

# **Prof. İDRİS SORAR**

## **Personal Information**

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## **International Researcher IDs**

ScholarID: utRs\_ToAAAAJ

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Publons / Web Of Science ResearcherID: AAC-9894-2021

ScopusID: 20434595700

Yoksis Researcher ID: 111199

## **Education**

Doctorate, İstanbul Technical University, Fen Bilimleri Enstitüsü, Turkey 2000 - 2008

Postgraduate, Manisa Celal Bayar University, Fen Bilimleri Enstitüsü, Fizik, Turkey 1996 - 1999

Undergraduate, Cukurova University, Fen-Edebiyat Fakültesi, Turkey 1991 - 1996

## **Foreign Languages**

English

## **Dissertations**

Doctorate, Katkılı ve katkısız çinko oksit (ZnO) ince filmlerin hazırlanması ve karakterizasyonu, İstanbul Technical University, Fen Bilimleri Enstitüsü, 2008

Postgraduate, Kaolinit dispersiyonunun reolojik ve dielektrik özelliklerine polivinil alkol (PVA) etkisi, 1999

## **Research Areas**

Surfaces, Interfaces, Thin Films and Nanosystems

## **Academic Positions**

Professor, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2020 - Continues

Associate Professor, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2014 - 2020

Researcher, Uppsala Universitet (Uppsala University), Angström Laboratuvarı, 2018 - 2019

Assistant Professor, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2010 - 2014

Researcher, Uppsala Universitet (Uppsala University), Angström Laboratuvarı, 2011 - 2012

Research Assistant PhD, Manisa Celal Bayar University, Fen Edebiyat Fakültesi, Fizik, 2009 - 2010

Research Assistant, İstanbul Technical University, Fen Bilimleri Enstitüsü, 2000 - 2009

Research Assistant, Manisa Celal Bayar University, Fen Edebiyat Fakültesi, Fizik, 1997 - 2000

## **Academic and Administrative Experience**

Rectorate Commissioner, Hatay Mustafa Kemal University, Rektörlük, 2021 - Continues  
Rectorate Commissioner, Hatay Mustafa Kemal University, Rektörlük, 2021 - Continues  
Rectorate Commissioner, Hatay Mustafa Kemal University, Rektörlük, 2020 - Continues  
Head of Department, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2019 - Continues  
Dean, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Dekanlık, 2021 - 2024  
BAP Scientific Commissioner, Hatay Mustafa Kemal University, Rektörlük, 2019 - 2024  
Head of Department, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2020 - 2021  
BAP Scientific Commissioner, Hatay Mustafa Kemal University, Rektörlük, 2015 - 2018  
College Management Board Member, Hatay Mustafa Kemal University, Kırıkhan Meslek Yüksekokulu, 2015 - 2018  
Head of Department, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2016 - 2016  
Member of ADEK Commission, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Dekanlık, 2015 - 2015  
Manager of Research and Application Center, Hatay Mustafa Kemal University, Rektörlük, 2014 - 2015  
Deputy Head of Department, Hatay Mustafa Kemal University, Fen Edebiyat Fakültesi, Fizik, 2014 - 2014

## **Courses**

### **Doctorate**

İnce Film Optiği, Doctorate, 2024 - 2025

### **Postgraduate**

Uzmanlık Alan Dersi, Postgraduate, 2024 - 2025

İNCE FİLM OPTİĞİ, Postgraduate, 2022 - 2023, 2021 - 2022, 2019 - 2020

OPTİK İNCE FİMLERİN UYGULAMA ALANLARI, Postgraduate, 2022 - 2023, 2021 - 2022, 2018 - 2019, 2017 - 2018

YARIİLETKEN FİZİĞİNE GİRİŞ-II, Postgraduate, 2018 - 2019

### **Undergraduate**

TEMEL BİLGİ TEKNOLOJİLERİ-I, Undergraduate, 2016-2017, 2015-2016, 2014-2015

FİZİKTE MATEMATİK METODLAR II, Undergraduate, 2016-2017

FİZİKTE MATEMATİK METODLAR I, Undergraduate, 2016-2017

KATİHAL FİZİĞİ-I, Undergraduate, 2015-2016, 2013-2014

KATİHAL FİZİĞİ-II, Undergraduate, 2015-2016, 2013-2014

TEMEL BİLGİ TEKNOLOJİLERİ-II, Undergraduate, 2015-2016

GENEL FİZİK-I, Undergraduate, 2015-2016, 2013-2014, 2012-2013

BİTİRME PROJESİ-I, Undergraduate, 2015-2016, 2014-2015

GENEL FİZİK-II, Undergraduate, 2015-2016, 2013-2014, 2012-2013

BİTİRME PROJESİ-II, Undergraduate, 2015-2016

Fizik Lab.-II, Undergraduate, 2013-2014

Fizik, Undergraduate, 2013-2014, 2010-2011

Fizik Lab.-IV, Undergraduate, 2012-2013

Kuantum Fiziği I, Undergraduate, 2012-2013

Mühendislik Fiziği-II, Undergraduate, 2012-2013

Bilgisayar II, Undergraduate, 2012-2013

Biyofizik, Undergraduate, 2012-2013

Mühendislik Fiziği-I, Undergraduate, 2012-2013

Genel Fizik-III, Undergraduate, 2012-2013

Fen ve Tekn. Lab. Uyg.I, Undergraduate, 2012-2013

Mühendisler İçin Fizik-II, Undergraduate, 2010-2011

Fizik Laboratuarı-II, Undergraduate, 2010-2011

Mühendisler İçin Fizik-I, Undergraduate, 2010-2011

Kuantum Fiziği-II, Undergraduate, 2010-2011

Kuantum Fiziği-I, Undergraduate, 2010-2011

## **Supervised Theses**

- SORAR İ., SiC ve Al<sub>2</sub>O<sub>3</sub> ilavesinin Mg-Sn-Y合金larının mikroyapı, mekanik ve korozyon özellikleri üzerindeki etkisinin incelenmesi, Postgraduate, İ.HUZEYFE(Student), 2023
- SORAR İ., Sol-jel yöntemiyle hazırlanan metal ftalosianın katkılı TiO<sub>2</sub> filmelerin optik ve yapısal özelliklerinin incelenmesi, Doctorate, H.SARIGÜL(Student), 2021
- SORAR İ., Dekstrin ve kumarin katkılı TiO<sub>2</sub> filmelerin optik ve morfolojik özelliklerinin incelenmesi, Postgraduate, D.DİKÇE(Student), 2021
- SORAR İ., Yüksek basınçlı döküm yöntemi ile üretilen biyobozunur mg合金larının mekanik ve korozyon özelliklerine nadir element ilavesinin etkisi, Doctorate, S.ÖZARSLAN(Student), 2018
- SORAR İ., Sol-jel yöntemiyle hazırlanan TiO<sub>2</sub> filmelerin elektrokromik özellikleri, Postgraduate, H.SARIGÜL(Student), 2015

## **Journal articles indexed in SCI, SSCI, and AHCI**

- I. **Investigation of Microstructural, Mechanical and Corrosion Properties of Biodegradable Mg-Sn-Y Alloys**  
ÖZARSLAN S., SORAR İ., Sevik H.  
INTERNATIONAL JOURNAL OF METALCASTING, 2024 (SCI-Expanded)
- II. **Durability and rejuvenation of electrochromic tungsten oxide thin films in LiClO<sub>4</sub>-propylene carbonate viscous electrolyte: Effect of Ti doping of the film and polyethylene oxide addition to the electrolyte**  
SORAR İ., ATAK G., Bayrak Pehlivan İ., Granqvist C. G., Niklasson G. A.  
Solid State Sciences, vol.137, 2023 (SCI-Expanded)
- III. **Spectroscopic, electrochemical and optical properties of non-peripherally (2,2-dimethyl-1,3-dioxolan-4-yl)methoxy groups substituted metal-free and metallophthalocyanines**  
Tağman İ., Özçeşmeci M., Gümrükçü S., SORAR İ.  
Journal of Molecular Structure, vol.1245, 2021 (SCI-Expanded)
- IV. **The effect of Zn metallophthalocyanine on the optical and structural properties of sol-gel spin coated TiO<sub>2</sub> thin films**  
Sarıgül H., Özçeşmeci İ., SORAR İ.  
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, no.11-12, pp.587-593, 2021 (SCI-Expanded)
- V. **The effect of Zn metallophthalocyanine on the optical and structural properties of sol-gel spin coated TiO<sub>2</sub> thin films**  
Sarıgül H., Özçeşmeci İ., SORAR İ.  
Journal of Optoelectronics and Advanced Materials, vol.23, no.11-12, pp.587-593, 2021 (SCI-Expanded)
- VI. **Potentiostatic rejuvenation of electrochromic WO<sub>3</sub> thin films: Exploring the effect of polyethylene oxide in LiClO<sub>4</sub>-Propylene carbonate electrolytes**  
SORAR İ., Bayrak Pehlivan İ., Bohlin J., Granqvist C. G., Niklasson G. A.  
Solar Energy Materials and Solar Cells, vol.218, 2020 (SCI-Expanded)
- VII. **Optical and morphological properties and in silico studies on metallophthalocyanines containing pyridyloxy moieties**  
SORAR İ., Özçeşmeci İ., Katircı R., Gül A.  
Journal of Molecular Structure, vol.1212, 2020 (SCI-Expanded)
- VIII. **Electrochromism of W-In oxide thin films: Implications for cycling durability**  
SORAR İ., Pehlivan İ. B., Granqvist C. G., Niklasson G. A.  
Thin Solid Films, vol.697, 2020 (SCI-Expanded)
- IX. **Cycling Durability of Electrochromic W-Ti Oxide Thin Films: Optical Transmittance Data Signal Dual Degradation Modes**  
SORAR İ., Granqvist C. G., Niklasson G. A.  
Journal of the Electrochemical Society, vol.167, no.2, 2020 (SCI-Expanded)

- X. **Electrochromism in Ni Oxide Thin Films Made by Advanced Gas Deposition and Sputtering: A Comparative Study Demonstrating the Significance of Surface Effects**  
SORAR İ., Welearegay T. G., Primetzhofer D., Österlund L., Granqvist C. G., Niklasson G. A.  
Journal of the Electrochemical Society, vol.167, no.11, 2020 (SCI-Expanded)
- XI. **Microstructure, mechanical and corrosion properties of novel Mg-Sn-Ce alloys produced by high pressure die casting**  
ÖZARSLAN S., Şevik H., SORAR İ.  
Materials Science and Engineering C, vol.105, 2019 (SCI-Expanded)
- XII. **Electrochromism of W-Ti Oxide Thin Films: Cycling Durability, Potentiostatic Rejuvenation, and Modelling of Electrochemical Degradation**  
SORAR İ., Rojas-Gonzalez E. A., Pehlivan I. B., Granqvist C. G., Niklasson G. A.  
JOURNAL OF THE ELECTROCHEMICAL SOCIETY, no.15, 2019 (SCI-Expanded)
- XIII. **Optical and Morphological Properties of New Metallophthalocyanines with Hydroxyethylsulfanyl Substituents**  
SORAR İ., Özçeşmeci İ., GÜL A.  
PROTECTION OF METALS AND PHYSICAL CHEMISTRY OF SURFACES, no.5, pp.1019-1024, 2019 (SCI-Expanded)
- XIV. **The effect of organic solvents on the optical and morphological properties of metallophthalocyanines containing 3,5-bis(2',3',4',5',6'-pentafluorobenzyloxy) benzyloxy groups**  
Özçeşmeci M., SORAR İ., Hamuryudan E.  
JOURNAL OF PORPHYRINS AND PHTHALOCYANINES, no.1-2, pp.136-141, 2019 (SCI-Expanded)
- XV. **Synthesis, characterization, and optical studies of pentoxy-substituted tetrakis(pentafluorobenzyloxy)phthalocyanines**  
Özçeşmeci M., SORAR İ., Özçeşmeci İ., Hamuryudan E.  
Journal of Coordination Chemistry, vol.71, no.15, pp.2281-2292, 2018 (SCI-Expanded)
- XVI. **Synthesis and some optical results of long chain substituted phthalocyanines**  
Özçeşmeci İ., SORAR İ.  
Turkish Journal of Chemistry, vol.42, no.1, pp.21-28, 2018 (SCI-Expanded)
- XVII. **Thin films of fluorinated groups substituted metallophthalocyanines as an optical material**  
Özçeşmeci M., Özçeşmeci İ., SORAR İ., Hamuryudan E.  
Inorganic Chemistry Communications, vol.86, pp.209-212, 2017 (SCI-Expanded)
- XVIII. **Optical studies on phthalocyanines substituted with phenylazonaphthoxy groups**  
Özçeşmeci İ., SORAR İ., Gül A.  
Philosophical Magazine, vol.96, no.28, pp.2986-2999, 2016 (SCI-Expanded)
- XIX. **Electrochromism of DC magnetron-sputtered TiO<sub>2</sub> : Role of film thickness**  
SORAR İ., Pehlivan E., Niklasson G. A., Granqvist C. G.  
Applied Surface Science, vol.318, pp.24-27, 2014 (SCI-Expanded)
- XX. **Electrochromism of DC magnetron sputtered TiO<sub>2</sub> thin films: Role of deposition parameters**  
SORAR İ., Pehlivan E., Niklasson G. A., Granqvist C. G.  
SOLAR ENERGY MATERIALS AND SOLAR CELLS, pp.172-180, 2013 (SCI-Expanded)
- XXI. **Synthesis, optical and structural studies of tetrakis[4-(2',3', 4',5',6'-pentafluorobenzyloxy)benzyloxy]-substituted metallo-phthalocyanines**  
Özçeşmeci M., SORAR İ., Hamuryudan E.  
Synthetic Metals, vol.162, no.1-2, pp.154-161, 2012 (SCI-Expanded)
- XXII. **Zinc(II)phthalocyanine as an optical window for visible region**  
Özçeşmeci İ., SORAR İ., Gül A.  
Inorganic Chemistry Communications, vol.14, no.8, pp.1254-1257, 2011 (SCI-Expanded)
- XXIII. **Optical and structural properties of Si-doped ZnO thin films**  
SORAR İ., Saygin-Hinczewski D., Hinczewski M., Tepehan F.  
Applied Surface Science, vol.257, no.16, pp.7343-7349, 2011 (SCI-Expanded)
- XXIV. **The effect of aging on ZnO thin films for different sol concentrations**

- SORAR İ., Tepehan F. Z.  
 OPTOELECTRONICS AND ADVANCED MATERIALS-RAPID COMMUNICATIONS, no.5, pp.455-458, 2009 (SCI-Expanded)
- XXV. Modeling the optical properties of  $WO_3$  and  $WO_3-SiO_2$  thin films  
 Saygin-Hinczewski D., Hinczewski M., SORAR İ., Tepehan F. Z., Tepehan G. G.  
 SOLAR ENERGY MATERIALS AND SOLAR CELLS, no.8, pp.821-829, 2008 (SCI-Expanded)
- XXVI. Structural and optical studies of tetra (tricarbethoxy)-substituted metallophthalocyanines  
 SORAR İ., ŞENER M. K., Tepehan F. Z., Güllü A., Koçak M.  
 THIN SOLID FILMS, no.10, pp.2894-2898, 2008 (SCI-Expanded)
- XXVII. Optical and structural properties of  $Ta_2O_5-CeO_2$  thin films  
 Saygin-Hinczewski D., Koc K., SORAR İ., Hinczewski M., Tepehan F. Z., Tepehan G. G.  
 SOLAR ENERGY MATERIALS AND SOLAR CELLS, no.18, pp.1726-1732, 2007 (SCI-Expanded)

### Articles Published in Other Journals

- I. Investigation of optical and structural properties of cobalt phthalocyanine doped  $TiO_2$  films prepared by sol-gel method Sol-jel yöntemiyle hazırlanan kobalt ftalosiyanın katkılı  $TiO_2$  filmlerin optik ve yapısal özelliklerinin incelenmesi  
 Sarigül H., Özçeşmeci M., SORAR İ.  
 El-Cezeri Journal of Science and Engineering, vol.8, no.1, pp.299-308, 2021 (Scopus)
- II. Investigation of biodegradable ternary Mg-Zn-La magnesium alloys  
 ÖZARSLAN S., ŞEVİK H., SORAR İ.  
 AIP CONFERENCE PROCEEDINGS, vol.1935, no.1, pp.50005, 2018 (Scopus)
- III. Optical investigation of palladium(II) phthalocyanine including an aromatic group  
 Özçeşmeci İ., SORAR İ.  
 Journal of the Turkish Chemical Society, Section A: Chemistry, vol.5, no.1, pp.295-302, 2018 (Scopus)
- IV. Sol Jel Yöntemiyle Hazırlanan  $TiO_2$  Filmlerin Optik ve Elektrokromik Özellikleri  
 SARIGÜL H., SORAR İ.  
 International journal of advances in engineering and pure sciences (Online), vol.28, no.2, pp.81-88, 2016 (Peer-Reviewed Journal)
- V. Antireflective filters of composite materials based on  $TiO_2$  and  $ZnO$  thin films  
 Saygin-Hinczewski D., Hinczewski M., SORAR İ., TEPEHAN F. Z., Tepehan G.  
 Journal of Optoelectronics and Advanced Materials-Symposia, no.1, pp.382-385, 2009 (Peer-Reviewed Journal)
- VI.  $ZnO$  ince filmlerin optik ve yapısal özelliklerine ısıl işlem sıcaklığının etkisi  
 SORAR İ., TEPEHAN F. Z.  
 İTÜ Dergisi/C, Fen Bilimleri, no.7, pp.21-26, 2009 (Peer-Reviewed Journal)
- VII. The effect of polyvinyl alcohol PVA on rheological and dielectric properties of kaolinite dispersion  
 SORAR İ., YILMAZ H., Güler S., Güler Ç.  
 Anadolu University Journal of Science and Technology, no.2, pp.335-342, 2002 (Peer-Reviewed Journal)

### Papers Presented at Peer-Reviewed Scientific Conferences

- I. Evaluation of the Effect of La Addition to Mg-Sn Alloy on Microstructure and Mechanical Properties  
 Özarslan S., Şevik H., Sorar İ.  
 International Conference on Mathematic, Statistics and Applied Science, Phuket, Thailand, 26 - 27 December 2024, pp.1-2, (Summary Text)
- II. Investigation of Microstructural, Mechanical and Corrosion Properties of Biodegradable Mg-Sn-Y

## **Alloys**

ÖZARSLAN S., ŞEVİK H., SORAR İ.

The Turkish Physical Society 39 th International Physics Congress (TPS-39), Muğla, Turkey, 31 August - 04 September 2023, (Summary Text)

- III. **Optical Studies of Tetrakis(3,5-bis(2',3',4',5',6'-pentafluorobenzyloxy)benzyloxy) Phthalocyanines**  
ÖZÇEŞMECİ M., SORAR İ., HAMURYUDAN E.

Paintistanbul Turkcoat 2018 International Paint Coatings Industry, Raw Materials, Auxiliary Products Congress and Paint Schools, 20 - 21 March 2018, (Full Text)

- IV. **Synthesis and optical investigation of metallophthalocyanines.**

ÖZÇEŞMECİ İ., SORAR İ.

Paintistanbul Turkcoat 2018, 20 - 21 March 2018, (Summary Text)

- V. **Investigation of Biodegradable Ternary Magnesium Alloys**

ÖZARSLAN S., ŞEVİK H., SORAR İ.

The Turkish Physical Society 33th International Physics Congress (TPS-33), Muğla, Turkey, 6 - 10 September 2017, (Summary Text)

- VI. **Microstructure and Mechanical Properties of Mg-Zn-Ce Magnesium Alloys**

ÖZARSLAN S., ŞEVİK H., SORAR İ.

The Turkish Physical Society 33th International Physics Congress (TPS-33), Muğla, Turkey, 6 - 10 September 2017, (Summary Text)

- VII. **Synthesis of peripherally tetra- hexylthio substituted metallo-phthalocyanines and their some optical results**

SORAR İ., ÖZÇEŞMECİ İ.

19. JCF-Frühjahrssymposium, 29 March - 01 April 2017, (Summary Text)

- VIII. **Electrochromic Properties of TiO<sub>2</sub> Thin Films Prepared By Sol Gel Method**

SARIGÜL H., SORAR İ.

International Conference on Natural Science and Engineering, Kilis, Turkey, 19 - 20 March 2016, (Summary Text)

- IX. **Synthesis and Optical Studies on Phthalocyanines Substituted with Phenylazonaphthoxy Groups**  
SORAR İ., ÖZÇEŞMECİ İ.

18. JCF-Frühjahrssymposium, Germany, 16 - 19 March 2016, (Summary Text)

## **Funded Projects**

Sorar İ., Project Supported by Higher Education Institutions, SiC ve Al<sub>2</sub>O<sub>3</sub> İlavesinin Mg-Sn-Y Alaşımlarının Mikroyapı, Mekanik ve Korozyon Özellikleri Üzerindeki Etkisinin İncelenmesi, 2021 - 2023

Sorar İ., Project Supported by Higher Education Institutions, Metal Ftalosiyantan Katkılı TiO<sub>2</sub> Filmlerin Optik ve Yapısal Özelliklerinin İncelenmesi, 2017 - 2021

Sorar İ., Universities of Other Countries Supported Project, Degradation and Rejuvenation Processes in Electrochromic Materials for Smart Window Applications, 2018 - 2019

ÖZARSLAN S., SORAR İ., Project Supported by Higher Education Institutions, Yüksek Basınçlı Döküm Yöntemi ile Üretilen Mg Alaşımlarının Mekanik ve Korozyon Özelliklerine Nadir Element İlavesinin Etkisi, 2016 - 2018

Sorar İ., Project Supported by Higher Education Institutions, Sol gel yöntemiyle hazırlanan TiO<sub>2</sub> filmlerin elektrokromik özellikleri, 2013 - 2015

Sorar İ., Universities of Other Countries Supported Project, Characterization of Sputtered Electrochromic Thin Films, 2011 - 2012

Sorar İ., Project Supported by Higher Education Institutions, Katkılı ve katkısız çinko oksit ZnO ince filmlerin hazırlanması ve karakterizasyonu, 2005 - 2008

Sorar İ., TUBITAK Project, Vakumda termal ve reaktif buharlaştırma yöntemleri ile metal oksit filmlerin hazırlanması ve optik özelliklerinin incelenmesi, 2006 - 2007

## **Peer Reviews in Scientific Publications**

Other journals, January 2017

Other journals, January 2016

El-Cezeri Journal of Science and Engineering, Other Journals, January 2016

Other journals, January 2015

## **Metrics**

Publication: 45

Citation (Scopus): 227

H-Index (Scopus): 8

## **Non Academic Experience**

MİLLÎ EĞİTİM BAKANLIĞI, Öğretmen