

## Prof. Dr. HAKAN ALTAN

### Kişisel Bilgiler

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### Eğitim Bilgileri

Bütünleşik Doktora, New Jersey Institute of Technology, Uygulamalı Fizik, Amerika Birleşik Devletleri 2000 - 2005

Lisans Çift Anadal, State University of New York State University at Stony Brook, Fizik Ve Astronomi, Amerika Birleşik Devletleri 1994 - 1998

### Yabancı Diller

İngilizce, C2 Ustalık

### Araştırma Alanları

Fizik, Yoğun Madde 2:Elektronik Yapı, Elektrik, Manyetik ve Optik Özellikler, Optik özellikler, Yoğun madde spektroskopisi, Temel Bilimler

### Akademik Unvanlar / Görevler

Prof. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü, 2017 - Devam Ediyor

Doç. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü, 2011 - 2017

Yrd. Doç. Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü, 2009 - 2011

Öğretim Görevlisi Dr., Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Fizik Bölümü, 2007 - 2009

### Yönetilen Tezler

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Altan H., TIME DOMAIN TERAHERTZ ATTENUATED TOTAL INTERNAL REFLECTION SPECTROSCOPY, Yüksek Lisans, A.ATALAR(Öğrenci), 2021

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ALTAN H., Terahertz time-domain spectroscopy and its application towards measurements in biology, Yüksek Lisans, Z.ÖZER(Öğrenci), 2016  
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OKUTUCU ÖZYURT H. T., ALTAN H., Experimental investigation of nanofluids using terahertz time domain spectroscopy (THz TDS), Yüksek Lisans, C.KORAL(Öğrenci), 2012  
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ALTAN H., Material characterization with terahertz time-domain spectroscopy, Doktora, D.KÖSEOĞLU(Öğrenci), 2010  
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- I. **Terahertz wavefront engineering using a hard-coded metasurface**  
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- III. **Investigation of resonant properties of metamaterial THz filters fabricated from vanadium dioxide thin films**  
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- IV. **The sub-terahertz region absorption of sputter deposited nanoscale TiAlV thin films**  
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- V. **Response of a Glow Discharge Detector to Far Infrared Radiation**

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- VI. **1030 nm All-Fiber Closed-Loop Fiber Optic Gyroscope with High Sensitivity**  
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- VIII. **Time-Domain Characterization of the Radiation Pattern of the Terahertz Photoconductive Antennas**  
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- IX. **Robust, Sensitive, and Inexpensive 2D Focal Plane Array Upconverting MMW Imaging Into the Visible**  
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- XXI. **Observation of Gate-Tunable Coherent Perfect Absorption of Terahertz Radiation in Graphene**  
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- XXVI. **Broadband terahertz modulators using self-gated graphene capacitors**  
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- XXVII. **Graphene-enabled electrically controlled terahertz spatial light modulators**  
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- XXVIII. **Low-cost bandpass filter for terahertz applications**  
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- XXIX. **Dielectric Properties of Diesel and Gasoline by Terahertz Spectroscopy**  
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- XXX. **Characterization of primary and permanent teeth using terahertz spectroscopy**  
KAMBUROĞLU K., Yetimoglu N. O., ALTAN H.  
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- XXXI. **Dielectric Properties of Ethanol and Gasoline Mixtures by Terahertz Spectroscopy and an Effective Method for Determination of Ethanol Content of Gasoline**  
ARIK E., ALTAN H., ESENTÜRK O.  
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- XXXII. **A simple single-mode fiber loss measurement scheme in the C-band based on fiber loop-cavity ringdown spectroscopy**  
Berberoglu H., ALTAN H.  
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- XXXIII. **Development of a rapid-scan fiber-integrated terahertz spectrometer**  
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- XXXIV. **Concentration-Based Measurement Studies of L-Tryptophan Using Terahertz Time-Domain Spectroscopy (THz-TDS)**  
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- XXXV. **Characterization of polypropylene treated under dual-RF plasma using terahertz time-domain**

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**XXXVI. Characterization of a Glow Discharge Detector With Terahertz Time Domain Spectroscopy**

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**XXXVII. Characteristics of HfO<sub>2</sub> and SiO<sub>2</sub> on p-type silicon wafers using terahertz spectroscopy**

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**XXXVIII. Terahertz absorption spectrum of para and ortho water vapors at different humidities at room temperature**

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**XXXIX. Terahertz (THz) spectroscopy of Freon-11 (CCl<sub>3</sub>F, CFC-11) at room temperature**

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**XL. Direct observation of the strength of plasmon-longitudinal optical phonon interaction in n-type GaAs**

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**XLI. Terahertz study of 1,3,5-trinitro-s-triazine by time-domain and Fourier transform infrared spectroscopy**

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## **Diğer Dergilerde Yayınlanan Makaleler**

**I. Elektriksel Ölçüm ve Terahertz Teknolojileri**

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## **Kitap & Kitap Bölümleri**

**I. Tryptophan as a biomarker using terahertz spectroscopy**

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**II. THz Sources and Detectors Fabricated from High Temperature Superconductors**

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- III. **Development of Stand-Off Imaging Systems Using Low Cost Plasma Detectors That Work in the GHz to THz Range**  
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- VI. **Numerical Simulation of the Plasma Inside a Glow Discharge Millimeter Wave Detector**  
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- VIII. **Investigating Glow Discharge Detectors as a Millimeter-Wave/Terahertz Radiation Detection Tool**  
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- XI. **Characterization of Air-Nitrogen-Argon DC Glow Discharge Plasma with THz Time Domain Spectroscopy**  
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Köseoğlu D., BERBEROĞLU H., ALTAN H.

## Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Evaluation of performance of an active terahertz imaging system for concealed face recognition**  
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- III. **Fast and sensitive MMW imaging system with up-conversion readout working in the NIR Zone**  
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- IV. **Detection and recognition of concealed faces using a 340 GHz imaging system**  
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- V. **Broadband THz Absorber Layers for Microbolometer Applications**  
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- VI. **Comparison of terahertz and ultrasound imaging in the assessment of oral soft tissue lesions**  
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- VII. **Case presentation of oral soft tissue lesions by using ultrasound, terahertz and histopathology**  
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