

Prof. NİHAL SARIER



## Personal Information

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## International Researcher IDs

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Publons / Web Of Science ResearcherID: P-5104-2018

ScopusID: 15726002800

Yoksis Researcher ID: 114920



## Education Information

Doctorate, Ege University, Fen Bilimleri Enstitüsü, Fizikokimya (Dr), Turkey  
1983 - 1986

Postgraduate, Ege University, Fen Bilimleri Enstitüsü, Kimya (YI) (Tezli),  
Turkey 1979 - 1983

Undergraduate, Ege University, Fen Fakültesi, Kimya Bölümü, Turkey 1977 -  
1978

Undergraduate, Middle East Technical University, Fen-Edebiyat Fakültesi,  
Kimya Bölümü, Turkey 1972 - 1977

## Foreign Languages

English, C2 Mastery

## Research Areas

Natural Sciences, Engineering and Technology

## Academic Titles / Tasks

Professor, Istanbul Kultur University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2015 - Continues

Associate Professor, Istanbul Kultur University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2010 - 2015

Assistant Professor, Istanbul Kultur University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2001 - 2010

## Academic and Administrative Experience

Ethics Committee Member, Istanbul Kultur University, Üniversite Rektörlüğü, 2023 - Continues

Member of Department Quality Commission, Istanbul Kultur University, Mühendislik Fakültesi, İnşaat Mühendisliği, 2023  
- Continues

Faculty Board Member, Istanbul Kultur University, Mühendislik Fakültesi, 2021 - Continues  
Faculty Management Board Member, Istanbul Kultur University, Mühendislik Fakültesi, 2021 - Continues  
Faculty Management Board Member, Istanbul Kultur University, Eğitim Fakültesi, 2023 - 2024  
Istanbul Kultur University, 2016 - 2021  
Istanbul Kultur University, 2017 - 2019  
Istanbul Kultur University, 2009 - 2012  
Istanbul Kultur University, 2007 - 2009

## Courses

CE1001 General Chemistry, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021, 2018 - 2019, 2017 - 2018  
IE3603 Materials Science, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022, 2020 - 2021  
BES1003 Temel Kimya I, Undergraduate, 2023 - 2024  
CE3701 Materials Science, Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022  
CE0530 Occupational Health and Safety, Undergraduate, 2023 - 2024  
EE6023 Materials Science, Undergraduate, 2022 - 2023  
CSE2094 Chemistry, Undergraduate, 2022 - 2023  
EE2021 Chemistry, Undergraduate, 2022 - 2023, 2021 - 2022  
ENC1001 Engineering Orientation, Undergraduate, 2022 - 2023  
IE2602 General Chemistry, Undergraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021  
CE0830 Nanomaterials and Nanotechnology in the Construction Industry, Undergraduate, 2022 - 2023  
EE6023 Materials Science, Undergraduate, 2021 - 2022, 2020 - 2021  
MBG1007 Genel Kimya I, Undergraduate, 2021 - 2022  
CSE1001 Chemistry, Undergraduate, 2021 - 2022, 2020 - 2021  
MBG1004 Genel Kimya I Laboratuvarı, Undergraduate, 2021 - 2022  
CE0805 NANOTECHNOLOGY APPLICATIONS IN CIVIL ENGINEERING, Undergraduate, 2021 - 2022, 2020 - 2021, 2018 - 2019  
CE3201 Materials Science, Undergraduate, 2020 - 2021  
IE3603 Material Science, Undergraduate, 2017 - 2018  
CE3201 Material Science, Undergraduate, 2017 - 2018  
MALZEME BİLGİSİ, Undergraduate, 2014 - 2015, 2013 - 2014  
İNŞAAT MÜHENDİSLİĞİNDE NANOTEKNOLOJİ UYGULAMALARI, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013  
NANOTECHNOLOGY APPLICATIONS IN CIVIL ENGINEERING, Undergraduate, 2014 - 2015, 2012 - 2013, 2011 - 2012  
MATERIALS SCIENCE, Undergraduate, 2014 - 2015, 2013 - 2014, 2012 - 2013, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006, 2004 - 2005, 2003 - 2004, 2002 - 2003, 2001 - 2002  
GENEL KİMYA, Undergraduate, 2013 - 2014, 2012 - 2013  
GENERAL CHEMISTRY, Undergraduate, 2013 - 2014, 2012 - 2013, 2011 - 2012, 2010 - 2011, 2009 - 2010, 2008 - 2009, 2007 - 2008, 2006 - 2007, 2005 - 2006, 2004 - 2005, 2003 - 2004, 2002 - 2003, 2001 - 2002  
MATERIALS SCIENCE, Undergraduate, 2000 - 2001  
GENERAL CHEMISTRY, Undergraduate, 2000 - 2001

## Jury Memberships

Associate Professor Exam, Associate Professor Exam, İstanbul Kültür Üniversitesi, October, 2023  
Associate Professor Exam, Associate Professor Exam, İstanbul Kültür Üniversitesi, October, 2023  
PhD Thesis Monitoring Committee Member, PhD Thesis Monitoring Committee Member, İstanbul Teknik Üniversitesi, January, 2023

## Designed Lessons

Sarier N., Occupational Health and Safety , Undergraduate, 2023 - 2024

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

- I. **Thermomechanical behavior of polyurethane nanocomposite foams containing organoclay particles modified with bio-based fatty acid**  
Önder Karaoğlu E., SARIER N.  
THERMOCHIMICA ACTA, vol.733, 2024 (SCI-Expanded)
- II. **Development of textile nanocomposites with thermal energy storage capability**  
Önder Karaoğlu E., SARIER N.  
INDIAN JOURNAL OF FIBRE & TEXTILE RESEARCH, vol.46, no.3, pp.260-268, 2021 (SCI-Expanded)
- III. **Fatty acid alkyl ester nanowebs suitable for renewable thermal energy storage**  
Önder Karaoğlu E., SARIER N.  
THERMOCHIMICA ACTA, vol.690, 2020 (SCI-Expanded)
- IV. **Ethanol sensing with pure and boric acid doped electrospun CuInS<sub>2</sub> nanofibers in the presence of relative humidity**  
YAĞCI Ö., ARAT R., SARIER N., CAN ÖMÜR B., ALTINDAL A.  
MATERIALS SCIENCE IN SEMICONDUCTOR PROCESSING, vol.104, 2019 (SCI-Expanded)
- V. **Development of heat storing poly(acrylonitrile) nanofibers by coaxial electrospinning**  
Noyan E. C. B., Önder Karaoğlu E., SARIER N., ARAT R.  
THERMOCHIMICA ACTA, pp.135-148, 2018 (SCI-Expanded)
- VI. **The manufacture of organic carbonate-poly(methyl ethylacrylate) nanowebs with thermal buffering effect**  
Önder Karaoğlu E., SARIER N., ARAT R.  
THERMOCHIMICA ACTA, vol.657, pp.170-184, 2017 (SCI-Expanded)
- VII. **Production of PEG grafted PAN copolymers and their electrospun nanowebs as novel thermal energy storage materials**  
SARIER N., ARAT R., MENCELOGLU Y., ÖNDER KARAOĞLU E., BOZ E. C., OGUZ O.  
THERMOCHIMICA ACTA, vol.643, pp.83-93, 2016 (SCI-Expanded)
- VIII. **Silver incorporated microencapsulation of *n*-hexadecane and *n*-octadecane appropriate for dynamic thermal management in textiles**  
SARIER N., ÖNDER KARAOĞLU E., UKUSER G.  
THERMOCHIMICA ACTA, vol.613, pp.17-27, 2015 (SCI-Expanded)
- IX. **Thermal regulation finishes for textiles**  
Önder Karaoğlu E., SARIER N.  
FUNCTIONAL FINISHES FOR TEXTILES: IMPROVING COMFORT, PERFORMANCE AND PROTECTION, pp.17-98, 2015 (SCI-Expanded)
- X. **Comparative Study of the Characteristics of Nano Silica-, Silica Fume- and Fly Ash-Incorporated Cement Mortars**  
Biricik H., SARIER N.  
MATERIALS RESEARCH-IBERO-AMERICAN JOURNAL OF MATERIALS, vol.17, no.3, pp.570-582, 2014 (SCI-Expanded)
- XI. **Ultrasound assisted solvent free intercalation of montmorillonite with PEG1000: A new type of organoclay with improved thermal properties**  
Önder Karaoğlu E., SARIER N., UKUSER G., OZTURK M., ARAT R.  
THERMOCHIMICA ACTA, vol.566, pp.24-35, 2013 (SCI-Expanded)
- XII. **The manufacturing of polyamide- and polypropylene-organoclay nanocomposite filaments and their suitability for textile applications**

- Önder Karaoğlu E., SARIER N., Ersoy M. S.  
THERMOCHIMICA ACTA, vol.543, pp.37-58, 2012 (SCI-Expanded)
- XIII. **Organic phase change materials and their textile applications: An overview**  
SARIER N., Önder Karaoğlu E.  
THERMOCHIMICA ACTA, vol.540, pp.7-60, 2012 (SCI-Expanded)
- XIV. **Preparation of phase change material-montmorillonite composites suitable for thermal energy storage**  
SARIER N., Önder Karaoğlu E., Ozay S., Özkılıç Y.  
THERMOCHIMICA ACTA, vol.524, no.1-2, pp.39-46, 2011 (SCI-Expanded)
- XV. **The modification of Na-montmorillonite by salts of fatty acids: An easy intercalation process**  
SARIER N., Önder Karaoğlu E., Ersoy S.  
COLLOIDS AND SURFACES A-PHYSICOCHEMICAL AND ENGINEERING ASPECTS, vol.371, no.1-3, pp.40-49, 2010 (SCI-Expanded)
- XVI. **Organic modification of montmorillonite with low molecular weight polyethylene glycols and its use in polyurethane nanocomposite foams**  
SARIER N., Önder Karaoğlu E.  
THERMOCHIMICA ACTA, vol.510, no.1-2, pp.113-121, 2010 (SCI-Expanded)
- XVII. **Thermal insulation capability of PEG-containing polyurethane foams**  
SARIER N., Önder Karaoğlu E.  
THERMOCHIMICA ACTA, vol.475, no.1-2, pp.15-21, 2008 (SCI-Expanded)
- XVIII. **Thermal characteristics of polyurethane foams incorporated with phase change materials**  
SARIER N., Önder Karaoğlu E.  
THERMOCHIMICA ACTA, vol.454, no.2, pp.90-98, 2007 (SCI-Expanded)
- XIX. **Encapsulation of phase change materials by complex coacervation to improve thermal performances of woven fabrics**  
Önder Karaoğlu E., SARIER N., Cimen E.  
THERMOCHIMICA ACTA, vol.467, no.1-2, pp.63-72, 2007 (SCI-Expanded)
- XX. **The manufacture of microencapsulated phase change materials suitable for the design of thermally enhanced fabrics**  
SARIER N., Önder Karaoğlu E.  
THERMOCHIMICA ACTA, vol.452, no.2, pp.149-160, 2007 (SCI-Expanded)

## **Books & Book Chapters**

- I. **General Chemistry Laboratory Manual**  
SARIER N.  
İstanbul Kültür Üniversitesi Yayınları, İstanbul, 2018
- II. **Chapter 2: Thermal Regulation Finishes For Textiles**  
ÖNDER KARAOĞLU E., SARIER N.  
in: Functional Finishes For Textiles Improving Comfort Performance And Protection No 156, ROSHAN PAUL, Editor, ELSEVIER Woodhead Publishing Series İn Textiles, pp.17-98, 2015

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

- I. **POLYURETHANE NANOCOMPOSITE FOAMS INCORPORATED WITH ORGANOCCLAYS**  
ÖNDER KARAOĞLU E., SARIER N.  
International Textile and Fashion Congress 2023, İstanbul, Turkey, 16 March 2023
- II. **DESIGN AND DEVELOPMENT OF THERMALLY ENHANCED TEXTILE NANOCOMPOSITES INCORPORATED WITH PHASE CHANGE MATERIAL NANOWEBS**

ÖNDER KARAOĞLU E., SARIER N.

2nd International Congress of Innovative Textiles – ICONTEX 2019, Tekirdağ, Turkey, 17 - 19 April 2019

- III. **Design of a Functional Denim Fabric With Improved Thermal Comfort Properties**  
ÖNDER KARAOĞLU E., NERGİS F. B., SARIER N., ARAT R.  
18th Autex World Textile Conference, 20 - 22 June 2018
- IV. **Electrospun nanofibers of boric acid doped copper indium disulfide**  
YAĞCI Ö., ARAT R., SARIER N., ALTINDAL A.  
TFD 33, 6 - 10 September 2017
- V. **Preparation of magnetite nanoparticle and fatty alcohol/acidincorporated poly(methacrylic acid-ethyl acrylate) nanowebs via electrospinning for magnetic hyperthermia application**  
SARIER N., ÖNDER KARAOĞLU E., ARAT R.  
RADIOMAG: Annual Action Conference and MC meeting, Bilbao, Spain, 27 - 28 April 2017
- VI. **Preparation of Shape Stabilized Phase Change Materials by Coaxial Electrospinning**  
ÖNDER KARAOĞLU E., SARIER N., ARAT R., BOZ NOYAN E. C.  
ELEN2016 - ELECTROSPINNING FOR ENERGY CONFERENCE, MONTPELLIER, FRANCE, 22 - 24 JUNE 2016
- VII. **Synthesis and Electrospinning of Polyethylene Glycol Grafted Polyacrylonitrile Copolymers as Novel Solid-Solid Phase Change Materials**  
SARIER N., ARAT R., ÖNDER KARAOĞLU E., BOZ NOYAN E. C., MENCELOĞLU Y. Z.  
ELEN2016 - ELECTROSPINNING FOR ENERGY CONFERENCE, MONTPELLIER, FRANCE, 22 - 24 JUNE 2016
- VIII. **PAN/PEG and PAN/n-Alkane Nanofibers Suitable For Heat Storage Applications in Textiles**  
BOZ NOYAN E. C., ÖNDER KARAOĞLU E., SARIER N., ARAT R.  
16th Autex World Textile Conference 2016, Ljubljana, Slovenia, 8 - 10 June 2016
- IX. **Production of Dynamic Thermal Insulators By Coaxial Electrospinning of PAN and PEG**  
SARIER N., BOZ E. C., ARAT R., ÖNDER KARAOĞLU E.  
15th Autex World Textile Conference 2015, 10 - 12 June 2015
- X. **Synthesis of Biobased Oleocarbonates and Their Use in the Production of Thermally Enhanced Nanofibers by Electrospinning**  
SARIER N., REFİK A., BOZ E. C., ÖNDER KARAOĞLU E.  
4th International Polymeric Composites Symposium and Exhibition, İzmir, Turkey, 6 - 09 May 2015
- XI. **Improving Thermo Responsive Behavior of Wool Fabrics 1 Proceedings Uludağ University Bursa Turkey**  
ULUDAĞ B., ÖNDER KARAOĞLU E., SARIER N.  
14th Autex World Textile Conference, Bursa, Turkey, 9 - 11 June 2014
- XII. **New Approaches for Improving Thermal Properties of Textile Materials**  
ULUDAĞ B., ÖNDER KARAOĞLU E., SARIER N.  
The International Istanbul Textile Congress 2013 Innovative and Functional Textiles, İstanbul, Turkey, 30 May - 01 June 2013
- XIII. **A Biomimetic Application Manufacturing of Superhydrophobic Cotton Fabrics and Their Surface Properties**  
SARIER N., ÖZAY S., UKUSER G., ARAT R.  
The International Istanbul Textile Congress 2013: Innovative and Functional Textiles, İstanbul, Turkey, 30 May - 01 June 2013
- XIV. **Biodegradable Pectin Based Agrotexiles**  
SARIER N., ÖZAY S., UKUSER G., ARAT R.  
The International Istanbul Textile Congress 2013 Innovative and Functional Textiles, 30 May - 01 June 2013
- XV. **Organoclay Applications In Polymer Nanocomposite Filament Production**  
ÖNDER KARAOĞLU E., SARIER N., ERSOY M. S.  
International Congress of Innovative Textiles(ICONTEX 2011) Proceedings, İzmir, Turkey, 20 - 22 October 2011, pp.297302
- XVI. **Manufacture of Silver Nanoparticle Embedded Chitosan and Design of Antimicrobial Cotton Fabrics**  
SARIER N., ÖNDER KARAOĞLU E.

- AUTEX 2011 World Conference Book of Proceedings, Mulhouse, France, 8 - 10 June 2011, pp.838-842
- XVII. **Silver Nanoparticle Incorporated Thermocapsules Suitable For The Development of Thermally Enhanced Fabrics**  
ÖNDER KARAOĞLU E., SARIER N.  
AUTEX 2011 World Conference Book of Proceedings, Mulhouse, France, 8 - 10 June 2011, pp.744-748
- XVIII. **Electroless Plating of Textile Surfaces with Silver Nano Particles for Electromagnetic Shielding**  
ÖNDER KARAOĞLU E., SARIER N., ERSOY M. S.  
XIIth International Izmir Textile and Apparel Symposium, İzmir, Turkey, 28 - 30 September 2010, pp.70-75
- XIX. **Mechanical and Dynamic Mechanical Properties of Carbon Nanotube Added Polypropylene Nanocomposite Fibers**  
ERSOY M. S., ÖNDER KARAOĞLU E., SARIER N.  
Proceedings of X International Conference on Nanotechnology, ROMA, Italy, 13 - 17 September 2010, pp.350
- XX. **Ultrasound Sonication of Tokat Reşadiye Montmorillonite and its Feasibility in Nano Clay Production**  
SARIER N., ÖNDER KARAOĞLU E.  
the International Conference on Nanotechnology: Fundamentals and Applications, OTTOWA, 4 - 06 August 2010, pp.220

## Supported Projects

SARIER N., Project Supported by Higher Education Institutions, Preparation of Edible Anti-Bacterial Films Doped with Curcumin and Olive Leaf Extract for Food Packaging, 2021 - Continues

Sarier N., TÜBİTAK - AB COST Project, TD1402 Multifunctional Nanoparticles for Magnetic Hyperthermia Indirect Radiation Therapy RADIOMAG, 2014 - 2018

SARIER N., TUBITAK Project, The Design and Development of Nanocomposite Webs and Nonwovens with Dynamic Thermal Management Capability, 2014 - 2016

Önder Karaoğlu E., Sarier N., Okur A., TUBITAK Project, Design and Development of Nanocomposite Structured Multifunctional Technical Textiles, 2008 - 2011

Sarier N., TUBITAK Project, Design of Smart Textiles with Temperature Regulation Function, 2004 - 2006

## Patent

Sarier N., Eloğlu A., Önder Karaoğlu E., A METHOD OF OBTAINING A PACKAGING FILM AND A PACKAGING FILM OBTAINED BY THE SAID METHOD, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Recourse Number: PCT/TR2023/050452 , Standard Registration, 2023

Sarier N., Sözbir M. E., Önder Karaoğlu E., SMART and ACTIVE PACKING FILM PRODUCTION METHOD and PACKING FILM PRODUCTION WITH THE METHOD THEREOF, Patent, CHAPTER A Human Needs, The Invention Recourse Number: 2023/012374 , Standard Registration, 2023

Sarier N., Büyükdürmuş Sarıtop S., Önder Karaoğlu E., A METHOD OF OBTAINING A MICROCAPSULE AND THE MICROCAPSULE OBTAINED BY THE METHOD, Patent, CHAPTER A Human Needs, The Invention Recourse Number: TPE 2023/015433 , Standard Registration, 2023

Sarier N., Önder Karaoğlu E., A Textile Product Containing Phase Change Material and a Method For Obtaining Thereof, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: GB2594185 , Standard Registration, 2023

Sarier N., Önder Karaoğlu E., Faz Degisim Malzemesi İçeren Bir Tekstil Ürünü ve Elde Etme Yöntemi, Patent, CHAPTER B Implementation of Operations; Transport, The Invention Registration Number: TR 2019 14584 B , Standard Registration, 2022

## Scientific Refereeing

TUBITAK Project, 1001 - Program for Supporting Scientific and Technological Research Projects, TÜBİTAK, Turkey, June 2024  
COLLOIDS AND SURFACES A: PHYSICOCHEMICAL AND ENGINEERING ASPECTS, SCI Journal, May 2024  
POLYMERS, SCI Journal, May 2024  
POLYMERS, SCI Journal, April 2024  
JOURNAL OF INDUSTRIAL TEXTILES, SCI Journal, March 2024  
TUBITAK Project, 1002 - Quick Support Program, Akdeniz University, Turkey, March 2024  
CARBON, SCI Journal, February 2024  
TUBITAK Project, 1002 - Quick Support Program, Akdeniz University, Turkey, February 2024  
KOSGEB, Vimpo, Bırfatura, TEGAS, Gön Klima, Kayra Pırlanta, Asır1071, Turkey, February 2024  
POLYMERS, SCI Journal, January 2024  
MOLECULES, SCI Journal, September 2023  
POLYMERS, SCI Journal, August 2023  
TÜBİTAK International Bilateral Joint Cooperation Program Project, TÜBİTAK 2517 International Bilateral Cooperation, Özel Kurulus / Ticem İleri Yapı Teknolojileri San Ve Tic. Dan. Ltd.sti., Turkey, August 2023  
TUBITAK Project, 1002 - Quick Support Program, Afyon Kocatepe University, Turkey, July 2023  
SUSTAINABILITY, SCI Journal, June 2023  
CHEMICAL ENGINEERING JOURNAL, SCI Journal, May 2023  
SUSTAINABILITY, SCI Journal, March 2023  
JOURNAL OF INDUSTRIAL TEXTILES, SCI Journal, March 2023  
POLYMERS, SCI Journal, January 2023  
MATERIALS CHEMISTRY AND PHYSICS, SCI Journal, January 2023

## **Metrics**

Publication: 42  
Citation (WoS): 1445  
Citation (Scopus): 1901  
H-Index (WoS): 13  
H-Index (Scopus): 12

## **Congress and Symposium Activities**

İstanbul'un Jeolojisi Sempozyumu Sürdürülebilir Bir İstanbul, Working Group, İstanbul, Turkey, 2023  
ITFC 2023 International Textile & Fashion Congress , Attendee, İstanbul, Turkey, 2023  
ITFC 2023 International Textile and Fashion Congress, Session Moderator, İstanbul, Turkey, 2023

## **Non Academic Experience**

Public Corporation, KOSGEB, KOSGEB  
Other Public Institution, Çalışma ve Sosyal Güvenlik Bakanlığı, İş Sağlığı ve Güvenliği Genel Müdürlüğü