

Prof. HALİL BERBEROĞLU

Personal Information

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International Researcher IDs

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Education Information

Doctorate, Middle East Technical University, Fen Bilimleri Enstitüsü, Fizik (Dr), Turkey 1997 - 2007

Postgraduate, Lehigh University, College of Arts and Sciences, Department of Physics, United States Of America 1994 - 1996

Undergraduate, Ankara University, Mühendislik Fakültesi, Fizik Mühendisliği Bölümü, Turkey 1988 - 1992

Foreign Languages

English, B2 Upper Intermediate

Dissertations

Doctorate, Numerical simulations on stimulated raman scattering for fiber raman amplifiers and lasers using spectral methods, Middle East Technical University, Fen Bilimleri Enstitüsü, Fizik (Dr), 2007

Research Areas

Physics, Optics, Physics of Plasmas, Measurement Science, General Laboratory Techniques, and Metrology

Academic Titles / Tasks

Professor, Ankara Hacı Bayram Veli University, Polatlı Faculty Of Arts And Sciences, Department Of Physics, 2022 - Continues

Associate Professor, Ankara Hacı Bayram Veli University, Polatlı Faculty Of Arts And Sciences, Department Of Physics, 2018 - 2022

Associate Professor, Ankara Hacı Bayram Veli University, Polatlı Faculty Of Arts And Sciences, Department Of Physics, 2018 - 2020

Assistant Professor, Gazi University, Polatlı Fen-Edebiyat Fakültesi, Fizik, 2014 - 2018

Expert, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Graduate School Of Natural And Applied Sciences, 2008 - 2014

Research Assistant, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Physics, 1997 - 2007

Research Assistant, Lehigh University, College of Arts and Sciences, Physics, 1993 - 1996

Courses

GENEL FİZİK 1, Undergraduate, 2019 - 2020, 2018 - 2019, 2017 - 2018, 2016 - 2017, 2015 - 2016, 2014 - 2015, 2013 - 2014
Plazma Fiziği, Undergraduate, 2014 - 2015
ÖLÇME VE ENSTRÜMANTASYON, Undergraduate, 2014 - 2015
Lazer Fiziği, Undergraduate, 2013 - 2014
Optoelektronik, Undergraduate, 2013 - 2014
Titreşim ve Dalgalar, Undergraduate, 2013 - 2014

Advising Theses

BERBEROĞLU H., Development of hand-held laser-induced breakdown spectroscopy(LIBS) device, Postgraduate, M.AKTEPE(Student), 2021
BERBEROĞLU H., Helyum-neon lazerlerde kullanılan alüminyum elektrotlar üzerinde oksit tabakası birikimi ve karakterizasyonu, Postgraduate, A.İLHAN(Student), 2019
BERBEROĞLU H., Fiber-integrated terahertz spectrometer driven by ultrafast ytterbium doped fiber laser, Postgraduate, H.KESKİN(Student), 2013
BERBEROĞLU H., Development of a picosecond pulsed mode-locked fiber laser, Postgraduate, M.EMRE(Student), 2013
BERBEROĞLU H., Design and analysis of an open loop fiber-optic gyroscope, Postgraduate, M.ÖZDEMİR(Student), 2012

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Enhanced self-collimation effect by low rotational symmetry in hexagonal lattice photonic crystals**
Yuksel Z. M., Oguz H., Karakilinc O. O., Turdueva M., Berberoglu H., Adak M., Ozdemir Kart S.
Physica Scripta, vol.99, no.6, 2024 (SCI-Expanded)
- II. **Electrical Properties of Laser Patterned Schottky Diode with ALD-Grown TiO₂ Interlayer**
Dikicioğlu E., Balı M. B., SAĞLAM S., Berberoglu H., PAVLOV I., Goodarzi A., ORHAN E.
ACS Omega, vol.9, no.19, pp.21346-21352, 2024 (SCI-Expanded)
- III. **Performance evaluation of self-mixing interferometer with the ceramic type piezoelectric accelerometers**
Berberoglu H., Tiken M., Eseller K. E., ORHAN E., Candan C.
Open Physics, vol.20, no.1, pp.78-86, 2022 (SCI-Expanded)
- IV. **Comparison of different calibration techniques of laser induced breakdown spectroscopy in bakery products: on NaCl measurement**
Bilge G., Eseller K. E., Berberoglu H., Sezer B., TAMER U., BOYACI İ. H.
Journal of the European Optical Society-Rapid Publications, vol.17, no.1, 2021 (SCI-Expanded)
- V. **Experimental study on km-range long-distance measurement using silicon photomultiplier sensor with low peak power laser pulse**
Candan C., Tiken M., Berberoglu H., ORHAN E., Yeniay A.
Applied Sciences (Switzerland), vol.11, no.1, pp.1-13, 2021 (SCI-Expanded)
- VI. **3D-graphene-laser patterned p-type silicon Schottky diode**
ORHAN E., Efil E., Bayram O., Kaymak N., Berberoglu H., Candemir O., PAVLOV I., Ocak S. B.
Materials Science in Semiconductor Processing, vol.121, 2021 (SCI-Expanded)
- VII. **Laser induced breakdown spectroscopy based diffusion modelling in cheese matrix**
Sezer B., Bilge G., Eseller K. E., Berberoglu H., BOYACI İ. H.
Journal of Food Engineering, vol.263, pp.320-325, 2019 (SCI-Expanded)
- VIII. **Performance evaluation of fiber-based ballistic composites against laser threats**
Candan C., Seymen A. A., Karatutlu A., Tiken M., Midilli Y., ORHAN E., Berberoglu H., Ortaç B.

Optics and Lasers in Engineering, vol.121, pp.54-60, 2019 (SCI-Expanded)

- IX. **Performance evaluation of laser induced breakdown spectroscopy in the measurement of liquid and solid samples**
Bilge G., Sezer B., BOYACI İ. H., ESELLER K. E., Berberoglu H.
SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY, vol.145, pp.115-121, 2018 (SCI-Expanded)
- X. **Determination of whey adulteration in milk powder by using laser induced breakdown spectroscopy**
Bilge G., Sezer B., ESELLER K. E., Berberoglu H., TOPCU A., BOYACI İ. H.
FOOD CHEMISTRY, vol.212, pp.183-188, 2016 (SCI-Expanded)
- XI. **Determination of Ca addition to the wheat flour by using laser-induced breakdown spectroscopy (LIBS)**
Bilge G., Sezer B., ESELLER K. E., Berberoglu H., Koksel H., BOYACI İ. H.
EUROPEAN FOOD RESEARCH AND TECHNOLOGY, vol.242, no.10, pp.1685-1692, 2016 (SCI-Expanded)
- XII. **Ash analysis of flour sample by using laser-induced breakdown spectroscopy**
Bilge G., Sezer B., ESELLER K. E., Berberoglu H., Koksel H., BOYACI İ. H.
SPECTROCHIMICA ACTA PART B-ATOMIC SPECTROSCOPY, vol.124, pp.74-78, 2016 (SCI-Expanded)
- XIII. **A simple single-mode fiber loss measurement scheme in the C-band based on fiber loop-cavity ringdown spectroscopy**
Berberoglu H., ALTAN H.
OPTICS COMMUNICATIONS, vol.317, pp.29-33, 2014 (SCI-Expanded)
- XIV. **The numerical study of pumping configurations on the lasing efficiency in photonic crystal fiber Raman laser**
Berberoglu H., TARMAN I. H.
OPTIK, vol.124, no.6, pp.522-525, 2013 (SCI-Expanded)
- XV. **Variational Approach to Power Evolution in Cascaded Fiber Raman Laser**
TARMAN I. H., Berberoglu H.
JOURNAL OF LIGHTWAVE TECHNOLOGY, vol.28, no.21, pp.3136-3141, 2010 (SCI-Expanded)
- XVI. **Efficient Numerical Algorithm for Cascaded Raman Fiber Lasers Using a Spectral Method**
TARMAN I. H., Berberoglu H.
JOURNAL OF LIGHTWAVE TECHNOLOGY, vol.27, no.13, pp.2289-2295, 2009 (SCI-Expanded)
- XVII. **A spectral collocation algorithm for two-point boundary value problem in fiber Raman amplifier equations**
TARMAN I. H., Berberoglu H.
OPTICS COMMUNICATIONS, vol.282, no.8, pp.1551-1556, 2009 (SCI-Expanded)

Articles Published in Other Journals

- I. **Determination of balance degree of spinning gyro disk by using optical feedback interferometry**
Candan C., TİKEN M., ORHAN E., BERBEROĞLU H.
Proceedings of SPIE, vol.10695, 2018 (Scopus)
- II. **Re construction of a Target Motion Shape with Self Mixing Laser Diode System**
Tiken M., Candan C., BERBEROĞLU H.
Savunma Bilimleri Dergisi, vol.15, no.1, pp.179-199, 2016 (Peer-Reviewed Journal)

Books & Book Chapters

- I. **Food science application**
ESELLER K. E., BOYACI İ. H., Sezer B., BİLGE G., BERBEROĞLU H.
in: Laser-Induced Breakdown Spectroscopy, , Editor, Elsevier Science, pp.347-368, 2020

Refereed Congress / Symposium Publications in Proceedings

- I. **PERFORMANCE EVALUATION OF SILICON PHOTOMULTIPLIER DETECTOR ON THE USE OF LASER RANGEFINDER**
BERBEROĞLU H., Tiken M., ORHAN E., Candan C.
ISPEC 14th INTERNATIONAL CONFERENCE ON ENGINEERING & NATURAL SCIENCES, Turkey, 18 - 19 July 2022
- II. **Raman Amplifier Possibility of Optical Steganography for Secure Communication**
BERBEROĞLU H., ORHAN E.
1st Workshop on TF-X Integrated Processing Unit Technologies, Turkey, 11 December 2018 - 13 January 2019
- III. **Optik Geri Besleme Girişim Tekniği İle Mikron Ölçekte Titreşimlerin Mutlak Yerdeğiştirme Hareketinin Belirlenmesi**
TİKEN M., CANDAN C., KUL E., ORHAN E., BERBEROĞLU H.
Fotonik 2017 19. Ulsal Optik, Elektro-Optik ve Fotonik Çalıştayı, Turkey, 29 September 2017
- IV. **Desing and Fabrication of Green Laser Designater Prototype**
DEVELİ B., TİKEN M., BERBEROĞLU H., BİLGE OCAK S., ORHAN E.
Turkish Physical Society 33. International Congress, 6 - 10 September 2017
- V. **Rapid Elemental Analysis of Foods By Using Laser Induced Breakdown Spectroscopy**
BİLGE G., Sezer B., ESELLER K. E., BOYACI İ. H., BERBEROĞLU H.
7th international symposium on recent advances in food analysis, Prague, Czech Republic, 3 - 06 November 2015
- VI. **Numerical Improvement of Terahertz Time-Domain Spectroscopic Measurements**
Koseoglu D., BERBEROĞLU H., ALTAN H.
NATO Advanced Research Workshop on Terahertz and Mid Infrared Radiation - Basic Research and Practical Applications, Marmaris, Turkey, 3 - 06 November 2009, pp.85-90
- VII. **Silika Tabanlı Fiberlerde Uyarılmış Raman Saçılımı**
BERBEROĞLU H.
12. Yoğun Madde Fiziği, Turkey, 18 November 2005

Supported Projects

Berberoğlu H., Özdemir Kart S., Project Supported by Higher Education Institutions, KADEMELİ İNDİS FOTONİK KRİSTAL TASARLANMASI, 2021 - 2024

Berberoğlu H., Candan C., Tiken M., Orhan E., Project Supported by Higher Education Institutions, Optik Geri-Besleme İnterferometre Tekniği ile Dönen Rotorların Kusur ve Rezonans Frekans Tespiti, 2021 - 2023

Berberoğlu H., Eseller K. E., Velioglu H. M., Sezer B., Bilge G., Boyacı İ. H., TUBITAK Project, İşlenmiş Hayvansal Ürünlerde Tağışın Belirlenmesine Yönelik Proteomiks Temelli Yeni Analitik Yöntem Geliştirilmesi, 2018 - 2020

Berberoğlu H., TUBITAK Project, Terahertz Frekans Bandı Yüksek Veri Hızı Komünikasyon Sistemi Deneyisel Alıcı Verici Yapılarının Kurulması Ve Geliştirilmesi, 2013 - 2019

BERBEROĞLU H., Project Supported by Other Official Institutions, Toprakta Azot Miktarının Ölçümlemesine ve Gübre Önerisinde Kullanılmasına Yönelik Taşınabilir Lazerle Tespit Sistemi Tasarımı ve Yöntem Geliştirilmesi, 2015 - 2018

BERBEROĞLU H., Project Supported by Higher Education Institutions, Dinlemeyen Fiber Optik Ağların Kurulması, 2015 - 2018

Berberoğlu H., Altan H., TUBITAK Project, Zamana Dayalı Terahertz Ölçüm ve Görüntüleme Tekniklerinin Geliştirilmesi, 2012 - 2014

Berberoğlu H., Bilikmen S., Project Supported by Higher Education Institutions, Femtosaniye Atımlı Lazer ile Mikro Yapılı Optik Fiberler Üzerinden Süpersürekli Işınım SSI Kaynağı Üretimi, 2013 - 2013

Berberoğlu H., Industrial Thesis Project, ÇEŞİTLİ ÇAPTA Kİ NAMLULARIN ÖLÇÜMÜNDE KULLANILCAK MASTER LAZER OPTİK SİSTEMLERİNİN TASARIMI, 2008 - 2011

Metrics

Publication: 28

Citation (WoS): 179

Citation (Scopus): 185

H-Index (WoS): 6

H-Index (Scopus): 5