

## Prof. EMREN NALBANT ESENTÜRK

### Personal Information

Email: emren@metu.edu.tr

### Education Information

Doctorate, University Of Maryland, Kimya, United States Of America 2001 - 2006

Post Graduate, Middle East Technical University, Graduate School of Natural and Applied Sciences, Kimya (YI) (Tezli), Turkey 1999 - 2001

Under Graduate, Middle East Technical University, Faculty of Education, Matematik Ve Fen Bilimleri Eğitimi Bölümü, Turkey 1992 - 1998

### Foreign Languages

English, C1 Advanced

### Research Areas

Natural Sciences

### Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 2009 - Continues

### Advising Theses

NALBANT ESENTÜRK E., TiN(IV) oxide coated gold nanoparticles: Synthesis, characterization and investigation of surface enhanced Raman scattering activities, Post Graduate, A.ELÇİ(Student), 2017

NALBANT ESENTÜRK E., Carbon dioxide capture by copper oxide nanoparticles decorated supports, Post Graduate, C.BÖRÜBAN(Student), 2016

SON Ç. D. , NALBANT ESENTÜRK E., Design and characterization of 5-L autoclavable batch-culture bioreactor, Post Graduate, Ş.ÜNSAL(Student), 2014

ÜNALAN H. E. , NALBANT ESENTÜRK E., Growth and characterization of branched gold nanoparticles on surfaces, Post Graduate, N.İLKEM(Student), 2014

NALBANT ESENTÜRK E., Synthesis, spectroscopic and computational analysis of nickel integrated germanium clusters, Post Graduate, S.ESRA(Student), 2014

AYDINOL M. K. , NALBANT ESENTÜRK E., Production and characterization of nano silver oxide for silver zinc batteries, Post Graduate, Ö.ÖYKÜM(Student), 2013

NALBANT ESENTÜRK E., Synthesis, functionalization and characterization of gold nanoparticles, Post Graduate, Z.SHOLANBAYEVA(Student), 2012

ÜNALAN H. E. , NALBANT ESENTÜRK E., Synthesis of gold nanowires with high aspect ratio and morphological purity, Post Graduate, E.DERTLİ(Student), 2012

TURAN R., NALBANT ESENTÜRK E., Power conversion efficiency enhancement of organic solar cells by addition of gold nanoparticles, Post Graduate, D.KOZANOĞLU(Student), 2012

## Designed Lessons

Nalbant Esentürk E., Nanochemistry, Post Graduate, 2014 - 2015

## Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Nanowires assembled from iron manganite nanoparticles: Synthesis, characterization, and investigation of electrocatalytic properties for water oxidation reaction**  
Çetin A., Önal A. M. , Esenturk E.  
Journal of Materials Research, vol.34, pp.3231-3239, 2019 (Journal Indexed in SCI)
- **Chromium substituted iron oxide nanowires as affordable electrocatalysts for oxygen evolution reaction**  
Kocabas S., Çetin A., Önal A. M. , Esenturk E.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.21, 2019 (Journal Indexed in SCI)
- **Optical and vibrational properties of nickel integrated germanium Zintl ion clusters**  
Ogun E., Esentürk O., Nalbant Esentürk E.  
INORGANICA CHIMICA ACTA, vol.490, pp.16-23, 2019 (Journal Indexed in SCI)
- **Magnesium substituted cobalt spinel nanostructures for electrocatalytic water oxidation**  
Ekebas E., Çetin A., Önal A. M. , Nalbant Esentürk E.  
JOURNAL OF APPLIED ELECTROCHEMISTRY, vol.49, pp.315-325, 2019 (Journal Indexed in SCI)
- **Synthesis of tin oxide-coated gold nanostars and evaluation of their surface-enhanced Raman scattering activities**  
Elci A., Demirtas O., Öztürk İ. M. , Bek A., Esenturk E.  
JOURNAL OF MATERIALS SCIENCE, vol.53, pp.16345-16356, 2018 (Journal Indexed in SCI)
- **Activated carbon-supported CuO nanoparticles: a hybrid material for carbon dioxide adsorption**  
Boruban C., Nalbant Esentürk E.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.20, 2018 (Journal Indexed in SCI)
- **Synthesis of CuO nanostructures on zeolite-Y and investigation of their CO<sub>2</sub> adsorption properties**  
Boruban C., Nalbant Esentürk E.  
JOURNAL OF MATERIALS RESEARCH, vol.32, pp.3669-3678, 2017 (Journal Indexed in SCI)
- **Optical and Vibrational Properties of [Pt@Pb-12](2-), [Ni@Pb-12](2-), and [Ni@Pb-10](2-) Zintl Ion Clusters**  
Çetin A., Esentürk O., Esenturk E.  
EUROPEAN JOURNAL OF INORGANIC CHEMISTRY, pp.2413-2421, 2017 (Journal Indexed in SCI)
- **Growth of branched gold nanoparticles on solid surfaces and their use as surface-enhanced Raman scattering substrates**  
Nalbant Esentürk E., Coskun S., Kozanoglu D., Ertas G., Ünal H. E. , Nalbant Esentürk E.  
RSC ADVANCES, vol.5, pp.101656-101663, 2015 (Journal Indexed in SCI)
- **A functional immobilization matrix based on a conducting polymer and functionalized gold nanoparticles: Synthesis and its application as an amperometric glucose biosensor**  
Kesik M., Kanik F. E. , Hizalan G., Kozanoglu D., Nalbant Esentürk E., Timur S., Toppare L. K.  
POLYMER, vol.54, pp.4463-4471, 2013 (Journal Indexed in SCI)
- **Power conversion efficiency enhancement of organic solar cells by addition of gold nanostars, nanorods, and nanospheres**  
Kozanoglu D., Apaydin D. H. , Çırpan A., Esenturk E.  
ORGANIC ELECTRONICS, vol.14, pp.1720-1727, 2013 (Journal Indexed in SCI)

- **Gold nanowires with high aspect ratio and morphological purity: Synthesis, characterization, and evaluation of parameters**  
Dertli E., Coskun S., Nalbant Esentürk E.  
JOURNAL OF MATERIALS RESEARCH, vol.28, pp.250-260, 2013 (Journal Indexed in SCI)
- **Gold nanostar @ iron oxide core-shell nanostructures: synthesis, characterization, and demonstrated surface-enhanced Raman scattering properties**  
Nalbant Esentürk E., Walker A. R. H.  
JOURNAL OF NANOPARTICLE RESEARCH, vol.15, 2013 (Journal Indexed in SCI)
- **Surface-enhanced Raman scattering spectroscopy via gold nanostars**  
Esenturk E., Walker A. R. H.  
JOURNAL OF RAMAN SPECTROSCOPY, vol.40, pp.86-91, 2009 (Journal Indexed in SCI)
- **The Pb-12(2-) and Pb-10(2-) zintl ions and the M@Pb-12(2-) and M@Pb-10(2-) cluster series where M = Ni, Pd, Pt**  
Esenturk E., Fettinger J., Eichhorn B.  
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.128, pp.9178-9186, 2006 (Journal Indexed in SCI)
- **Synthesis and characterization of the [Ni6Ge13(CO)(5)](4-) and [Ge9Ni2(PPh3)](2-) Zintl ion clusters**  
Esenturk E., Fettinger J., Eichhorn B.  
POLYHEDRON, vol.25, pp.521-529, 2006 (Journal Indexed in SCI)
- **Synthesis, structure, and dynamic properties of [Ni2Sn17](4-)**  
Esenturk E., Fettinger J., Eichhorn B.  
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.128, pp.12-13, 2006 (Journal Indexed in SCI)
- **The closo-Pb-10(2-) Zintl ion in the [Ni@Pb-10](2-) cluster**  
Esenturk E., Fettinger J., Eichhorn B.  
CHEMICAL COMMUNICATIONS, pp.247-249, 2005 (Journal Indexed in SCI)
- **[Pt@Pb-12](2-)**  
Esenturk E., Fettinger J., Lam Y., Eichhorn B.  
ANGEWANDTE CHEMIE-INTERNATIONAL EDITION, vol.43, pp.2132-2134, 2004 (Journal Indexed in SCI)
- **Spectroelectrochemical investigation of pentacarbonyl(pyrazine)metal(0) (metal = Cr, Mo, W) complexes of group 6 elements**  
Yaman S., Esenturk E., Kayran C., Onal A.  
ZEITSCHRIFT FÜR NATURFORSCHUNG SECTION B-A JOURNAL OF CHEMICAL SCIENCES, vol.57, pp.92-98, 2002 (Journal Indexed in SCI)

## Refereed Congress / Symposium Publications in Proceedings

- **Synthesis and characterization of Fe-Mn oxide nanowires and their catalytic activities towards oxygen evolution reaction**  
ÇETİN A., Onal A., NALBANT ESENTÜRK E.  
257th National Meeting of the American-Chemical-Society (ACS), Florida, United States Of America, 31 March - 04 April 2019, vol.257

## Supported Projects

NALBANT ESENTÜRK E., KARAMAN S., Project Supported by Higher Education Institutions, BAKIR DEMİR OKSİT VE SPİNEL NANOPARÇACIKLARININ SENTEZİ, KARAKTERİZASYONU VE KATALİTİK ETKİNLİKLERİNİN İNCELENMESİ, 2018 - 2020

NALBANT ESENTÜRK E., ÇETİN A., Project Supported by Higher Education Institutions, SPİNEL YAPIDAKİ BAKIR KROM OKSİT NANOPARÇACIKLARININ SENTESİ, KARAKTERİZASYONU VE KATALİTİK ETKİNLİKLERİNİN İNCELENMESİ, 2018 -

2019

- YILMAZ A., AKMAN P., GÖKAĞAÇ ARSLAN G., ÇORUH N., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, Lüminesan MCM-41 Mezogözenekli Silika Nanoparçacıklarına Selekoksib Yükleme Çalışmaları: İlaç Yükleme ve Bırakma Özellikleri, 2018 - 2019
- Nalbant Esentürk E., Önal A. M. , TUBITAK Project, Spinel Yapıda Yeni Nano-Katalizörlerin Sentezi ve Temiz Enerji Üretimi için Suyun Yükseltgenmesindeki Kullanımlarının İncelenmesi, 2017 - 2019
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, Fonksiyonel Özellikleri Güçlendirilmiş Soymetal Nano Parçacıklarının Sentezi Ve Uygulama Alanlarının İncelenmesi Isıl Karakterizasyonu, 2011 - 2019
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, YÜZEY ÜZERİNE KAPLANMIŞ FARKLI UZUNLUKLARDAKİ ALTIN NANOÇUBUKLARIN OPTİK ÖZELLİKLERİNİN VE GÜNEŞ GÖZELERİNDEKİ POTANSİYEL UYGULAMALARININ İNCELENMESİ, 2017 - 2017
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, KOBALT OKSİT NANOPARÇACIKLARININ SENTEZİ, KARAKTERİZASYONU VE KATALİTİK ETKİNLİKLERİNİN İNCELENMESİ, 2017 - 2017
- GÖKAĞAÇ ARSLAN G., YILMAZ A., ÇORUH N., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, Değişik destek maddeleri kullanılarak yeni katalizörlerin hazırlanması, 2017 - 2017
- ÖZKAR S., AKBAYRAK S., GÖKAĞAÇ ARSLAN G., YILMAZ A., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., Project Supported by Higher Education Institutions, Serya destekli rutenyum nanokümleri: Sentezi, tanımlanması ve amonyak boranın hdirolizinden hidrojen üretiminde katalitik etkinliğinin incelenmesi, 2016 - 2016
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
- ÖZKAR S., GÖKAĞAÇ ARSLAN G., YILMAZ A., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., Project Supported by Higher Education Institutions, Hidrojen Üretiminde Formik Asidin Dehidrojenlenmesini Katalizleyecek Metal Nanokümlerinin Hazırlanması, Tanımlanması ve Katalitik Performanslarının İncelenmesi, 2015 - 2015
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2015
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2015
- NALBANT ESENTÜRK E., TUBITAK Project, Ana Grup Kümelerinden Nanomalzemelere Sentez Karakterizasyon Birleştirme, 2012 - 2015
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2014
- YILMAZ A., GÖKAĞAÇ ARSLAN G., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., Project Supported by Higher Education Institutions, Biyomedikal Amaçla Kullanılabilecek Anorganik Nanoparçacıkların Yüzey Aktifleme Çalışmaları ve Bunların Fizikokimyasal Karakterizasyonları, 2014 - 2014
- NALBANT ESENTÜRK E., ÖĞÜN S. E. , Project Supported by Higher Education Institutions, GEÇİŞ METALLERİ AŞILANMIŞ GERMANİYUM KÜMELERİNİN SENTEZİ VE KARAKTERİZASYONU, 2013 - 2013
- NALBANT ESENTÜRK E., ÇETİN A., Project Supported by Higher Education Institutions, GEÇİŞ METALLERİ AŞILANMIŞ KALAY KÜMELERİNİN SENTEZİ VE KARAKTERİZASYONU, 2013 - 2013

NALBANT ESENTÜRK E., ARCA B. Ç. , Project Supported by Higher Education Institutions, YÜKSEK EN BOY ORANINDAKİ ALTIN NANOTELLERİN SENTEZİ, KARAKTERİZASYONU VE POTANSİYEL UYGULAMALARININ İNCELENMESİ, 2013 - 2013

NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, ALTIN ÇEKİRDEK, GÜMÜŞ KABUK BİMETALİK NANOPARÇACIKLARIN SENTEZİ VE KARAKTERİZASYONU, 2013 - 2013

NALBANT ESENTÜRK E., Project Supported by Higher Education Institutions, Altın (au), Gümüş (ag) Nanoparçacıklarının Sentezi Ve Karakterizasyonu, 2010 - 2010

## **Scientific Refereeing**

RSC ADVANCES, Journal Indexed in SCI-E, June 2015

RSC ADVANCES, Journal Indexed in SCI-E, March 2015

## **Citations**

Total Citations (WOS):899

h-index (WOS):9

## **Scholarships**

Howard Hughes Medical Institute Fellowship, Other International Organizations, 2004 - 2006

## **Awards**

Nalbant Esentürk E., Prof. Dr. Mustafa Parlar Eğitim ve Araştırma Vakfı Yılın Eğitimcisi Ödülü, Prof. Dr. Mustafa Parlar Eğitim Ve Araştırma Vakfı, December 2016