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Eğitim:

- **Doktora**, Orta Doğu Teknik Üniversitesi (ODTÜ), Fen Bilimleri Enstitüsü, (Aralık 2001)
- **Yüksek Lisans**, ODTÜ Fen Bilimleri Enstitüsü, (Temmuz 1996)
- **Lisans**, ODTÜ Fen Ed. Fak., Fizik Bölümü, (Temmuz 1992)

Akademik ve Mesleki Deneyim:

- **Prof. Dr.**, Ankara Üniversitesi, Biyomedikal Mühendisliği Bölümü, (Şubat 2019 -)
- **Prof. Dr.**, Çanakkale Onsekiz Mart Üniversitesi (ÇOMÜ), Fizik Bölümü, (Ekim 2017 – Ocak 2019)
- **MIT Affiliate**, Massachusetts Institute of Technology (MIT), Chemical Eng. Dept., Cambridge, MA (Eylül 2013 – Eylül 2016)
- **FDA ORISE Fellow**, US Food and Drug Administration, WEAC, Winchester, MA (Eylül 2014 – Eylül 2016)
- **Doç. Dr.**, COMÜ, Fizik Bölümü, (Aralık 2009 – Ekim 2017)
- **Yrd. Doç. Dr.**, ÇOMÜ, Fizik Bölümü, (Ekim 2005 - Aralık 2009)
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Proje Deneyim:

BAP : Yürütücü (4) / Araştırmacı (1)
 Ulusal : Yürütücü (1) / Araştırmacı (3)
 Uluslararası : Yürütücü () / Araştırmacı (2)

Yönetilip Tamamlanan Yüksek Lisans ve Doktora Tezleri

Yüksek Lisans Tezleri:

- 1) G. Akpınar, "Elektrospın Yöntemiyle Monomerden Nanofiberlerin Elde Edilmesi Ve Optimum Reaksiyon Şartları", Çanakkale Onsekiz Mart Üniversitesi, Ağustos 2018.
- 2) Z. Demircioğlu, "Anilin ve anilin içerikli kopolimer ince filmlerin plazma yöntemiyle üretilmesi ve karakterizasyonları" Çanakkale Onsekiz Mart Üniversitesi, Ocak 2012.

- ☰ Anasayfa
- ☰ Kişisel Akademik Bilgiler
- ☰ Kişisel PDF Dosyası
- ☰ English

- 3) T. Güneş, "Plazma yöntemiyle PEDOT ince filminin üretilmesi, karakterizasyonu ve güneş pillerine uygulanması" Çanakkale Onsekiz Mart Üniversitesi, Ocak 2011.
- 4) A. İşcan, "Çift desanj yöntemiyle polipirol ince filmlerinin hazırlanması ve karakterizasyonu", Çanakkale Onsekiz Mart Üniversitesi, Mayıs 2009.
- 5) F. G. İnce, "Plazma polimerizasyonu tekniği ile politiyofen ince filmlerin üretilmesi ve karakterizasyonlarının yapılması", Çanakkale Onsekiz Mart Üniversitesi, Ağustos 2008.

Doktora Tezleri:

- 1) Şengül, E., "Zaman ortamı elektromanyetik verilerde gürültü yok etme çalışmaları ile görünge ve çeşitli tepki fonksiyonlarının eldesi" Eş-danışman, Çanakkale Onsekiz Mart Üniversitesi, Eylül 2011.

İdari Görevler:

- 1) **Merkez Müdürü;** Çanakkale Onsekiz Mart Üniversitesi (ÇOMÜ), Enerji Kaynakları Araştırma Uygulama Merkezi, Mayıs 2008 – Nisan 2013.
- 2) **Yönetim Kurulu Üyesi;** ÇOMÜ, Enerji Kaynakları Araştırma Uygulama Merkezi, 28.11.2007 – 05.05.2008.
- 3) **Yönetim Kurulu Üyesi;** ÇOMÜ, Bilim ve Teknoloji Uygulama Merkezi; Haziran 2007 – Haziran 2013.

Araştırma İlgili Alanlar:

Plazma ve kimyasal buhar biriktirme cihazlarının tasarımı ve yapımı; fonksiyonel polimer ince film ve malzemelerinin üretim ve karakterizasyonları; üretilen malzemelerin sensör uygulamaları – gaz sensörü, biyosensör; biyomedikal uygulamaları; iletken/optoelektronik ve süper-kapasitor uygulamaları. Plazma diyagnostiği, Darbeli güç, Elektron demet yapım ve uygulamaları.

Hakemli Dergilerde Yayımlanan Makaleler:

- 1) Xiaoxue Wang, Sema Ermez, Hilal Goktas, Silviya Gradečak, Karen Gleason, "Room Temperature Sensing Achieved by GaAs Nanowires and oCVD Polymer Coating", Macromol. Rapid Commun., DOI: 10.1002/marc.201700055, 2017.
- 2) Andong Liu, Peter Kovacic, Nolan Peard, Wenda Tian, Hilal Goktas, Jonathan Lau, Bruce Dunn and Karen K. Gleason, "Monolithic Flexible Supercapacitors Integrated into Single Sheets of Paper and Membrane via Vapor Printing", Advanced Materials, DOI: 10.1002/adma.201606091, 1606091, 2017.
- 3) H. Goktas, ND. Boscher, X. Wang, S. Torosion, KK. Gleason, "Functionalizable and electrically conductive thin films formed by oxidative chemical vapor deposition (oCVD) from mixtures of 3-thiopheneethanol (3TE) and ethylene dioxythiophene (EDOT)", J. Mater. Chem. C, 4, 3403–3414, 2016
- 4) X. Wang, A. Ugur, H. Goktas, N. Chen, M. Wang, N. Lachman, E. Kalfon-Cohen, W. Fang, B. L. Wardle, and K. K. Gleason, "Room Temperature Resistive Volatile Organic Compound Sensing Materials Based on a Hybrid Structure of Vertically Aligned Carbon Nanotubes and Conformal oCVD/iCVD Polymer Coatings", ACS Sensor, 1, 374–383, 2016
- 5) X. Wang, S. Hou, H. Goktas, P. Kovacic, F. Yaul, A. Paidimarrı, N. Ickes, A. Chandrakasan, and K. Gleason, "Small-Area, Resistive Volatile Organic Compound (VOC) Sensors Using Metal–Polymer Hybrid Film Based on Oxidative Chemical Vapor Deposition (oCVD)", ACS Appl. Mater. Interfaces, 7 (30), pp 16213–16222, 2015.
- 6) H. Goktas, X. Wang, A. Katmis, K. K. Gleason, "Water-Assisted Vapor Deposition of PEDOT Thin Film", Macromol. Rapid Commun., 36, 1283–1289, 2015.
- 7) R. Capan, H. Göktaş, Z. Özbek, S. Sen, M.E. Özel, F. Davise, "Langmuir–Blodgett thin film for chloroform detection", Applied Surface Science, 350, 129–134, 2015.
- 8) Salih Gulsen, Dilek Cokeliler, Hilal Goktas, Aysu Kucukturhan, Bilgehan Ozcil, Hakan Caner, "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", Mac. Journal of Medical Sciences. 2014 Jun 15; 2(2):198-208.
- 9) H. Goktas, Z. Demircioglu, K. Sel, T. Gunes, I. Kaya, "The optical properties of plasma polymerized polyaniline thin films", Thin Solid Films, 548, 81 – 85, 2013.

- 10) H. Goktas, D. Mansuroglu, B. Atalay, S. Bilikmen, I. Kaya "Polyfluorene Thin Films Synthesized by a Novel Plasma Polymerization Method" *Plasma Chem. Plasma Process.*, 32, 35-44, 2012.
- 11) Z. Özbek, R. Capan, H. Goktas, S. Sen, F.G. Ince, M.E. Ozel, F. Davis, "Optical parameters of calix[4]arene films and their response to volatile organic vapors", *Sensors and Actuators B*, 158, 235, 2011.
- 12) H. Goktas, T. Gunes, B. Atalay, A. O. Er, I. Kaya, "Plasma Copolymerization of Thiophene and Pyrrole", *IEEE Transaction on Plasma Science*, 39, No 11, 2578, 2011.
- 13) F. G. Ince, H. Goktas, Z. Ozbek, R. Capan, F. Davis, "Plasma polymerized calixarene thin films and their sensing properties to chloroform vapors", *Mol. Cryst. Liq. Cryst.*, 521, 104, 2010.
- 14) Dilek Çökeller, Hilal Göktas, Pinar Deniz Tosun, and Selma Mutlu, "Infection Free Titanium Alloys by Stable Thiol Based Nanocoating", *Journal of Nanoscience and Nanotechnology*, 10, 2583, 2010.
- 15) R. Capan, Z. Özbek, H. Göktas, S. Sen, F.G. Ince, M.E. Özel, G.A. Stanciu, F. Davis, "Characterization of Langmuir-Blodgett films of a calix[8]arene and sensing properties towards volatile organic vapors", *Sensors and Actuators B*, 148, 358-365, 2010.
- 16) F. G. Ince, S. Şen, Z. Özbek, H. Göktas, M. E. Özel, R. Çapan, "Fabrication of plasma polymerized polythiophene and polypyrrole thin films as chloroform vapor sensors", *Journal of Optoelectronics and Advanced Materials*, 11, No. 9, 1182 – 1185, September 2009.
- 17) H. Goktas, F.G. Ince, A. Iscan, I. Yildiz, M. Kurt, I. Kaya, "The molecular structure of plasma polymerized thiophene and pyrrole thin films produced by double discharge technique", *Synthetic Metals*, 159, 2001-2008, 2009.
- 18) H. Goktas, F. G. Ince, "Characterization of plasma-polymerized thiophene thin films and nanoparticles synthesized by a double-discharge technique" *Plasma Process. Polym.*, 6, 126-131, 2009.
- 19) H. Goktas, E. Kacar, A. Demir, "Spectroscopic Investigation of a Double Discharge Pulsed Electron Beam Generator" *Spectroscopy Letters*, 41, 189-192, 2008.
- 20) S. Mutlu, D. Çökeller, A. Shard, H. Goktas, B. Ozansoy, M. Mutlu, "Preparation and characterization of ethylenediamine and cysteamine plasma polymerized films on piezoelectric quartz crystal surfaces for a biosensor" *Thin Solid Films*, 516, 1249-1255, 2008.
- 21) H. Goktas, A. Demir, E. Kacar, H. Hegazy, A. Seyhan, R. Turan, "Spectroscopic measurements of electron temperature and electron density in electron beam plasma generator based on collisional radiative model" *Spectroscopy Letters*, 40, 183, 2007.
- 22) S. Özder, Ö. Kocahan, E. Coskun, H. Goktas, "Optical phase distribution evaluation by using S-Transform", *Optics Letters*, 32, 591, 2007.
- 23) S. Ozder, M. Okutan, O. Koysal, H. Goktas, S.E. San, "Effect of an azo dye (DR1) on the dielectric parameters of a nematic liquid crystal system", *Physica B*, 390, 101-105, 2007.
- 24) H. Goktas, U. B. Ayhan, G. Gunduz, H. Disbudak, E. Eryilmaz, G. Oke, M. Somer, "Synthesis of carbon nanotube by plasma based electron beam generator", *Physica Scripta*, T123, 145, 2006.
- 25) S.E. Ogun, H. Goktas, H. Ozkan, H. Gasanly, "Effect of Low-energy Electron Irradiation on (Bi, Pb)-2212 Superconductors" *Surface & Coating Technology*, 196, 118, 2005.
- 26) H. Goktas, M. Udrea, G. Oke, A. Alacakir, A. Demir, J. Loureiro, "Self-confinement of a fast pulsed electron beam generated in a double discharge" *J. Phys. D: Applied Physics*, 38, 2793, 2005.
- 27) A. Demir, N. Kenar, H. Goktas, G. Tallents, "Modelling of Ne-like Copper X-ray laser driven by 1.2 ps short pulse and 280 ps pre pulse configuration", *Czech. J. of Physics*, C1, 54, 2004.
- 28) H. Goktas, G. Oke, M. Udrea, "Development and Study of a Pulsed Intense Electron Beam Generator and its Applications in Material Processing" *Tr. J. of Physics*, 27, 77, 2003.
- 29) H. Goktas, G. Oke, M. Udrea, H. Kirkici, 'Micro Processing by Intense Fast Electron Beam', *IEEE Transaction on Plasma Science*, 50, 1837-1842, 2002.
- 30) H. Goktas, G. Oke, A. Esendemir, M. Udrea, 'Deposition of Carbon by Intense Fast Electron Beam Generator', *C. J. of Physics*, 52, D756, 2002.

[Bildiriler](#)

- 1) Akpınar G., Göktaş H., "Fabrication of Pani nanofibers directly from its monomer using electrospinning method", Turkish Physical Society 34th International Physics Congress, MUĞLA, TÜRKİYE, 5-9 Eylül 2018, pp.164-164
- 2) Hilal Goktas, "Double Discharge Plasma Polymerization (DBD) technique and its applications", KONNECT Summer School, Eco-Bio-Nano Materials Processing and Applications and Konnect Day, 26 May – 3 June 2018, Ankara, Turkey.
- 3) Güven Akpınar, Hilal Göktaş, "Mathematical Modelling in Electrospinning Process for Polymer Nanofiber", TFD 33th International Physics Congress, p. 38, 6-10 September 2017, Bodrum, Turkey
- 4) X. Wang, A. Ugur, H. Goktas, N. Chen, M. Wang, N. Lachman, E. Kalfon-Cohen, W. Fang, B. L. Wardle, and K. K. Gleason, "Room Temperature Sensing Based on initiated CVD coated Carbon Nanotube Arrays", 9th Int. Conference on hot wire and initiated chemical vapor deposition, 6 – 9 September 2016, Philadelphia, US.
- 5) A. Bandremer, A. Hebert, S. D. Torosian, H. Goktas, K. K. Gleason, "Low Level Detection of E. coli Based on Electrochemical Biosensor", Int. Association of Food Protection Annual Conference, 25-28 June 2015, Portland, Oregon.
- 6) H. Goktas, A. Bandremer, A. Hebert, S. D. Torosian, K. K. Gleason, "Fabrication of Functional and Porous surfaces in a Single Step for Chemiresistive Biosensor", FDA Nanotechnology Conference, 27-29 May 2015, Silver Spring, MD
- 7) H. Goktas, A. Bandremer, A. Hebert, S. D. Torosian, K. K. Gleason, i) "Optimization of Label-free Chemiresistive Biosensor for Low Level Detection of E. coli", ii) Torosian, Stephen, Bandremer, Aaron, Goktas, Hilal, "Investigation of Quartz Crystal Microbalance (QCM) for Determination of Viability of Hepatitis A Assay Eluate", iii) Bandremer, Aaron; Torosian, Stephen; Goktas, Hilal, Measurement Techniques for Conductive Polymer Membrane Based Biosensors 2015 FDA Science Forum Emerging Technologies, 27-28 May 2015, Silver Spring, MD
- 8) X. Wang, F. Yaul, S. Hou, P. Kovacic, H. Goktas, A. Chandrakasan, K. K. Gleason, "Fabrication of Hybrid Conducting Copolymer-Metal Nanoparticle for Chemiresistive Sensing of Volatile Organic Compounds" MARC 2014, Microsystems Technology Laboratories, MIT Annual Research Conference, p. 137, January 29 – 30, 2014, Bretton Woods, NH, USA
- 9) H. Goktas, "Plasma Polymerization and its Applications", TFD 29th International Physics Congress, p. 4-5, 5-8 September 2012, Bodrum, Turkey
- 10) H. Goktas, D. Cokeliler, A. Ozkan, P. Imirzalioglu, "The anti-fouling properties of plasma polymerized mercapto thin films on dental implants", 12th High-Tech Plasma Processes & 12th European Plasma Conference, June 24-29, 2012, Bologna, Italy
- 11) H. Goktas, T. Gunes, Z. Demircioglu, D. Mansuroglu, I. Kaya, "Plasma Polymerized Polyaniline Thin Films by Double Discharge Technique" 20th International Symposium on Plasma Chemistry, June 24-29, 2011, Philadelphia, USA
- 12) H. Goktas, Z. Demircioglu, T. Gunes, I. Kaya, "Plasma polymerized composite thin films produced by double discharges technique", IEEE 37th International Conference on Plasma Science, p. 79, June 20-24, 2010, Norfolk, Virginia, USA
- 13) H. Goktas, C. Zafer, T. Gunes, S. Icli, "Plasma polymerized thin films for photovoltaic applications" First Turkish Solar Energy Conference and Exhibition, p. 57, April 29-30, 2010, Ankara, Turkey
- 14) F. G. Ince, H. Goktas, Z. Ozbek, R. Capan, F. Davis, "Plasma polymerized calixarene thin films and their sensing properties to chloroform vapors", 10th International conference on frontiers of polymers and advanced materials, p.281, September 28 – 2 October, 2009, Santiago, Chile.
- 15) D. Mansuroglu, F. G. Ince, H. Goktas, S. Bilikmen, R. Aydin, "The morphology and molecular structure of polyfluorene thin films synthesized by a novel plasma polymerization method", 2nd International conference on physics of optical materials and devices, ICOM 2009, p. 30, August 26 – September 1, 2009, Herceg Novi, Montenegro
- 16) D. Mansuroglu, F. G. Ince, H. Goktas, I. Kaya, R. Aydin, "A Novel Plasma Polymerization Method for Synthesizing Thin Films of Flourene" The International Conference on Nanotechnology: Science and Applications (Nanotech Insight '09), p. 264, Barcelona, Spain, March 29 - April 2, 2009
- 17) H. Göktaş, T. Güneş, F. G. Ince, İ. Kaya, "Plazma yöntemiyle konjuge yapıli polimer ince film üretimi", Güneş Enerjisinde Yeni Ufuklara Doğru Fikir Paylaşımı ve Nihai Ürünlerinin Tanıtımı, 30 Ocak 2009, Enerji ve Tabii Kaynaklar Bakanlığı, MTA Konferans Salunu, Ankara
- 18) D. Çökeliiler, H. Caner, H. Göktaş, A. Ö. Özsar, A. Küçükurhan, M. Mutlu, "The improvement of titanium alloys biocompatibility by glow discharge technique with immobilization of bioactive protein", 14th Biomedical Science & Technology Symposium, pp.78, May 3-7, 2008 Muğla-Turkey
- 19) Z. Özbek, S. Şen, F. Ince, R. Çapan, H. Göktaş, M. E. Özel, F. Davis, "The Langmuir and Deposition Properties of Calixarenes", Condensed Matter Physics Conference of Balkan Countries, pp. 184, 26-28 May 2008, Mugla-Turkey

- 20) H. Goktas, F. Ince, A. Iscan, I. Yildiz, M. Kurt "Production of Organic Nano Particles and Thin Films by Superposing Two Discharges as a Plasma Polymerization Technique" pp. 31, Int. Workshop on Advanced Materials and Devices for Photovoltaic Applications, Ankara-Turkey, April 24-25, 2008
- 21) D. Çökeliler, H. Caner, N. Saglam, H. Göktaş, C. Topaçlı, M. Mutlu "Infection Free Titanium Alloy Biomaterials by Thiol Based Plasma Polymerisation Technique" 17th Int. Vacuum congress, Stocholm, Sweeden, 2-6 July, 2007
- 22) D. Çökeliler, H. Göktaş, H. Caner, D. Tosun, T. Bayrak, S. Mutlu, M. Mutlu "Titanyum Alaşım Metalik Biyomalzemelerde Enfeksiyon Riskinin Azaltılmasında Yeni bir Yaklaşım: Tiyol İçerikli Plazma Polimerizasyon" Biyomedikal Mühendisliği Ulusal Toplantısı Boğaziçi Üni. , Ed.: Y. Ulgen, A. Akin, İstanbul, 22-23 Mayıs 2007
- 23) H. Goktas, "Potential applications of intense electron beam generator", 3rd Workshop on Nanosciences & Nanotechnologies, p. 44; 10-12 July 2006, Thessaloniki, Greece
- 24) A. Demir, E. Hajiyev, H. Goktas and G. J. Tallents, "Modelling of the Ni-like Tin X-Ray Laser Driven by 1.2 ps Short Pulse and 280 ps Background Pulse Configuration," X-Ray Lasers, Institute of Physics Conference Series, 186, 401-404 (2005)
- 25) H. Goktas, G. Oke, H. Kenar, V. Hasirci, "Plasma based electron beam generator and its nanobiomaterials related applications" pp. 179, Editor in chief: M. Mutlu, Hacettepe University Press, 2005
- 26) H. Goktas, U. B. Ayhan, G. Gunduz, H. Disbudak, E. Eryilmaz, G. Oke, "Synthesis of carbon nanotube by plasma based electron beam generator", 5th International workshop and summer school 'Towards fusion energy-plasma physics, diagnostics, spin-off' Kudowa, Poland, 6 – 10 June 2005
- 27) H. Goktas, "Plasma based electron beam generator and its related applications" International workshop on plasma polymers and related materials, 7 – 9 October 2004, Antalya, Turkey
- 28) U.B. Ayhan, H. Goktas, H. Disbudak, et.al, "Karbon nano tüp üretimi", Savunma Teknolojileri Kongresi, 24-25 Haziran 2004, Ankara
- 29) H. Goktas, A. Alacakir, G. Oke, "Plazma tabanlı elektron demeti jeneratörünün yapımı ve uygulamaları" 2. Ulusal Parçacık Hızlandırıcıları Kongresi, 7-9 Haziran 2004, Ankara
- 30) H. Goktas, A. Demir, R. Turan, A. Seyhan, G. Oke, "Measurements and modelling of neutral helium spectral lines emitted from electron beam generator", International Conference Plasma 2003, Research and Applications of Plasmas, Warsaw, Poland, 8 – 12 September, 2003
- 31) A. Demir, E. Hajiev, E. Kayhan, H. Goktas, R. Turan, A. Seyhan, "The comparison of experimental and simulated ArI and ArII spectral lines emitted from electron beam generator", International Conference Plasma 2003, Research and Applications of Plasmas, Varsaw, Poland, 8 – 12 September, 2003
- 32) H. Goktas, A. Alaçakir, G. Oke, A. Esendemir, I. Yıldız, H. Kırkıcı, M. Mudrea, J. Loureiro, "The electron beam and pinch effect characteristics of double discharge pulsed electron beam generator", 2003 Pulsed Power Conference, Texas, USA, 15 – 18 June, 2003.
- 33) M. Udrea, N. Mandache, A. Pointu, H. Goktas, G. Oke, A. Alacakir, "Experimental Study of the Interaction of Intense Electron Beams with Metallic Targets" Proc. SPIE, 4430, 222, Sixth Conference on Optics, ROMOPTO 2000, Bucharest
- 34) H. Goktas, M. Udrea, G. Oke, "Intense Electron Beam Generation By Fast Filamentary Discharge" IEEE Int. Conf. on Plasma Science, 2000, New Orleans, USA
- 35) H. Goktas, et. al. "Stable Filamentary Discharge in Low Pressure Gases as Electron Beam Generator" TFD 8th Int. Physics Conference, Adana-Turkey, 1999