

Assoc. Prof. ERDEM ASLAN

Personal Information

Office Phone: [+90 352 207 6666](tel:+903522076666) Extension: 32282

Email: aslanerdem@erciyes.edu.tr

Web: <https://avesis.erciyes.edu.tr/aslanerdem/>

Address: Erciyes Üniversitesi Mühendislik Fakültesi Elektrik-Elektronik Mühendisliği Bölümü 38039 Melikgazi / KAYSERİ

International Researcher IDs

ScholarID: q_i3eRcAAAAJ

ORCID: 0000-0001-6829-9000

Publons / Web Of Science ResearcherID: AAU-6537-2020

ScopusID: 42461042600

Yoksis Researcher ID: 37956

Education Information

Doctorate, Erciyes University, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği / Elektromanyetik Alanlar Ve Mikrodalga Tekniği, Turkey 2012 - 2017

Postgraduate, Mustafa Kemal Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, Turkey 2009 - 2012

Undergraduate, Erciyes University, Mühendislik Fakültesi, Elektronik Mühendisliği, Turkey 1999 - 2004

Foreign Languages

English, C1 Advanced

Certificates, Courses and Trainings

Occupational Health and Safety, Temel İş Güvenliği Eğitimi, ERSEM - Erciyes Üniversitesi, 2014

Dissertations

Doctorate, Yüzeyde Güçlendirilmiş Spektroskopi Uygulamaları için Plazmonik Nanoanten Tabanlı Fotonik Metamalzemelerin Tasarımı, Üretimi ve Karakterizasyonu , Erciyes Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Müh. A.B.D., 2017

Postgraduate, Screen Printing Yöntemi ile Güneş Pili Üretimi, Mustafa Kemal Üniversitesi, Fen Bilimleri Enstitüsü, Elektrik-Elektronik Mühendisliği, 2012

Research Areas

Electrical and Electronics Engineering, Nanotechnology, Optics and Photonics, Electromagnetic, Electromagnetic in Biology and Medicine, Electric and Magnetic Fields, Engineering and Technology

Academic Titles / Tasks

Assistant Professor, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği, 2021 - Continues
Assistant Professor, Hatay Mustafa Kemal University, Faculty Of Engineering, 2018 - 2021
Research Assistant, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği, 2014 - 2018
Other, Boston University, College Of Engineering, Electrical And Computer Engineering, 2015 - 2016
Lecturer, Mustafa Kemal Üniversitesi, Dörtüyl Meslek Yüksekokulu, Elektronik Ve Otomasyon, 2013 - 2013
Lecturer, Mustafa Kemal Üniversitesi, Hassa Meslek Yüksekokulu, Elektronik Ve Otomasyon, 2010 - 2013
Lecturer, Mustafa Kemal Üniversitesi, Dörtüyl Meslek Yüksekokulu, Elektronik Ve Otomasyon, 2009 - 2010

Academic and Administrative Experience

Deputy Head of Department, Erciyes University, Mühendislik Fakültesi, Elektrik- Elektronik Mühendisliği, 2022 - Continues
Erciyes University, 2022 - Continues
Director of Vocational School, Hatay Mustafa Kemal University, Vocational School, 2019 - 2021
Hatay Mustafa Kemal University, 2019 - 2021
Head of Department, Hatay Mustafa Kemal University, Faculty Of Engineering, 2018 - 2021
Head of Department, Hatay Mustafa Kemal University, Faculty Of Engineering, 2018 - 2021
Hatay Mustafa Kemal University, 2018 - 2021
Hatay Mustafa Kemal University, 2018 - 2021

Courses

Integrated Fotonic Waveguides and Applications, Postgraduate, 2021 - 2022
Biomedical Optics, Undergraduate, 2021 - 2022
Career Planning, Undergraduate, 2021 - 2022
Fotonic Applications, Undergraduate, 2021 - 2022
Electromagnetic Field Theory, Undergraduate, 2021 - 2022
Seminar, Postgraduate, 2021 - 2022
Optical Waveguides, Postgraduate, 2021 - 2022
Fiber Optic, Undergraduate, 2021 - 2022
Electromagnetic Field Theory, Undergraduate, 2021 - 2022

Advising Theses

Hameş Y., Aslan E., Design and Numeric Characterization of Dielectric based Nanphotonic Devices, Postgraduate, Ş.Kaba(Student), Continues

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Tungsten disulfide based anisotropic metalens for refractive index sensing applications in visible region**
Kırlar M., Aslan E., Aslan E., Türkmen M.
OPTIK, vol.290, pp.1-10, 2023 (SCI-Expanded)
- II. **Engineering the boosting of the magnetic Purcell factor with a composite structure based on nanodisk and ring resonators**
Aslan E., Aslan E.
JOURNAL OF ELECTROMAGNETIC WAVES AND APPLICATIONS, vol.36, no.10, pp.1339-1351, 2022 (SCI-Expanded)

- III. **Engineering of dual-band magnetic dipole decay rate enhancement with concentric hollow nanodisk resonators**
Aslan E.
Optical Materials, vol.113, pp.1-6, 2021 (SCI-Expanded)
- IV. **Germanium hollow nanodisk resonator for magnetic dipole decay rate enhancement in near-infrared**
Aslan E.
MICROWAVE AND OPTICAL TECHNOLOGY LETTERS, vol.63, no.1, pp.279-285, 2021 (SCI-Expanded)
- V. **An effective triple-band enhanced-infrared-absorption detection by honeycomb-shaped metamaterial-plasmonic absorber**
Aslan E., Aslan E., SARAÇOĞLU Ö. G., TÜRKMEN M.
SENSORS AND ACTUATORS A-PHYSICAL, vol.288, pp.149-155, 2019 (SCI-Expanded)
- VI. **Metamaterial plasmonic absorber for reducing the spectral shift between near- and far-field responses in surface-enhanced spectroscopy applications**
Asian E., Aslan E., TÜRKMEN M., SARAÇOĞLU Ö. G.
SENSORS AND ACTUATORS A-PHYSICAL, vol.267, pp.60-69, 2017 (SCI-Expanded)
- VII. **Experimental and numerical characterization of a mid-infrared plasmonic perfect absorber for dual-band enhanced vibrational spectroscopy**
ASLAN E., Aslan E., TÜRKMEN M., SARAÇOĞLU Ö. G., SARAÇOĞLU Ö. G.
OPTICAL MATERIALS, vol.73, pp.213-222, 2017 (SCI-Expanded)
- VIII. **Polarization insensitive plasmonic perfect absorber with coupled antisymmetric nanorod array**
Aslan E., Kaya S., Aslan E., Korkmaz S., SARAÇOĞLU Ö. G., Turkmen M.
SENSORS AND ACTUATORS B-CHEMICAL, vol.243, pp.617-625, 2017 (SCI-Expanded)
- IX. **Multispectral Cesaro-Type Fractal Plasmonic Nanoantennas**
Aslan E., Aslan E., Wang R., Hong M. K., Erramilli S., TÜRKMEN M., SARAÇOĞLU Ö. G., Dal Negro L.
ACS PHOTONICS, vol.3, no.11, pp.2102-2111, 2016 (SCI-Expanded)
- X. **Novel Dual-Band Resonator Nanoantenna Array for Infrared Detection Applications**
Aslan E., TÜRKMEN M.
SENSORS AND MATERIALS, vol.25, no.9, pp.689-696, 2013 (SCI-Expanded)
- XI. **A comparative study on TiO₂ doped hybrid solar cells**
Özdal T., HAMEŞ Y., ASLAN E.
APPLIED SURFACE SCIENCE, vol.258, no.13, pp.5259-5264, 2012 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Multilayer Plasmonic Absorber Based Metamaterial for Refractive Index Sensing and Surface Enhanced Spectroscopy Applications**
ASLAN E., ASLAN E., SARAÇOĞLU Ö. G., TÜRKMEN M.
5th International Conference on Advanced Technology & Sciences (ICAT'17), İstanbul, Turkey, 9 - 12 May 2017, pp.205
- II. **Multi-Spectral Fractal Plasmonics for Surface-Enhanced Spectroscopy**
ASLAN E., ASLAN E., Wang R., Hong M. K., Erramilli S., TÜRKMEN M., SARAÇOĞLU Ö. G., Dal Negro L.
2016 MRS Fall Meeting & Exhibit, Boston, Ma, United States Of America, 27 November - 02 December 2016, pp.1
- III. **Design of Multi Resonant Metamaterial Absorber for Biosensing Applications**
ASLAN E., Aslan E., Korkmaz S., KAYA S., SARAÇOĞLU Ö. G., TÜRKMEN M.
BİYOMUT 2016, 3 - 05 November 2016
- IV. **Biyoalgılama Uygulamaları için Çoklu-Rezonant Metamalzeme Soğurucu Tasarımı**
ASLAN E., Aslan E., Korkmaz S., KAYA S., SARAÇOĞLU Ö. G., TÜRKMEN M.
20. BİYOMEDİKAL MÜHENDİSLİĞİ ULUSAL TOPLANTISI (BİYOMUT 2016), İzmir, Turkey, 3 - 05 November 2016, pp.206-209
- V. **A Study on the Performance of ZnO/Cu₂O Solar Cells**

HAMEŞ Y., ÖZDAL T., ASLAN E.

1st International Mediterranean Science and Engineering Congress, Adana, Turkey, 26 - 28 October 2016, pp.4064-4070

- VI. **Transmission and Reflection Characteristics of Fourfold Rotationally Symmetric Rectangular Nanoaperture Antenna Arrays**
Aslan E., ASLAN E., Korkmaz S., KAYA S., SARAÇOĞLU Ö. G., TÜRKMEN M.
International Conference on Advanced Technology & Sciences (ICAT'16), Konya, Turkey, 1 - 03 September 2016, pp.632-634
- VII. **Quadratic Koch Island Shaped Multi-Resonant Metamaterial Absorber for Biosensing Applications**
ASLAN E., Aslan E., Korkmaz S., KAYA S., SARAÇOĞLU Ö. G., TÜRKMEN M.
18th Nanotech 2016 Conference & Expo, Washington Dc, United States Of America, 22 - 25 May 2016, pp.1-3
- VIII. **Honeycomb-shaped metamaterial absorber for multiband infrared sensing applications**
Aslan E., Saracoglu O. G., KAYA S., Turkmen M.
META'15, the 6th International Conference on Metamaterials, Photonic Crystals and Plasmonics (Poster Session), New York, United States Of America, 4 - 07 August 2015, pp.1-2
- IX. **Diamond Nanoparticle with Cross Aperture for Improving Absorbance Characteristics of Multispectral Sensors**
Aslan E., ASLAN E., KAYA S., Saracoglu O. G., TÜRKMEN M.
OSA Advanced Photonics Congress, Boston, United States Of America, 27 June - 01 July 2015
- X. **H Şeklindeki Nano Anten Dizilerinde Polarizasyonun Yansıma ve Geçiş Spektrumlarına Etkisi**
ASLAN E., TÜRKMEN M., SARAÇOĞLU Ö. G.
-TÜRKİYE 2014 Ulusal Kongresi, Elazığ, Turkey, 28 - 30 August 2014, pp.1-3
- XI. **Characterization of a Plasmonic Absorber Structure for Infrared Detection Applications**
ASLAN E., Korkmaz S., SARAÇOĞLU Ö. G., TÜRKMEN M.
OSA Advanced Photonics Congress, Barselona, Spain, 27 - 31 July 2014
- XII. **RGB Tabanlı Basit Bir Spektrofotometre ile Sulu Çözeltide Glikozun Optik Soğurmasının Ölçümü**
Tabaru T. E., SARAÇOĞLU Ö. G., ASLAN E.
7. Mühendislik ve Teknoloji Sempozyumu, Ankara, Turkey, 15 - 16 May 2014, pp.219-223
- XIII. **Optical properties of plasmonic nanoantenna arrays based on H-shaped nanoparticles with extended arms**
TÜRKMEN M., Aslan E.
Conference on Reliability, Packaging, Testing, and Characterization of MOEMS/MEMS, Nanodevices, and Nanomaterials XIII, San-Francisco, Costa Rica, 3 - 04 February 2014, vol.8975
- XIV. **Optical characterization of Jerusalem cross-shaped nanoaperture antenna arrays**
TÜRKMEN M., Aslan E., ASLAN E.
Conference on Microfluidics, BioMEMS, and Medical Microsystems XII, San-Francisco, Costa Rica, 2 - 04 February 2014, vol.8976
- XV. **ZnO/P3HT Junction Hybrid Solar Cells**
HAMEŞ Y., ÖZDAL T., ASLAN E., ŞAR H., CABALAK H., İNCİ H.
The Second International Conference on Nuclear and Renewable Energy Resources, Ankara, Turkey, 4 - 07 July 2010, pp.340-343
- XVI. **The Effects Of Screen Printing Parameters on Organic Solar Cells' Power Conversion Efficiency**
HAMEŞ Y., ŞAR H., ÖZDAL T., ASLAN E., CABALAK H.
The Second International Conference on Nuclear and Renewable Energy Resources, Ankara, Turkey, 4 - 07 July 2010, pp.348-351
- XVII. **ZnO/Cu2O inorganic solar cells**
HAMEŞ Y., ÖZDAL T., ŞAR H., ASLAN E., İNCİ H.
6. Nanobilim ve Nanoteknoloji Konferansı, İzmir, Turkey, 15 - 18 June 2010, pp.762
- XVIII. **Manufacturing Of Inorganic-Organic Hybrid Solar Cells By Screen Printing Method**
HAMEŞ Y., SAN S. E., ÖZDAL T., ASLAN E., CABALAK H., ŞAR H.
6. Nanobilim ve Nanoteknoloji Konferansı, İzmir, Turkey, 15 - 18 June 2010, pp.578

Supported Projects

SARAÇOĞLU Ö. G., ASLAN E., TÜRKMEN M., ASLAN E., Project Supported by Higher Education Institutions, Fotonik Metamalzemelerin Biyosensör Potansiyelinin Araştırılması, 2015 - 2017

TÜRKMEN M., ASLAN E., KORKMAZ S., ERYILMAZ G. M., SARAÇOĞLU Ö. G., ASLAN E., Project Supported by Higher Education Institutions, BİYOSENSÖR UYGULAMALARI İÇİN FRAKTAL GEOMETRİLİ PLAZMONİK NANOANTEN DİZİLERİ TASARIM VE ÜRETİMİ, 2015 - 2017

Metrics

Publication: 31

Citation (WoS): 139

Citation (Scopus): 142

H-Index (WoS): 6

H-Index (Scopus): 6

Non Academic Experience

Business Establishment Private, Tosçelik Profil Ve Sac End. A.Ş., Çelikhane Elektrik Bakım Şefliği

TOSÇELİK PROFİL VE SAC ENDÜSTRİSİ A.Ş.

Business Establishment Private, Mmk-Atakaş Metalurji A.Ş.

MMK-ATAKAŞ METALURJİ SAN. A.Ş.

Business Establishment Private, Yazıcı Demir Çelik A.Ş., Haddehane Elektrik Bakım Baş Mühendisliği

YAZICI DEMİR-ÇELİK SAN. A.Ş.