Prof. HİLAL GÖKTAŞ

Personal Information

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International Researcher IDs
ORCID: 0000-0003-2897-0036
Publons / Web Of Science ResearcherID: AAF-6732-2020
ScopusID: 55939304700
Yoksis Researcher ID: 147739

Education Information

Doctorate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik (Dr), Turkey 1997 - 2001
Postgraduate, Middle East Technical University, Graduate School Of Natural And Applied Sciences, Fizik (Yl) (Tezli), Turkey 1993 - 1996
Undergraduate, Middle East Technical University, Fen-Edebiyat Fakültesi, Fizik Bölümü, Turkey 1987 - 1992

Research Areas

Biomedical Engineering, Materials Science, Gases, Plasmas and Electrical Discharges Physics

Academic Titles / Tasks

Professor, Ankara University, Mühendislik Fakültesi, Biyomedikal Mühendisliği Bölümü, 2019 - 2022
Professor, Canakkale Onsekiz Mart University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2017 - 2019
Associate Professor, Canakkale Onsekiz Mart University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2009 - 2017
Associate Professor, Massachusetts Institute of Technology, Kimya Mühendisliği, 2013 - 2016
Assistant Professor, Canakkale Onsekiz Mart University, Fen-Edebiyat Fakültesi, Fizik Bölümü, 2005 - 2009

Academic and Administrative Experience

Fakülte Yönetim Kurulu Üyesi, Ankara University, Mühendislik Fakültesi, Biyomedikal Mühendisliği Bölümü, 2022 - Continues
Rectorate Commissioner, Ankara University, Mühendislik Fakültesi, Biyomedikal Mühendisliği Bölümü, 2022 - Continues
Institute Board Member, Ankara University, Hızlandırıcı Teknolojileri Enstitüsü, Hızlandırıcı Teknolojileri Anabilim Dalı, 2021 - Continues
Head of Department, Ankara University, Mühendislik Fakültesi, Biyomedikal Mühendisliği Bölümü, 2019 - 2022
Director of the Center, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2008 - 2013
Uygulama ve Araştırma Merkezi Yönetim Kurulu Üyesi, Canakkale Onsekiz Mart University, Fen Fakültesi, Fizik, 2007 - 2013

Courses

Postgraduate

Biosensors, Postgraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
Advances in Biomedical Engineering, Postgraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023
Special Topics in Biomedical Engineering, Postgraduate, 2023 - 2024, 2022 - 2023
PLAZMA FİZİĞİ, Postgraduate, 2010 - 2011, 2009 - 2010

Undergraduate

Biomedical Engineering Design II, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023, 2021 - 2022
SURFACE MODIFICATION OF BIOMATERIALS , Undergraduate, 2024 - 2025
Electromagnetics , Undergraduate, 2023 - 2024, 2022 - 2023, 2021 - 2022
Biomedical Engineering Design I, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023
Bioelectricity and Biomagnetism , Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023
Introduction to Biomedical Engineering, Undergraduate, 2024 - 2025, 2023 - 2024, 2022 - 2023
TRANSITION TO UNIVERSITY LIFE AND LIFE SKILLS, Undergraduate, 2022 - 2023
PROGRESS TO PROFESSIONAL LIFE, Undergraduate, 2022 - 2023
Electromagnetics, Undergraduate, 2018 - 2019
Biyofizik, Undergraduate, 2018 - 2019
OPTİK VE DALGALAR, Undergraduate, 2017 - 2018, 2009 - 2010
BİOFİZİK, Undergraduate, 2017 - 2018, 2011 - 2012
MODERN FİZİK, Undergraduate, 2016 - 2017, 2012 - 2013
FİZİK I - II, Undergraduate, 2012 - 2013, 2008 - 2009
LASER FİZİĞİNE GİRİŞ, Undergraduate, 2010 - 2011
OPTOELEKTRONİK, Undergraduate, 2008 - 2009

Supervised Theses

Göktaş H., Dynamic preventive maintenance schedule based on usage rate for medical devices: An ahp and iot approach with magnetometer sensor, Postgraduate, A.BULUCU(Student), 2024
Göktaş H., Antifouling thin film synthesis for urinary catheters and investigation of their bacterial interactions, Postgraduate, M.TÜFEKÇİ(Student), 2023
GÖKTAŞ H., GÖKCE M. İ., REAL TIME MONITORING OF INTRARENAL PRESSURE FOR ENDOUROLOGICAL PROCEDURES, Postgraduate, M.GÜL(Student), 2021
GÖKTAŞ H., Elektrospin yöntemiyle monomerden nanofiberlerin elde edilmesi ve optimum reaksiyon şartları, Postgraduate, G.AKPINAR(Student), 2018
GÖKTAŞ H., Anilin ve anilin içerikli kopolimer ince filmlerin plazma yöntemiyle üretilmesi ve karakterizasyonları, Postgraduate, Z.DEMİRCİOĞLU(Student), 2012
GÖKTAŞ H., Zaman ortamı elektromanyetik verilerde gürültü yok etme çalışmaları ile görünge ve çeşitli tepki fonksiyonlarının, Doctorate, E.ŞENGÜL(Student), 2011
GÖKTAŞ H., Plazma yöntemiyle PEDOT ince filmerinin üretilmesi, karakterizasyonu ve güneş pillerine uygulanması, Postgraduate, T.GÜNEŞ(Student), 2011
GÖKTAŞ H., Çift desarj yöntemiyle polipirol ince filmlerinin hazırlanması ve karakterizasyonu, Postgraduate, A.İŞCAN(Student), 2009
GÖKTAŞ H., Plazma polimerizasyonu tekniği ile politiyofen ince filmlerin üretilmesi ve karakterizasyonlarının yapılması, Postgraduate, F.GÜL(Student), 2008

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Long-term antifouling surfaces for urinary catheters.**

Tüfekçi M., Hamarat S., Demir Çalışkan T., Özgüzar H. F., Meydan A. E., Göçmen J. S., Evren Yurtcu E., Gökçe M. İ., Göktaş H.
Journal of materials chemistry. B, vol.12, no.23, pp.5711-5721, 2024 (SCI-Expanded)

II. **Facile growth of high-yield and -crystallinity vertically aligned carbon nanotubes via a sublimated ferric chloride catalyst precursor**
Goktas H., Lachman N., Kalfon-Cohen E., Wang X., Torosian S., Gleason K. K., Wardle B. L.
NANO FUTURES, vol.7, no.2, 2023 (SCI-Expanded)

III. **Room Temperature Sensing Achieved by GaAs Nanowires and oCVD Polymer Coating**
Wang X., Ermez S., Goktas H., Gradecak S., Gleason K.
MACROMOLECULAR RAPID COMMUNICATIONS, vol.38, no.12, 2017 (SCI-Expanded)

IV. **Monolithic Flexible Supercapacitors Integrated into Single Sheets of Paper and Membrane via Vapor Printing**
Liu A., Kovacik P., Peard N., Tian W., Goktas H., Lau J., Dunn B., Gleason K. K.
ADVANCED MATERIALS, vol.29, no.19, 2017 (SCI-Expanded)

V. **Room Temperature Resistive Volatile Organic Compound Sensing Materials Based on a Hybrid Structure of Vertically Aligned Carbon Nanotubes and Conformal oCVD/iCVD Polymer Coatings**
Wang X., Ugur A., Goktas H., Chen N., Wang M., Lachman N., Kalfon-Cohen E., Fang W., Wardle B. L., Gleasont K. K.
ACS SENSORS, vol.1, no.4, pp.374-383, 2016 (SCI-Expanded)

VI. **Functionalizable and electrically conductive thin films formed by oxidative chemical vapor deposition (oCVD) from mixtures of 3-thiopheneethanol (3TE) and ethylene dioxythiophene (EDOT)**
Goktas H., Wang X., Boscher N. D., Torosian S., Gleason K. K.
JOURNAL OF MATERIALS CHEMISTRY C, vol.4, no.16, pp.3403-3414, 2016 (SCI-Expanded)

VII. **Langmuir-Blodgett thin film for chloroform detection**
ÇAPAN R., Goktas H., ÖZBEK Z., ŞEN S., Ozel M. E., Davis F.
APPLIED SURFACE SCIENCE, vol.350, pp.129-134, 2015 (SCI-Expanded)

VIII. **Novel resistive volatile organic compound (VOC) sensor based on a composite structure of vertically aligned carbon nanotubes and oCVD/iCVD polymer films**
Wang X., Ugur A., Chen N., GÖKTAŞ H., Lachman N., Wardle B., Gleason K.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.250, 2015 (SCI-Expanded)

IX. **Small-Area, Resistive Volatile Organic Compound (VOC) Sensors Using Metal-Polymer Hybrid Film Based on Oxidative Chemical Vapor Deposition (oCVD)**
Wang X., Hou S., Goktas H., Kovacik P., Yaul F., Paidimarri A., Ickes N., Chandrakasan A., Gleason K.
ACS APPLIED MATERIALS & INTERFACES, vol.7, no.30, pp.16213-16222, 2015 (SCI-Expanded)

X. **Water-Assisted Vapor Deposition of PEDOT Thin Film**
Goktas H., Wang X., Ugur A., Gleason K. K.
MACROMOLECULAR RAPID COMMUNICATIONS, vol.36, no.13, pp.1283-1289, 2015 (SCI-Expanded)

XI. **The optical properties of plasma polymerized polyaniline thin films**
Goktas H., Demircioglu Z., SEL K., GÜNEŞ T., KAYA İ.
THIN SOLID FILMS, vol.548, pp.81-85, 2013 (SCI-Expanded)

XII. **Polyfluorene Thin Films Synthesized by a Novel Plasma Polymerization Method**
Goktas H., MANSUROĞLU D., ATALAY B., Bilikmen S., KAYA İ.
PLASMA CHEMISTRY AND PLASMA PROCESSING, vol.32, no.1, pp.35-44, 2012 (SCI-Expanded)

XIII. **Optical parameters of calix[4]arene films and their response to volatile organic vapors**
Ozbek Z., Capan R., GÖKTAŞ H., Sen S., Ince F. G., Ozel M. E., Davis F.
SENSORS AND ACTUATORS B-CHEMICAL, vol.158, no.1, pp.235-240, 2011 (SCI-Expanded)

XIV. **Plasma Copolymerization of Thiophene and Pyrrole**
Goktas H., Gunes T., ATALAY B., Er A. O., KAYA İ.
IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.39, no.11, pp.2578-2579, 2011 (SCI-Expanded)

XV. **Characterization of Langmuir-Blodgett films of a calix[8]arene and sensing properties towards volatile organic vapors**
Capan R., Ozbek Z., Goktas H., Sen S., Ince F. G., Ozel M. E., Stanciu G. A., Davis F.

SENSORS AND ACTUATORS B-CHEMICAL, vol.148, no.2, pp.358-365, 2010 (SCI-Expanded)

XVI. **Infection Free Titanium Alloys by Stabile Thiol Based Nanocoating**
Coekeliler D., Goktas H., Tosun P. D., MUTLU S.
JOURNAL OF NANOSCIENCE AND NANOTECHNOLOGY, vol.10, no.4, pp.2583-2589, 2010 (SCI-Expanded)

XVII. **Plasma Polymerized Calixarene Thin Films and their Sensing Properties to Chloroform Vapors**
Ince F. G., Goktas H., Ozbek Z., Capan R., Davis F.
MOLECULAR CRYSTALS AND LIQUID CRYSTALS, vol.521, pp.104-111, 2010 (SCI-Expanded)

XVIII. **The molecular structure of plasma polymerized thiophene and pyrrole thin films produced by double discharge technique**
Goktas H., Ince F. G., Iscan A., Yildiz I., Kurt M., KAYA İ.
SYNTHETIC METALS, vol.159, no.19-20, pp.2001-2008, 2009 (SCI-Expanded)

XIX. **Characterization of Plasma-Polymerized Thiophene Thin Films and Nanoparticles Synthesized by a Double-Discharge Technique**
Goktas H., Ince F. G.
PLASMA PROCESSES AND POLYMERS, vol.6, no.2, pp.126-131, 2009 (SCI-Expanded)

XX. **Fabrication of plasma polymerized polythiophene and polypyrrole thin films as chloroform vapor sensors**
Ince F., Şen S., Özbek Z., Göktaş H., Öze M., Çapan R.
JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS, vol.11, pp.1182-1185, 2009 (SCI-Expanded)

XXI. **Spectroscopic investigation of a double discharge pulsed electron beam generator**
Goktas H., Kacar E., Demir A.
SPECTROSCOPY LETTERS, vol.41, no.4, pp.189-192, 2008 (SCI-Expanded)

XXII. **Preparation and characterization of ethylenediamine and cysteamine plasma polymerized films on piezoelectric quartz crystal surfaces for a biosensor**
MUTLU S., Coekeliler D., Shard A., Goktas H., Ozansoy B., Mutlu M.
THIN SOLID FILMS, vol.516, no.6, pp.1249-1255, 2008 (SCI-Expanded)

XXIII. **Optical phase distribution evaluation by using an S-transform**
Ozder S., Kocahan O., COŞKUN E., Goktas H.
OPTICS LETTERS, vol.32, no.6, pp.591-593, 2007 (SCI-Expanded)

XXIV. **Effect of an azo dye (DR1) on the dielectric parameters of a nematic liquid crystal system**
Ozder S., Okutan M., Koysal O., Goktas H., San S. E.
PHYSICA B-CONDENSED MATTER, vol.390, no.1-2, pp.101-105, 2007 (SCI-Expanded)

XXV. **Spectroscopic measurements of electron temperature and electron density in electron beam plasma generator based on collisional radiative model**
Goktas H., Demir A., Kacar E., Hegazy H., TURAN R., Oke G., Seyhan A.
SPECTROSCOPY LETTERS, vol.40, no.1, pp.183-192, 2007 (SCI-Expanded)

XXVI. **Synthesis of carbon nanotubes by a plasma based pulsed electron beam generator**
Goktas H., Ayhan U. B., Gunduz G., Disbudak H., Eryilmaz E., Oke G., Cicek B., Somer M.
PHYSICA SCRIPTA, vol.T123, pp.145-147, 2006 (SCI-Expanded)

XXVII. **Self-confinement of a fast pulsed electron beam generated in a double discharge**
Goktas H., Udrea M., Oke G., Alacakir A., Demir A., Loureiro J.
JOURNAL OF PHYSICS D-APPLIED PHYSICS, vol.38, no.16, pp.2793-2797, 2005 (SCI-Expanded)

XXVIII. **Effect of low-energy electron irradiation on (Bi, Pb)-2212 superconductors**
Ogun S., Goktas H., Ozkan H., HASANLI N.
SURFACE & COATINGS TECHNOLOGY, vol.196, no.1-3, pp.118-122, 2005 (SCI-Expanded)

XXIX. **Modelling of Ne-like Copper X-ray laser driven by 1.2 ps short pulse and 280 ps background pulse configuration**
DEMİR A., Kenar N., GÖKTAŞ H., Tallents G.
Czechoslovak Journal of Physics, vol.54, no.SUPPL. 3, 2004 (SCI-Expanded)

XXX. **Microprocessing by intense pulsed electron beam**
Goktas H., Kirkici H., Oke G., Udrea A.

IEEE TRANSACTIONS ON PLASMA SCIENCE, vol.30, no.5, pp.1837-1842, 2002 (SCI-Expanded)

XXXI. **Deposition of carbon by intense fast electron beam generator**
GÖKTAŞ H., Oke G., Udrea M., Esendemir A.
CZECHOSLOVAK JOURNAL OF PHYSICS, vol.52, pp.756-761, 2002 (SCI-Expanded)

Articles Published in Other Journals

I. **Improved bone formation in osteoporotic rabbits with the bone morphogenetic protein-2 (RhBMP-2) coated titanium screws which were coated by using plasma polymerization technique**
Gulsen S., Cokeliler D., GÖKTAŞ H., Kucukturhan A., Ozcil B., Caner H.
Open Access Macedonian Journal of Medical Sciences, vol.2, no.2, pp.198-208, 2014 (Scopus)

II. **Signal and noise detection in magnetotelluric data by the artificial neural network method,Yapay sinir ağı yöntemi ile manyetotellürik veride sinyal ve gürültü ayırımı**
Ulugergerli E., Göktaş H., Şengül Uluocak E.
YERBILIMLERI = EARTH SCIENCES, vol.34, pp.53-72, 2013 (Scopus)

III. **Development of double discharge pulsed electron beam generator and its preliminary applications in material processing**
Göktaş H., Oke G., Udrea M.
TURKISH JOURNAL OF PHYSICS, vol.27, pp.77-82, 2003 (Scopus)

IV. **Experimental study of the interaction of intense electron beams with metallic targets**
Udrea M., Stoica M., Ganciu M., Morjan I., Pointu A., GÖKTAŞ H., Alacakir A., Kirkici H.
Proceedings of SPIE - The International Society for Optical Engineering, vol.4430, no.1, pp.222-228, 2000 (Scopus)

Papers Published in Refereed Scientific Meetings

I. **Antifouling Surfaces Against E. coli**
Göktaş H., Tüfekçi M., Demir Çalışkan T., Özgüzar H. F., Göçmen J. S., Evren Yurtcu E., Gökce M. İ.
41st World Congress of Endourology and Urotechnology WCET 2024, Seoul, South Korea, 12 August 2024

II. **Investigation of Antifouling Effect of PEG-Coated Urinary Catheter Surfaces Against Proteus mirabilis**
TÜFEKÇİ M., HAMARAT S., DEMİR ÇALIŞKAN T., Özgüzar F., GÖÇMEN J. S., EVREN E., GÖKCE M. İ., GÖKTAŞ H.
Turkish Physical Society 39th International Physics Congress, Bodrum, Turkey, 31 August - 04 September 2023

III. **Synthesis of Polymeric Thin Films for Biomedical Applications**
HAMARAT S., TÜFEKÇİ M., Özgüzar F., DEMİR ÇALIŞKAN T., GÖÇMEN J. S., EVREN E., GÖKCE M. İ., GÖKTAŞ H.
Turkish Physical Society 39th International Physics Congress, Bodrum, Turkey, 31 August - 04 September 2023

IV. **Double Discharge Plasma Polymerization (DBD) technique and its applications**
GÖKTAŞ H.
KONNECT Summer School, Eco-Bio-Nano Materials Processing and Applications and Konnect Day, 26 May - 03 June 2018

V. **Mathmetical Modelling in Electrospinning Process for Polymer Nanofiber**
Akpınar G., GÖKTAŞ H.
Turkish Physical Society 33rd International Physics Congress, Bodrum, Turkey, 6 - 10 September 2017, vol.1, pp.683

VI. **Room Temperature Sensing Based on initiated CVD coated Carbon Nanotube Arrays**
WANG X., UĞUR A., GÖKTAŞ H., CHEN N., WANG M., LACHMAN N., COHEN E., FANG W., WARDLE B., GLEASON K.
9th International Conference on hot wire and initiated chemical vapor deposition, 6 - 09 September 2016

VII. **Estimating colloidal attachments onto fibrous substrates from nanoparticle functionalization to pathogen detection**
BERA T., SISCO P., GÖKTAŞ H., BANDREMER A., FONG A., SEAN L., GLEASON K., TOROSIAN S.
90th ACS Colloid and Surface Science Symposium, 5 - 08 June 2016

VIII. **Low Level Detection of E coli Based on Electrochemical Biosensor**
BANDREMER A., HEBERT A., TOROSIAN S., GÖKTAŞ H., GLEASON K.
Int. Association of Food Protection Annual Conference, 25 - 28 June 2015

IX. **Fabrication of Functional and Porous surfaces in a Single Step for Chemiresistive Biosensor**
GÖKTAŞ H., BANDREMER A., HEBERT A., TOROSIAN S., GLEASON K.
FDA Nanotechnology Conference, 27 - 29 May 2015

X. **Fabrication of Hybrid Conducting Copolymer Metal Nanoparticle for Chemiresistive Sensing of Volatile Organic Compounds**
WANG X., YAUL F., HOU S., KOVACIK P., GÖKTAŞ H., CHANDRACASAN A., GLEASON K.
MARC 2014, Microsystems Technology Laboratories, MIT Annual Research Conference, 29 - 30 January 2014

XI. **The anti fouling properties of plasma polymerized mercapto thin films on dental implants**
GÖKTAŞ H., ÇÖKELİLER D., ÖZKAN A., İMİRZALIOĞLU P.
12th High-Tech Plasma Processes & 12th European Plasma Conference, 24 - 29 June 2012

XII. **Plasma Polymerized Polyaniline Thin Films by Double Discharge Technique**
GÖKTAŞ H., GÜNEŞ T., DEMİRCİOĞLU Z., MANSUROĞLU D., KAYA İ.
20th International Symposium on Plasma Chemistry, 24 - 29 June 2011

XIII. **Plasma polymerized composite thin films produced by double discharges technique**
GÖKTAŞ H., DEMİRCİOĞLU Z., GÜNEŞ T., KAYA İ.
IEEE 37th International Conference on Plasma Science, 20 - 24 June 2010

XIV. **Plasma polymerized thin films for photovoltaic applications**
GÖKTAŞ H., ZAFER C., GÜNEŞ T., İÇLİ S.
First Turkish Solar Energy Conference and Exhibition, 29 - 30 April 2010

XV. **Plasma polymerized calixarene thin films and their sensing properties to chloroform vapors**
İNCE F. G., GÖKTAŞ H., ÖZBEK Z., ÇAPAN R., DAVİS F.
10th International conference on frontiers of polymers and advanced materials, 28 September - 02 October 2009

XVI. **The morphology and molecular structure of polyfluorene thin films synthesized by a novel plasma polymerization method**
MANSUROĞLU D., İNCE F. G., GÖKTAŞ H., BİLİKMEN S., AYDIN R.
2nd İnternational conference on physics of optical materials and devices, 26 August - 01 September 2009

XVII. **Micro processing by intense fast electron beam**
GÖKTAŞ H., Kirkici H., Oke G., Udrea M.
28th IEEE International Conference on Plasma Science/13th IEEE International Pulsed Power Conference, Nevada, United States Of America, 17 - 22 June 2001, pp.397-400

Supported Projects

Göktaş H., Kahıloğulları G., Akçelik N., Zaimoğlu M., Erkan Türkmen K., TUBITAK Project, Ekstraventriküler Drenaj Sistemleri için Antikoagülan ve Antimikrobiyal Polimer Bazlı Nano-Yüzey Geliştirilmesi, 2024 - 2026

Göçmen J. S., Büyükserin F., Göktaş H., TUBITAK Project, Polieter Eter Keton (PEEK) İmplantların Plazma Teknolojisi ile Osseointegrasyon ve Antimikrobiyal/Yapışma Önleyici Özelliklerinin İyileştirilmesi, 2022 - 2025

Göktaş H., Gökce M. İ., Evren Yurtcu E., Demir Çalışkan T., TUBITAK Project, Antifouling thin film synthesis for urinary catheters and investigation of their bacterial interactions, 2022 - 2024

GÖKTAŞ H., Project Supported by Higher Education Institutions, Elektrospin Yöntemiyle Monomerden Nanofiberlerin Elde Edilmesi Ve Optimum Reaksiyon Şartları, 2018 - 2018

GÖKTAŞ H., Other International Funding Programs, Chemiresistive biosensor for food and water borne pathogen detection, 2015 - 2016

GÖKTAŞ H., Other International Funding Programs, Wireless Microsensors for Industrial Monitoring, 2013 - 2016

GÖKTAŞ H., TUBITAK Project, Organik İnce Filmlerin Fiziksel Özelliklerinin ve Zararlı Gazlara Karşı Duyarlılığının İncelenmesi, 2007 - 2009

GÖKTAŞ H., CB Strateji ve Bütçe Başkanlığı (Kalkınma Bakanlığı) Projesi, Nükleer Füzyon ve Endüstriyel uygulamalar için

X Işını Lazerlerin Tasarımı ve Yapılması, 2004 - 2006

Metrics

Publication: 53
Citation (WoS): 424
Citation (Scopus): 557
H-Index (WoS): 13
H-Index (Scopus): 14