

Assoc. Prof. Mehmet YILMAZ

Personal Information

Post Address: Atatürk Üniversitesi Mühendislik Fakültesi Kimya Mühendisliği Bölümü

Biography

Dr. Mehmet Yılmaz, Lisans, Yüksek Lisans ve Doktora derecelerini sırasıyla Hacettepe Üniversitesi, Ankara Üniversitesi ve Hacettepe Üniversitesi'nde 2005, 2011 ve 2014 yılında almıştır. 2014-2017 arası dönemde Gazi Üniversitesi'nde Doç. Dr. Gökhan Demirel ve 2017-2018 arası dönemde ise University of Michigan'da Prof. Nicholas A. Kotov danışmanlığında doktora sonrası çalışmalar yapmıştır ve şu anda Atatürk Üniversitesi'nde Dr. Öğr. Üyesi olarak çalışmaktadır. Çalışma alanları: Yüzey Zenginleştirilmiş Raman Spektroskopisi (SERS), Kiral Nanoyapılar, İnce Film Üretimi ve Uygulamaları, Kolloidal Nanoparçacıkların Sentezi ve Üretimi. Dr. Yılmaz dört ulusal projede görev almıştır. Çalışmalarının bir kısmı *Nature Materials* (IF: 38.9), *Advanced Functional Materials* (IF: 15.6) ve *ACS Applied Materials and Interfaces* (IF: 8.4) gibi prestijli dergilerde ilk yazar olarak basılmıştır. Basılı 23 adet SCI makalesi, 1 adet ulusal makalesi ve 2 adet kitap bölümü bulunmaktadır. Dr. Yılmaz bu yayınlarına toplam 407 adet atf almıştır. Evli ve bir çocuk babasıdır.

Education Information

Post Doctorate, The University Of Michigan, Faculty Of Engineering, Chemical Engineering, United States Of America
2017 - 2018

Doctorate, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Biyomühendislik, Turkey 2011 - 2014

Post Graduate, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Kimya Mühendisliği, Turkey 2006 - 2009

Under Graduate, Hacettepe Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği, Turkey 2000 - 2005

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Yüzey Zenginleştirilmiş Raman Spektroskopisi (SERS) için Nano-yaklaşım Temelli Platformların Geliştirilmesi ve Tanı Amaçlı Uygulanması, Hacettepe Üniversitesi, Fen Bilimleri Enstitüsü, Biyomühendislik, 2014

Post Graduate, Süperkritik Akışkan Ortamında Kopolimerizasyon, Ankara Üniversitesi, Fen Bilimleri Enstitüsü, Kimya Mühendisliği, 2009

Research Areas

Chemical Engineering and Technology, Chemistry, Physical Chemistry, Spectroscopy, Surface Chemistry, Natural Sciences, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Atatürk Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği, 2019 - Continues

Assistant Professor, Atatürk Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği, 2018 - 2019

Assistant Professor, Sinop Üniversitesi, Mühendislik Ve Mimarlık Fakültesi, Biyomühendislik, 2015 - 2018

Research Assistant, Ankara Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği, 2006 - 2011

Research Assistant, Van Yüzüncü Yıl Üniversitesi, Mühendislik Fakültesi, Kimya Mühendisliği, 2005 - 2006

Jury Memberships

Post Graduate, Yüksek lisans Tez savunma, Van Yüzüncü Yıl Üniversitesi, August, 2019

Post Graduate, Yüksek lisans Tez savunma, Tokat Gaziosmanpaşa Üniversitesi, August, 2019

Doctorate, Doktora Tez Savunma, Tokat Gaziosmanpaşa Üniversitesi, July, 2019

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

- **Bimetallic Core–Shell Nanoparticles of Gold and Silver via Bioinspired Polydopamine Layer as Surface-Enhanced Raman Spectroscopy (SERS) Platform**
Yılmaz A., Yılmaz M.
NANOMATERIALS, vol.10, no.688, pp.1-17, 2020 (Journal Indexed in SCI Expanded)
- **Silver thin film deposited 3-dimensional gold nanorod arrays for plasmonic catalysis**
YILMAZ M., Demirel G. B. , Demirel G.
Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, vol.38, 2020 (Journal Indexed in SCI Expanded)
- **Gold-nanoisland-decorated titanium nanorod arrays fabricated by thermal dewetting approach**
Dinc D. O. , Yılmaz M., Cetin S. S. , Turk M., Piskin E.
SURFACE INNOVATIONS, vol.7, pp.249-259, 2019 (Journal Indexed in SCI)
- **Silver-Nanoparticle-Decorated Gold Nanorod Arrays via Bioinspired Polydopamine Coating as Surface-Enhanced Raman Spectroscopy (SERS) Platforms**
YILMAZ M.
COATINGS, vol.9, 2019 (Journal Indexed in SCI)
- **Asymmetric, nano-textured surfaces influence neuron viability and polarity**
BELU A., Yılmaz M., NEUMANN E., Offenhaeusser A., Demirel G., MAYER D.
JOURNAL OF BIOMEDICAL MATERIALS RESEARCH PART A, vol.106, pp.1634-1645, 2018 (Journal Indexed in SCI)
- **Surface-enhanced Raman spectroscopy (SERS): an adventure from plasmonic metals to organic semiconductors as SERS platforms**
Demirel G., USTA H., Yılmaz M., Celik M., Alidagi H. A. , Buyukserin F.
JOURNAL OF MATERIALS CHEMISTRY C, vol.6, pp.5314-5335, 2018 (Journal Indexed in SCI)
- **Nanostructured organic semiconductor films for molecular detection with surface-enhanced Raman spectroscopy**
Yılmaz M., Babur E., Ozdemir M., Giesecking R. L. , Dede Y., Tamer U., Schatz G. C. , Facchetti A., USTA H., Demirel G.
NATURE MATERIALS, vol.16, pp.918-925, 2017 (Journal Indexed in SCI)
- **Three-Dimensional Au-Coated Electrospayed Nanostructured BODIPY Films on Aluminum Foil as Surface-Enhanced Raman Scattering Platforms and Their Catalytic Applications**
Yılmaz M., ERKARTAL M., Ozdemir M., Sen U., USTA H., Demirel G.
ACS APPLIED MATERIALS & INTERFACES, vol.9, pp.18199-18206, 2017 (Journal Indexed in SCI)
- **Understanding the effect of polydopamine coating on catalytic reduction reactions**
Bakirci G., Yılmaz M., Babur E., Ozden D., Demirel G.
CATALYSIS COMMUNICATIONS, vol.91, pp.48-52, 2017 (Journal Indexed in SCI)
- **Fabrication of Plasmonic Nanorod-Embedded Dipeptide Microspheres via the Freeze-Quenching Method for Near-Infrared Laser-Triggered Drug-Delivery Applications**
Erdogan H., Yılmaz M., Babur E., DUMAN M., AYDIN H., Demirel G.
BIOMACROMOLECULES, vol.17, pp.1788-1794, 2016 (Journal Indexed in SCI)
- **Silver or gold deposition onto magnetite nanoparticles by using plant extracts as reducing and stabilizing agents**
Dizaji A. N. , Yılmaz M., Piskin E.
ARTIFICIAL CELLS NANOMEDICINE AND BIOTECHNOLOGY, vol.44, pp.1109-1115, 2016 (Journal Indexed in SCI)
- **Synthesis and characterization of poly(glycerol-co-sebacate-co-ε-caprolactone) elastomers**

AYDIN H., Salimi K., YILMAZ M., Turk M., Rzayev Z. M. O. , Piskin E.

Journal of Tissue Engineering and Regenerative Medicine, vol.10, 2016 (Journal Indexed in SCI Expanded)

- **The fabrication of plasmonic nanoparticle-containing multilayer films via a bio-inspired polydopamine coating**
Yilmaz M., Bakirci G., Erdogan H., Tamer U., Demirel G.
RSC ADVANCES, vol.6, pp.12638-12641, 2016 (Journal Indexed in SCI)
- **Antenna-type radiofrequency generator in nanoparticle-mediated hyperthermia**
Nasser B., Yilmaz M., Turk M., Kocum I. C. , Piskin E.
RSC ADVANCES, vol.6, pp.48427-48434, 2016 (Journal Indexed in SCI)
- **Micro-/Nanostructured Highly Crystalline Organic Semiconductor Films for Surface-Enhanced Raman Spectroscopy Applications**
Yilmaz M., Ozdemir M., Erdogan H., Tamer U., Sen U., Facchetti A., USTA H., Demirel G.
ADVANCED FUNCTIONAL MATERIALS, vol.25, pp.5669-5676, 2015 (Journal Indexed in SCI)
- **Light-Driven Unidirectional Liquid Motion on Anisotropic Gold Nanorod Arrays**
Yilmaz M., Kuloglu H. B. , Erdogan H., Cetin S. S. , Yavuz M. S. , Ince G. O. , Demirel G.
ADVANCED MATERIALS INTERFACES, vol.2, 2015 (Journal Indexed in SCI)
- **Morphological Versatility in the Self-Assembly of Val-Ala and Ala-Val Dipeptides**
Erdogan H., Babur E., Yilmaz M., Candas E., Gordesel M., Dede Y., Oren E. E. , Demirel G. B. , Ozturk M. K. , Yavuz M. S. , et al.
LANGMUIR, vol.31, pp.7337-7345, 2015 (Journal Indexed in SCI)
- **Controlled graft copolymerization of lactic acid onto starch in a supercritical carbon dioxide medium**
Salimi K., Yilmaz M., Rzayev Z. M. O. , Piskin E.
CARBOHYDRATE POLYMERS, vol.114, pp.149-156, 2014 (Journal Indexed in SCI)
- **Large area uniform deposition of silver nanoparticles through bio-inspired polydopamine coating on silicon nanowire arrays for practical SERS applications**
Akin M. S. , Yilmaz M., Babur E., Ozdemir B., Erdogan H., Tamer U., Demirel G.
JOURNAL OF MATERIALS CHEMISTRY B, vol.2, pp.4894-4900, 2014 (Journal Indexed in SCI)
- **Investigation of lichen based green synthesis of silver nanoparticles with response surface methodology**
Yildiz N., Ateş Ç., Yilmaz M., Demir D., Yildiz A., Çalimli A.
Green Processing and Synthesis, vol.3, pp.259-270, 2014 (Journal Indexed in SCI)
- **Combining 3-D plasmonic gold nanorod arrays with colloidal nanoparticles as a versatile concept for reliable, sensitive, and selective molecular detection by SERS**
Yilmaz M., Senlik E., Biskin E., Yavuz M. S. , Tamer U., Demirel G.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.16, pp.5563-5570, 2014 (Journal Indexed in SCI)
- **Ring-opening copolymerization of L-lactide and epsilon-caprolactone in supercritical carbon dioxide using triblock oligomers of caprolactone and PEG as stabilizers**
Yilmaz M., Egri S., Yildiz N., Calimli A., Piskin E.
POLYMER JOURNAL, vol.43, pp.785-791, 2011 (Journal Indexed in SCI)
- **Dispersion polymerization of L-lactide in supercritical carbon dioxide**
Yilmaz M., Egri S., Yildiz N., Calimli A., Piskin E.
JOURNAL OF POLYMER RESEARCH, vol.18, pp.975-982, 2011 (Journal Indexed in SCI)

Articles Published in Other Journals

- **3D and Plasmonic Nanoparticle Decorated Catalytic System via Bio-inspired Polydopamine Coating: Cigar Filter Case Study**
YILMAZ M.
Hacettepe Journal of Biology and Chemistry, vol.46, pp.515-521, 2018 (National Refreed University Journal)

Book & Book Chapters

- in: **İleri Malzemeler: Biyomalzeme ve Nanomalzeme Uygulamaları**

ERDOĞAN H., YILMAZ M., ÖZDEN D. Ş. , DEMİREL G.

Biyoesinlenmiş Fonksiyonel Malzemeler, Kurallay Filiz, Editor, HACETTEPE ÜNİVERSİTESİ, Ankara, pp.89-115, 2019

- **in: Nanostructures for Drug Delivery**

KURTAY G., YILMAZ M., KURALAY F., BİRLİK DEMİREL G.

MULTIFUNCTIONAL THERAPEUTIC HYBRID NANOCARRIERS FOR TARGETED AND TRIGGERED DRUG DELIVERY: RECENT TRENDS AND FUTURE PROSPECTS, Ecaterina Andronescu, Alexandru Mihai Grumezescu, Editor, Elsevier, 2017

Refereed Congress / Symposium Publications in Proceedings

- **Cell Diagnosis Based on Surface-Enhanced Raman Spectroscopy (SERS) Tools**

YILMAZ M., YILMAZ A., AYSİN F., ŞİMŞEK ÖZEK N.

iSAMN 2019 (3rd International Symposium On Advanced Materials and Nanotechnology), 19 - 20 August 2019

- **Bimetallic Core/Shell Nanoparticles of Gold and Silver via Bioinspired Polydopamine Layer**

YILMAZ M.

iSAMN 2019 (3rd International Symposium On Advanced Materials and Nanotechnology), 19 - 20 August 2019

- **Nanostructured Organic Semiconductor Thin Films as Surface Enhanced Raman Spectroscopy (SERS) Platforms**

YILMAZ M.

ISASE2018 INTERNATIONAL SYPOSIUM ON APPLIED SCIENCES AND ENGINEERING, 26 - 28 November 2018

- **Novel Approaches in Synthesis of Chiral Nanostructures**

YILMAZ M.

ISASE2018 INTERNATIONAL SYPOSIUM ON APPLIED SCIENCES AND ENGINEERING, 26 - 28 November 2018

- **Organic semiconductor thin films as SERS substrates**

YILMAZ M.

41st Annual Symposium Emergent Polymer Science Engineering, 19 October 2017

- **Nanostructured organic semiconductor films as new generations of surface-enhanced Raman spectroscopy substrates**

YILMAZ M.

2017-5th Annual LNF Users Symposium, 06 December 2017

- **Self powering biosensors for biofuel cell applications**

NİLGÜN D., YILMAZ M., DEMİREL G., KURALAY F.

3rd International Congress on Biosensors, 5 - 07 October 2016

- **Layer by layer films of polydopamine and gold nanoparticles**

BAKIRCI DÜNDAR G., YILMAZ M., DEMİREL G.

3rd International Congress on Biosensors, 5 - 07 October 2016

- **Thin films of p type organic semiconductors as SERS substrates**

YILMAZ M., ÖZDEN D. Ş. , USTA H., DEMİREL G.

3rd International Congress on Biosensors, 5 - 07 October 2016

- **Gold modified anisotropic titanium nanorod arrays for sensing applications**

ÖZDEN D. Ş. , YILMAZ M., BİŞKİN E., DEMİREL G.

3rd International Congress on Biosensors, 5 - 07 October 2016

- **PGEs Carrying Polydopamine Mediated Gold Nanoparticles**

KARATAŞ E., DİLEK ŞURA Ö., YILMAZ M., ZEHRA y., ERHAN b.

International Köyceğiz Meetings 2015 (AFFTECH 2015, NANOMED 2015, NANOBIOTECH2015, 6 - 12 September 2015

- **New Generations of SERS Substrates**

YILMAZ M., DEMİREL G.

International Köyceğiz Meetings (AFFTECH 2015, NANOMED 2015, NANOBIOTECH 2015), 6 - 12 September 2015

- **Polydopamine mediated nanoparticle deposition for SERS applications**
YILMAZ M., AKIN M. S. , DEMİREL G.
NanoTR 11 Nanoscience and Nanotechnology Conference, Turkey, 22 - 25 June 2015
- **Silicon nanowire supported gold nanoparticles for environmental applications**
BAKİRCİ G., YILMAZ M., DEMİREL G.
NanoTR 11 Nanoscience and Nanotechnology Conference, 22 - 25 June 2015
- **Fabrication of starch g PLA copolymers in supercritical carbon dioxide medium**
SALİMİ K., YILMAZ M., RZAYEV Z., BİŞKİN E.
Euro BioMAT 2015 European Symposium and Exhibition on Biomaterials and Related Areas, 21 - 22 April 2015
- **Theranostic aimed nanoabsorbers in antenna modulus radiofrequency hyperthermia A comprehensive study**
NASSERİ B., YILMAZ M., KOÇUM İ. C. , BİŞKİN E.
Euro BioMAT 2015 European Symposium and Exhibition on Biomaterials and Related Areas, 21 - 22 April 2015
- **Fabrication and SERS applications of uni directional gold and silver nanorod arrays enhanced by colloidal nanoparticles**
YILMAZ M., DEMİREL G., BİŞKİN E.
Euro BioMAT 2015 European Symposium and Exhibition on Biomaterials and Related Areas, 21 - 22 April 2015
- **Silver or gold deposited magnetite nanoparticles Green synthesis approach with plant extract**
DİZAJI A. N. , YILMAZ M., BİŞKİN E.
1st International NanoBiotechnology Symposium - NanoBioTech 2014, 27 - 29 August 2014
- **Uni directional gold and silver nanorod arrays as Surface Enhanced Raman Spectroscopy SERS substrates**
YILMAZ M., DEMİREL G., BİŞKİN E.
1st International NanoBiotechnology Symposium - NanoBioTech 2014, 27 - 29 August 2014
- **Fabrication and applications of uni directional gold nanorod arrays based on gas phase deposition**
YILMAZ M., DEMİREL G., BİŞKİN E.
Biosensors 2014, 27 - 30 May 2014
- **The catalyst assisted two stage synthesis of poly glycerol c sebacate co caprolactone elastomers as potential subacromial adhesion barriers in rotator cuff repair**
AYDIN H. M. , SALİMİ K., YILMAZ M., TÜRK M., RZAYEV Z., BİŞKİN E.
TERMIS-EU 2013, 17 - 20 June 2013
- **Hyperthermia with RF using nanoparticles**
NASSERİ B., YILMAZ M., KOÇUM İ. C. , TÜRK M., BİŞKİN E.
TERMIS-EU 2013, 17 - 20 June 2013
- **Magnetite gold core shell nanoparticles for delivery and imaging of plasmid DNA**
DİZAJI A. N. , USTA D. D. , YILMAZ M., KUTSAL T., TÜRK M., BİŞKİN E.
TERMIS-EU 2013, 17 - 20 June 2013
- **Design and production of intelligent inorganic nanoparticles for delivery and imaging of plasmid DNA and antisense oligonucleotides to tumor cells**
DİZAJI A. N. , YILMAZ M., KUTSAL T., BİŞKİN E.
18th International Biomedical Science and Technology Symposium, 10 - 13 September 2012
- **PLLA PEG based biodegradable micelles**
YILMAZ M., NASSERİ B., EĞRİ S., DİNÇER İŞOĞLU S., BİŞKİN E.
18th International Biomedical Science and Technology Symposium, 10 - 13 September 2012
- **Micelles and reverse micelles of PLC PEG PCL triblock oligomers**
YILMAZ M., NASSERİ B., EĞRİ S., DİNÇER İŞOĞLU S., BİŞKİN E.
NANOTR-VIII, 25 - 29 June 2012
- **Nanomagnetic particle synthesis and characterization for seperation of plasmid DNA**
UTKAN G., SAYAR F., BATAT P., İDE S., YILMAZ M., ATILA DİNÇER C., KRİECHBAUM A., BİŞKİN E.
Nanomagnetisme et Spintronique, 24 - 25 November 2010
- **Ring opening homopolymerization of L lactide and copolymerization of L lactide and CL in supercritical carbon dioxide with triblock copolymers of CL and PEG as stabilizer**
YILMAZ M., EĞRİ S., YILDIZ N., ÇALIMLI A., BİŞKİN E.

5th European Symposium on Biopolymers, ESBP 2009, 18 - 20 November 2009

- **Triblock copolymers of CL and PEG as stabilizer in ring opening copolymerization of L lactide and CL in supercritical carbon dioxide**

YILMAZ M., EĞRİ S., YILDIZ N., ÇALIMLI A., BİŞKİN E.

BIOTECH-METU 2009, 27 - 30 September 2009

- **Copolymer synthesis of L lactide and CL in supercritical fluid**

YILMAZ M., EĞRİ S., YILDIZ N., ÇALIMLI A., BİŞKİN E.

8th National Chemical Engineering Convention, Turkey, 26 - 29 August 2008

Supported Projects

Yılmaz A., Yılmaz M., TUBITAK Project, Yüzey Zenginleştirilmiş Raman Spektroskopisi (SERS) Yaklaşımı ve 3D Haritalama Tekniği Kullanılarak Farklı Tipte Hücrelerin Tanımlanması ve Apoptoz ile Nekroz Düzeylerinin Belirlenmesi, 2020 - 2022

YILMAZ M., TUBITAK Project, Yeni Kiroplazmonik Nanoyapılı Sistemler, 2017 - 2018

YILMAZ M., TUBITAK Project, 3-Boyutlu Anizotropik Nanoyapılar Yardımı ile Plazmonik Fotokataliz, 2014 - 2017

YILMAZ M., TUBITAK Project, TÜBİTAK 2219 BİDEB Yurtiçi Doktora Programı, 2009 - 2014

YILMAZ M., TUBITAK Project, Süperkritik Karbondioksit Ortamında L-laktat/?-kaprolacton Kopolimer Sentezi, 2008 - 2009

Scientific Refereeing

Molecules, SCI Journal, November 2019

Sensors, SCI Journal, October 2019

Nanomaterials, SCI Journal, October 2019

Hacettepe Journal Biology and Chemistry, National Scientific Refreed Journal, September 2019

Materials, SCI Journal, September 2019

Sensors, SCI Journal, August 2019

Sensors, SCI Journal, July 2019

Coatings, SCI Journal, June 2019

Coatings, SCI Journal, May 2019

Nanomaterials, SCI Journal, May 2019

Nanomaterials, SCI Journal, April 2019

Applied Surface Science, SCI Journal, April 2019

Materials, SCI Journal, April 2019

Applied Sciences, SCI Journal, March 2019

International Journal of Molecular Sciences , SCI Journal, February 2019

Hacettepe Journal Biology and Chemistry, National Scientific Refreed Journal, January 2019

Sensors, SCI Journal, January 2019

materials, SCI Journal, November 2018

sensors, SCI Journal, November 2018

Sensors, SCI Journal, September 2018

sensors, SCI Journal, September 2018

sensors, SCI Journal, July 2018

sensors, SCI Journal, May 2018

sensors, SCI Journal, March 2018

Sensors, SCI Journal, February 2018

sensors, SCI Journal, December 2017

sensors, SCI Journal, November 2017

Journal of Hazardous Materials, SCI Journal, September 2015

Citations

Total Citations (WOS):292

h-index (WOS):9

Awards

YILMAZ M., En İyi Poster (Üçüncülük) Ödülü, NanoTR 11 Nanoscience and Nanotechnology Conference, 2015., June 2016