang Y., Krishnamoorthy S., Rajan S.

APPLIED PHYSICS EXPRESS, cilt.10, 2017 (SCI İndekslerine Giren Dergi)

- **Graded AlGaIn Channel Transistors for Improved Current and Power Gain Linearity**

Bajaj S., Yang Z., Akyol F., PARK P. S. , Zhang Y., Price A. L. , Krishnamoorthy S., MEYER D. J. , Rajan S.

IEEE TRANSACTIONS ON ELECTRON DEVICES, cilt.64, ss.3114-3119, 2017 (SCI İndekslerine Giren Dergi)

- **Reflective metal/semiconductor tunnel junctions for hole injection in AlGaIn UV LEDs**

Zhang Y., Krishnamoorthy S., Akyol F., Johnson J. M. , ALLERMAN A. A. , MOSELEY M. W. , ARMSTRONG A. M. , Hwang J., Rajan S.

APPLIED PHYSICS LETTERS, cilt.111, 2017 (SCI İndekslerine Giren Dergi)

- **Tunnel-injected sub-260nm ultraviolet light emitting diodes**

Zhang Y., Krishnamoorthy S., Akyol F., Bajaj S., ALLERMAN A. A. , MOSELEY M. W. , ARMSTRONG A. M. , Rajan S.

APPLIED PHYSICS LETTERS, cilt.110, 2017 (SCI İndekslerine Giren Dergi)

- **Design of p-type cladding layers for tunnel-injected UV-A light emitting diodes**

Zhang Y., Krishnamoorthy S., Akyol F., ALLERMAN A. A. , MOSELEY M. W. , ARMSTRONG A. M. , Rajan S.

APPLIED PHYSICS LETTERS, cilt.109, 2016 (SCI İndekslerine Giren Dergi)

- **AlGaIn channel field effect transistors with graded heterostructure ohmic contacts**

Bajaj S., Akyol F., Krishnamoorthy S., Zhang Y., Rajan S.

APPLIED PHYSICS LETTERS, cilt.109, 2016 (SCI İndekslerine Giren Dergi)

- **Design and demonstration of ultra-wide bandgap AlGaIn tunnel junctions**

Zhang Y., Krishnamoorthy S., Akyol F., ALLERMAN A. A. , MOSELEY M. W. , ARMSTRONG A. M. , Rajan S.

APPLIED PHYSICS LETTERS, cilt.109, 2016 (SCI İndekslerine Giren Dergi)

- **Enhanced light extraction in tunnel junction-enabled top emitting UV LEDs**

Zhang Y., ALLERMAN A. A. , Krishnamoorthy S., Akyol F., MOSELEY M. W. , ARMSTRONG A. M. , Rajan S.

APPLIED PHYSICS EXPRESS, cilt.9, 2016 (SCI İndekslerine Giren Dergi)

- **Low-resistance GaN tunnel homojunctions with 150 kA/cm² current and repeatable negative differential resistance**

Akyol F., Krishnamoorthy S., Zhang Y., Johnson J., Hwang J., Rajan S.

APPLIED PHYSICS LETTERS, cilt.108, 2016 (SCI İndekslerine Giren Dergi)

- **Density-dependent electron transport and precise modeling of GaN high electron mobility transistors**

Bajaj S., Shoron O. F. , Park P. S. , Krishnamoorthy S., Akyol F., Hung T., REZA S., CHUMBES E. M. , Khurgin J., Rajan S.

APPLIED PHYSICS LETTERS, cilt.107, 2015 (SCI İndekslerine Giren Dergi)

- **GaN-based three-junction cascaded light-emitting diode with low-resistance InGaIn tunnel junctions**

Akyol F., Krishnamoorthy S., Zhang Y., Rajan S.

APPLIED PHYSICS EXPRESS, cilt.8, 2015 (SCI İndekslerine Giren Dergi)

- **Interband tunneling for hole injection in III-nitride ultraviolet emitters**

Zhang Y., Krishnamoorthy S., Johnson J. M. , Akyol F., ALLERMAN A., MOSELEY M. W. , ARMSTRONG A., Hwang J., Rajan S.

APPLIED PHYSICS LETTERS, cilt.106, 2015 (SCI İndekslerine Giren Dergi)

- **InGaIn/GaN tunnel junctions for hole injection in GaN light emitting diodes**

Krishnamoorthy S., Akyol F., Rajan S.

APPLIED PHYSICS LETTERS, cilt.105, 2014 (SCI İndekslerine Giren Dergi)

- **Tunneling-based carrier regeneration in cascaded GaN light emitting diodes to overcome efficiency droop**

Akyol F., Krishnamoorthy S., Rajan S.

APPLIED PHYSICS LETTERS, cilt.103, 2013 (SCI İndekslerine Giren Dergi)

- **Low resistance GaN/InGaIn/GaN tunnel junctions**

Krishnamoorthy S., Akyol F., Park P. S. , Rajan S.

APPLIED PHYSICS LETTERS, cilt.102, 2013 (SCI İndekslerine Giren Dergi)

- **Polarization-engineered GaN/InGaIn/GaN tunnel diodes**

Kitap & Kitap Bölümleri

- **Gallium Nitride–Based Interband Tunnel Junctions**

AKYOL F.

Gallium Nitride (GaN) Physics, Devices, and Technology, Farid Medjdoub, Editör, Crc Press, Florida, Boca Raton, ss.299-326, 2017

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- **Tunnel-injected ultraviolet light-emitting diodes (Conference Presentation)**

RAJAN S., ZHANG Y., JAMAL EDDIE Z., AKYOL F., HWANG J., JOHNSON J.

Gallium Nitride Materials and Devices XIII, San Francisco, United States, Amerika Birleşik Devletleri, 27 Ocak - 01 Şubat 2018, cilt.10532

- **Small-Signal Characteristics of Graded AlGaIn Channel PoIFETs**

BAJAJ S., YANG Z., AKYOL F., PARK P. S. , ZHANG Y., SOHEL S. H. , KRISHNAMOORTHY S., MEYER D. J. , RAJAN S.

2017 75TH ANNUAL DEVICE RESEARCH CONFERENCE (DRC), South Bend, 25 - 28 Haziran 2017

- **Ultra-Wide Bandgap AlGaIn Channel MISFET with Polarization Engineered Ohmics**

BAJAJ S., AKYOL F., KRISHNAMOORTHY S., ZHANG Y., ARMSTRONG A., ALLERMAN A., RAJAN S.

2016 74TH ANNUAL DEVICE RESEARCH CONFERENCE (DRC), Newark, 19 - 22 Haziran 2016

- **Sub 300 nm Wavelength III-Nitride Tunnel-Injected Ultraviolet LEDs**

ZHANG Y., KRISHNAMOORTHY S., AKYOL F., KHANDAKER S., ALLERMAN A., MOSELEY M. W. , ARMSTRONG A., RAJAN S.

2015 73RD ANNUAL DEVICE RESEARCH CONFERENCE (DRC), Columbus, 21 - 24 Haziran 2015, ss.69-70

- **Density-Dependent Electron Transport for Accurate Modeling of AlGaIn/GaN HEMTs**

BAJAJ S., SHORON O. F. , PARK P. S. , KRISHNAMOORTHY S., AKYOL F., HUNG T. H. , REZA S., CHUMBES E. M. , KHURGIN J. B. , RAJAN S.

2015 73RD ANNUAL DEVICE RESEARCH CONFERENCE (DRC), Columbus, 21 - 24 Haziran 2015, ss.33-34

- **Power Switching Transistors Based on GaN and AlGaIn Channels**

Bajaj S., Hung T., Akyol F., Krishnamoorthy S., Khandaker S., ARMSTRONG A., ALLERMAN A., Rajan S.

3rd IEEE Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Virginia, Amerika Birleşik Devletleri, 2 - 04 Kasım 2015, ss.16-20

- **III-nitride tunnel junctions for efficient solid state lighting**

Krishnamoorthy S., Akyol F., Rajan S.

Conference on Gallium Nitride Materials and Devices IX, San-Francisco, Kostarika, 3 - 06 Şubat 2014, cilt.8986

Atrflar

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