

## Prof. KIVANÇ SEL

### Personal Information

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**Address:** Çanakkale Onsekiz Mart Üniversitesi, Fen-Edebiyat Fakültesi, Fizik bölümü Çanakkale

### International Researcher IDs

ORCID: 0000-0002-4623-5206

ScopusID: 11141491800

Yoksis Researcher ID: 124299

### Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 2002 - 2007

Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik, Turkey 2000 - 2002

Undergraduate, Middle East Technical University, Fen Edebiyat Fakültesi, Fizik, Turkey 1994 - 1999

### Foreign Languages

English, C2 Mastery

### Dissertations

Doctorate, KARBON İÇERİĞİNİN PLAZMA İLE BİRİKTİRİLMİŞ AMORF SİLİSYUM KARBÜR İNCE FİLMLERİN ÖZELLİKLERİNE ETKİLERİ , Middle East Technical University, Fen Bilimleri Enstitüsü, Fizik, 2007

Postgraduate, PLAZMA İLE BÜYÜTÜLMÜŞ AMORF SİLİSYUM KARBÜR FİLM TABANLI IŞIK YAYINLAYAN PIN DİYOTLARIN ÜRETİLMESİ , Middle East Technical University, Fen Bilimleri Enstitüsü, Fizik, 2002

### Research Areas

Physics, Condensed Matter 1: Structural, Mechanical and Thermal Properties, Equations of State, Phase Equilibria, and Phase Transitions, Lattice Dynamics, Transport Phenomena in Condensed Matter, Mechanical and Acoustic Properties of Condensed Matter, Surfaces, Interfaces, Thin Films and Nanosystems, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic structure of bulk material, Optical Properties, Spectroscopy of Matter, Natural Sciences

### Academic Titles / Tasks

Professor, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2019 - Continues

Associate Professor, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2012 - 2019

Assistant Professor, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2008 - 2012

Research Assistant, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2007 - 2008

Research Assistant, Middle East Technical University, Fen Edebiyat Fakültesi, Fizik, 2000 - 2007

## Academic and Administrative Experience

Canakkale Onsekiz Mart University, Çanakkale Onsekiz Mart Üniversitesi Nanobilim Ve Teknoloji Araştırma Merkezi, 2009 - 2018

## Courses

QUANTUM PHYSICS, Undergraduate, 2017 - 2018, 2015 - 2016

LİSANSÜSTÜ TEZ YÖNETİMİ, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

GENERAL PHYSICS II (ÇEV. MÜH.), Undergraduate, 2014 - 2015

KUANTUM FİZİĞİ, Undergraduate, 2015 - 2016

QUANTUM MECHANICS , Undergraduate, 2014 - 2015

UZMANLIK ALAN DERSİ, Postgraduate, 2015 - 2016, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

KUANTUM MEKANİĞİ (II.ÖĞ.), Undergraduate, 2014 - 2015

GENEL FİZİK (ÇEV.MÜH.), Undergraduate, 2013 - 2014

KUANTUM FİZİĞİ (II.ÖĞ.), Undergraduate, 2014 - 2015, 2010 - 2011, 2009 - 2010, 2008 - 2009

21. YÜZYIL İÇİN FİZİK, Undergraduate, 2013 - 2014

QUANTUM PHYSICS (YAZ OKULU), Undergraduate, 2013 - 2014, 2012 - 2013

QUANTUM PHYSICS (I.ÖĞ.), Undergraduate, 2014 - 2015

SİLİKON TEKNOLOJİSİNİN TEMELLERİ II, Postgraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2008 - 2009

QUANTUM MECHANICS (YAZ OKULU), Undergraduate, 2013 - 2014

GENERAL PHYSICS (ÇEV. MÜH.), Undergraduate, 2014 - 2015, 2013 - 2014

PHYSICS FOR 21TH CENTURY (I.ÖĞ.), Undergraduate, 2013 - 2014

UZMANLIK ALAN DERSİ, Postgraduate, 2014 - 2015

PHYSICS OF SPORTS AND GAMES (I.ÖĞ.), Undergraduate, 2014 - 2015, 2013 - 2014

İLERİ KATIHAL FİZİĞİ I, Postgraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011

SPOR VE OYUNLARIN FİZİĞİ (II.ÖĞ.), Undergraduate, 2013 - 2014

PHYSICS OF SEMICONDUCTOR DEVICES, Undergraduate, 2012 - 2013

OPTOELEKTRONİĞE GİRİŞ II (II.ÖĞ.), Undergraduate, 2012 - 2013, 2011 - 2012

FİZİKTE NANOBİLİM VE NANOTEKNOLOJİ (II.ÖĞ.), Undergraduate, 2013 - 2014

SEMİNER, Postgraduate, 2013 - 2014, 2012 - 2013

SİLİKON TEKNOLOJİSİNİN TEMELLERİ I, Postgraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009

GENEL FİZİK I (ÇEV. MÜH.), Undergraduate, 2013 - 2014

FİZİK I (FEF İÇİ - YAZ OKULU), Undergraduate, 2012 - 2013

NANOSCIENCE AND NANOTECHNOLOGY IN PHYSICS (I.ÖĞ.), Undergraduate, 2013 - 2014

OPTOELEKTRONİĞE GİRİŞ II (I.ÖĞ.), Undergraduate, 2012 - 2013, 2011 - 2012

MESLEKİ YABANCI DİL I (I.ÖĞ.), Undergraduate, 2012 - 2013

İLERİ KUANTUM MEKANİĞİ I, Postgraduate, 2011 - 2012

TEMEL FİZİK I, Undergraduate, 2012 - 2013, 2011 - 2012, 2008 - 2009

TEMEL FİZİK (ZOOTEKİNİ), Undergraduate, 2012 - 2013

OPTOELEKTRONİĞE GİRİŞ I (I.ÖĞ.), Undergraduate, 2012 - 2013

OPTOELEKTRONİĞE GİRİŞ I (II.ÖĞ.), Undergraduate, 2012 - 2013, 2011 - 2012

MESLEKİ YABANCI DİL I (II.ÖĞ.), Undergraduate, 2012 - 2013

KUANTUM FİZİĞİ (I.Öğ.), Undergraduate, 2010 - 2011, 2009 - 2010, 2008 - 2009  
OPTOELEKTRONİĞE GİRİŞ I, Undergraduate, 2011 - 2012, 2010 - 2011  
OPTOELEKTRONİĞE GİRİŞ II, Undergraduate, 2010 - 2011  
GENEL FİZİK II (ÇEV. MÜH.), Undergraduate, 2010 - 2011  
KUANTUM MEKANİĞİ , Undergraduate, 2010 - 2011  
KUANTUM FİZİĞİ (YAZ OKULU), Undergraduate, 2010 - 2011, 2009 - 2010, 2008 - 2009  
TEMEL FİZİK (SÜF. II. ÖĞ.), Undergraduate, 2011 - 2012  
TEMEL FİZİK (SÜF. I. ÖĞ.), Undergraduate, 2011 - 2012  
TEMEL ELEKTRONİK LABORATUVARI, Undergraduate, 2008 - 2009

## Advising Theses

Sel K., Fosfor katkılanmış hidrojenlenmiş amorf silisyum karbür ince filmlerin elektriksel özelliklerinin karakterizasyonu, Postgraduate, B.ALÇINKAYA(Student), 2017  
Sel K., PLAZMA İLE BÜYÜTÜLMÜŞ HİDROJENLEMİŞ AMORF SİLİSYUM KARBÜR İNCE FİMLERİN FOTOLÜMİNESAS ÖZELLİKLERİNİN İNCELENMESİ, Postgraduate, İ.GÜNEŞ(Student), 2012

## Jury Memberships

Post Graduate, Alper Ömer YAŞAR, Çanakkale Onsekiz Mart Üniversitesi, September, 2013  
Post Graduate, Emrah Sarıca Tez Savunması, Çanakkale Onsekiz Mart Üniversitesi, January, 2012  
Post Graduate, Barbaros DEMİRSELÇUK, Çanakkale Onsekiz Mart Üniversitesi, January, 2010

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Effects of phosphorus on the electrical characteristics of plasma deposited hydrogenated amorphous silicon carbide thin films**  
ALCINKAYA B., SEL K.  
SOLID-STATE ELECTRONICS, vol.139, pp.109-114, 2018 (SCI-Expanded)
- II. **Effects of carbon content and plasma power on room temperature photoluminescence characteristics of hydrogenated amorphous silicon carbide thin films deposited by PECVD**  
GÜNEŞ İ., SEL K.  
THIN SOLID FILMS, vol.636, pp.85-92, 2017 (SCI-Expanded)
- III. **Covalent organic framework based on melamine and dibromoalkanes for versatile use**  
ŞAHİNER N., DEMİRCİ S., SEL K.  
JOURNAL OF POROUS MATERIALS, vol.23, no.4, pp.1025-1035, 2016 (SCI-Expanded)
- IV. **Conductivity of p(AAc) Cryogel and Its Li<sup>+</sup>, Na<sup>+</sup>, and K<sup>+</sup> Salts for NH<sub>3</sub> Sensing**  
ŞAHİNER N., DEMİRCİ S., SEL K.  
JOURNAL OF ELECTRONIC MATERIALS, vol.45, no.7, pp.3759-3765, 2016 (SCI-Expanded)
- V. **Synthesis and characterization of new microgel from tris(2-aminoethyl)amine and glycerol diglycidyl ether as poly(TAEA-co-GDE)**  
URREHMAN S., Sahiner M., SEL K., SIDDIQ M., ŞAHİNER N.  
Colloids and Surfaces B: Biointerfaces, vol.136, pp.1156-1165, 2015 (SCI-Expanded)
- VI. **Ionic liquid colloids based on PEI for versatile use**  
Demirci S., SEL K., ŞAHİNER N.  
SEPARATION AND PURIFICATION TECHNOLOGY, vol.155, pp.66-74, 2015 (SCI-Expanded)
- VII. **NH<sub>3</sub> gas sensing applications of metal organic frameworks**  
SEL K., DEMİRCİ S., ÖZTÜRK Ö. F. , Aktaş N., ŞAHİNER N.

MICROELECTRONIC ENGINEERING, vol.136, pp.71-76, 2015 (SCI-Expanded)

- VIII. **Benign Preparation of Metal-Organic Frameworks of Trimesic Acid and Cu, Co or Ni for Potential Sensor Applications**  
SEL K., DEMIRCI S., MEYDAN E., YILDIZ S., ÖZTÜRK Ö. F., Al-Lohedan H., ŞAHİNER N.  
JOURNAL OF ELECTRONIC MATERIALS, vol.44, no.1, pp.136-143, 2015 (SCI-Expanded)
- IX. **Facile synthesis and characterization of trimesic acid-Cu based metal organic frameworks**  
ŞAHİNER N., SEL K., ÖZTÜRK Ö. F., DEMIRCI S., TERZI G.  
APPLIED SURFACE SCIENCE, vol.314, pp.663-669, 2014 (SCI-Expanded)
- X. **Detection of relative [Na<sup>+</sup>] and [K<sup>+</sup>] levels in sweat with optical measurements**  
Al-Omari M., SEL K., Mueller A., Edwards J., Kaya T.  
JOURNAL OF APPLIED PHYSICS, vol.115, no.20, 2014 (SCI-Expanded)
- XI. **The optical properties of plasma polymerized polyaniline thin films**  
Goktas H., DEMIRCIOGLU Z., SEL K., Gunes T., KAYA İ.  
THIN SOLID FILMS, vol.548, pp.81-85, 2013 (SCI-Expanded)
- XII. **The effect of Na<sup>+</sup> and K<sup>+</sup> doping on the properties of sol-gel deposited 2-hydroxy-1,4-naphthoquinone thin films**  
Al-Omari M., SEL K., Mueller A., Mellinger A., Kaya T.  
JOURNAL OF APPLIED PHYSICS, vol.113, no.20, 2013 (SCI-Expanded)
- XIII. **Room temperature photoluminescence spectrum modeling of hydrogenated amorphous silicon carbide thin films by a joint density of tail states approach and its application to plasma deposited hydrogenated amorphous silicon carbide thin films**  
SEL K., GUNES İ.  
THIN SOLID FILMS, vol.520, no.24, pp.7062-7065, 2012 (SCI-Expanded)
- XIV. **Hydrogel templated CdS quantum dots synthesis and their characterization**  
ŞAHİNER N., SEL K., Meral K., ONGANER Y., Butun S., ÖZAY Ö., SILAN C.  
COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS, vol.389, pp.6-11, 2011 (SCI-Expanded)
- XV. **Effects of tail states on the conduction mechanisms in silicon carbide thin films with high carbon content**  
SEL K., Akaoglu B., Atilgan I., Katircioglu B.  
SOLID-STATE ELECTRONICS, vol.57, no.1, pp.1-8, 2011 (SCI-Expanded)
- XVI. **Determination of the refractive index of a dielectric film continuously by the generalized S-transform**  
COŞKUN E., SEL K., ÖZDER S.  
OPTICS LETTERS, vol.35, no.6, pp.841-843, 2010 (SCI-Expanded)
- XVII. **Study of minority carrier injection phenomenon on Schottky and plasma deposited p-n junction diodes**  
ÖZDEMİR O., SEL K.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.12, pp.175-184, 2009 (SCI-Expanded)
- XVIII. **Electroluminescence properties of a PIN structure made by nearly stoichiometric a-SiC<sub>x</sub>:H active layer**  
SEL K., Akaoglu B., ÖZDEMİR O., Atilgan I.  
VACUUM, vol.83, no.5, pp.813-818, 2009 (SCI-Expanded)
- XIX. **Refractive index and extinction coefficient determination of an absorbing thin film by using the continuous wavelet transform method**  
COŞKUN E., SEL K., ÖZDER S., KURT M.  
APPLIED OPTICS, vol.47, no.27, pp.4888-4894, 2008 (SCI-Expanded)
- XX. **Carbon content influence on the optical constants of hydrogenated amorphous silicon carbon alloys**  
Akaoglu B., Sel K., Atilgan I., Katircioglu B.  
OPTICAL MATERIALS, vol.30, no.8, pp.1257-1267, 2008 (SCI-Expanded)
- XXI. **Frequency dependence of conductivity in intrinsic amorphous silicon carbide film, assessed through**

**admittance measurement of metal insulator semiconductor structure**

OZDEMIR O., ATILGAN İ., AKAOGLU B., SEL K., KATIRCIOGLU B.

THIN SOLID FILMS, vol.497, pp.149-156, 2006 (SCI-Expanded)

## **Refereed Congress / Symposium Publications in Proceedings**

- I. **The Effects Of Phosphorus On The Electrical Properties And Conduction Mechanisms Of Hydrogenated Amorphous Silicon Carbide Thin Films**  
ALÇINKAYA B., SEL K.  
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, BODRUM, Turkey, 6 - 10 September 2017
- II. **Characterization Of Room Temperature Photoluminescence Of Phosphorus Doped Hydrogenated Amorphous Silicon Carbide Thin Films**  
SEL K.  
Türk Fizik Derneği 33. Uluslararası Fizik Kongresi, BODRUM, Turkey, 6 - 10 September 2017
- III. **The Electrical Characterization of Plasma Deposited Phosphorus Doped N Type Hydrogenated Amorphous Silicon Carbide Thin Films**  
ALÇINKAYA B., SEL K.  
2ND INTERNATIONAL CONFERENCE ON ORGANIC ELECTRONIC MATERIAL TECHNOLOGIES, 17 - 19 May 2016
- IV. **Superporous cryogels and their composites for versatile use**  
ŞAHİNER N., DEMİRCİ Ş., SEL K., AKTAŞ N.  
International Porous and Powder Materials Symposium and Exhibition, 15 - 18 September 2015, pp.172
- V. **9-AMİNOAKRİDİN VE TÜREVLERİNİN İNCE FİLMLEİNİN BİRİKTİRİLMESİ VE KARAKTERİZASYONU**  
SEL K., AYDIN F.  
Türk Fizik Derneği, BODRUM-İZMİR, Turkey, 21 - 24 July 2014
- VI. **Fotovoltaik Güneş Gözesi Uygulamaları İçin CdO İnce Filmlerin Sol-Gel Spin Kaplama Yöntemi İle Büyütülmesi Ve Fiziksel Özellikleri Üzerine Tavlamanın Etkisi**  
DEMİRSELÇUK B., SARICA E., SEL K., BİLGİN V.  
14. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştay, Turkey, 14 September 2012

## **Supported Projects**

- SEL K., TUBITAK Project, Kriyojel/İletken Polimer Kompozitlerinin Hazırlanması Ve Sensör Olarak Uygulanabilirliğinin İncelenmesi, 2015 - 2017
- SEL K., Project Supported by Other Official Institutions, Seramik yer ve duvar karolarının kizilötesi ve mikrodalga teknolojileri ile pişirme ve kurutma sistemlerinin geliştirilmesi, 2012 - 2013
- SEL K., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Silisyum tabanlı ışıyan diyotların üretilmesi, zaman çözünürlü ışıma, 2002 - 2005
- SEL K., Project Supported by Other Official Institutions, Gözenekli silisyum ışıyan yapıların üretilmesi, 2001 - 2002
- SEL K., TUBITAK Project, Silisyum tabanlı ışıyan yapıların üretilmesi, 1999 - 2001

## **Scientific Refereeing**

- Journal of Materials Chemistry C, SCI Journal, October 2015
- Journal of Materials Chemistry C, SCI Journal, September 2015
- Materials Science in Semiconductor Processing, SCI Journal, April 2015
- Journal of Chemistry, SCI Journal, January 2015
- Journal of Chemistry, SCI Journal, December 2014
- Materials Science in Semiconductor Processing, SCI Journal, October 2014

Materials Science in Semiconductor Processing, SCI Journal, May 2014  
Materials Science in Semiconductor Processing, SCI Journal, January 2014  
Materials Science in Semiconductor Processing, SCI Journal, December 2013  
Materials Science in Semiconductor Processing, SCI Journal, September 2013  
Materials Science in Semiconductor Processing, SCI Journal, March 2013  
Materials Science in Semiconductor Processing, SCI Journal, January 2013  
Materials Science in Semiconductor Processing, SCI Journal, January 2013  
Materials Science in Semiconductor Processing, SCI Journal, September 2012  
Journal of Chemistry , SCI Journal, January 2010

## **Scientific Consultations**

Çanakkale Seramik Ar-Ge Merkezi, Scientific Consultancy, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, Turkey, 2012 - 2013

## **Metrics**

Publication: 49  
Citation (WoS): 315  
Citation (Scopus): 269  
H-Index (WoS): 9  
H-Index (Scopus): 9

## **Congress and Symposium Activities**

LİSE ÖĞRETMENLERİ- FİZİK, KİMYA, BİYOLOJİ, MATEMATİK - PROJE DANIŞMANLIĞI EĞİTİM ÇALIŞTAYI, Invited Speaker, Çanakkale, Turkey, 2014

## **Scholarships**

YÖK Doktora Sonrası Yurt Dışı Araştırma Bursu. Central Michigan University, Graduate Faculty of The Science of Advanced Materials, Michigan, ABD, YOK, 2012 - 2012  
BDP, TÜBİTAK, 2005 - 2007

## **Visual Activities**

SEL K., TV Show, 2014 - 2014