

Assoc. Prof. MEHMET FATİH DANIŞMAN

Personal Information

Office Phone: [+90 312 210 7618](tel:+903122107618)

Email: danisman@metu.edu.tr

Web: <https://avesis.metu.edu.tr/danisman>

International Researcher IDs

ScholarID: [nhbJW-UAAAAJ](https://scholar.google.com/citations?user=nhbJW-UAAAAJ)

ORCID: [0000-0002-7252-3113](https://orcid.org/0000-0002-7252-3113)

Publons / Web Of Science ResearcherID: [AAZ-6619-2020](https://publons.com/researcher/AAZ-6619-2020)

ScopusID: [6506978157](https://scopus.com/authid/detail.uri?authorId=6506978157)

Yoksis Researcher ID: [164345](https://yoksis.metu.edu.tr/yoksis/164345)

Education Information

Doctorate, Princeton University, Kimya, United States Of America 2000 - 2005

Postgraduate, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, Turkey 1999 - 2000

Research Areas

Chemistry, Physical Chemistry, Natural Sciences

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 2014 - Continues

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 2008 - 2011

Lecturer PhD, Middle East Technical University, Faculty of Arts and Sciences, Department of Chemistry, 2006 - 2008

Advising Theses

Danişman M. F., Yerci S., Investigation of perfluoropentacene thin films on substrates with different chemical structures, Doctorate, A.YAVUZ(Student), 2020

Danişman M. F., Investigation of carboxyl-functionalized self-assembled monolayers on gold surfaces., Postgraduate, S.GÖRGÜLÜ(Student), 2020

Danişman M. F., Yılmaz A., Mixed carboranethiol self-assembled monolayers on gold surfaces, Postgraduate, N.SOHRABNIA(Student), 2017

Danişman M. F., Bek A., Utilization of fiber loop ring down technique for sensing applications, Postgraduate, A.YOLALMAZ(Student), 2017

Danişman M. F., Mete E., Uzun menzilli korelasyon dahilinde karborantiol metal yüzey etkileşimlerinin incelenmesi, Postgraduate, G.GÜNEY(Student), 2016

ESENTÜRK O., DANIŞMAN M. F., FIBER LOOP RING DOWN SPECTROSCOPY FOR TRACE CHEMICAL DETECTION,

Postgraduate, B.CENGİZ(Student), 2013

Danışman M. F., Duman S., Bazı kendiliğinden düzenlenmiş organik ince filmlerin helyum kırınım metoduyla incelenmesi, Doctorate, E.ALBAYRAK(Student), 2012

Danışman M. F., Ellialtıoğlu S. Ş., Ab initio studies of pentacene on Ag(111) surfaces, Postgraduate, İ.DEMİROĞLU(Student), 2010

DANIŞMAN M. F., Growth of gold films on quartz surfaces for quartz crystal microbalance application, Postgraduate, B.ÖZKAN(Student), 2010

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Striped Phase Formations of Alkanethiols in Au(111)/Graphene/SAM and Au(111)/SAM/Graphene Heterolayered Structures: Insights from vdW-DFT Calculations**
Yortanlı M., DANIŞMAN M. F., Mete E.
Journal of Physical Chemistry C, vol.128, no.30, pp.12618-12631, 2024 (SCI-Expanded)
- II. **Functional Group Effects on the Electrochemical Properties of Carboranethiol Monolayers on Au(111) As Studied by Density Functional Theory: Implications for Organic Electronics**
Yortanlı M., DANIŞMAN M. F., Mete E.
ACS APPLIED NANO MATERIALS, vol.5, no.8, pp.11185-11193, 2022 (SCI-Expanded)
- III. **Perfluoropentacene thin films on Au(111) surfaces: Effect of kinetic energy and vibrational properties**
Yavuz A., Danisman M. F.
APPLIED SURFACE SCIENCE, vol.586, 2022 (SCI-Expanded)
- IV. **Influence of Terminal Carboxyl Groups on the Structure and Reactivity of Functionalized m-Carboranethiolate Self-Assembled Monolayers**
Goronzky D. P., Stanek J., Avery E., Guo H., Bastl Z., Dusek M., Gallup N. M., Gun S., Kucerakova M., Levandowski B. J., et al.
CHEMISTRY OF MATERIALS, vol.32, no.15, pp.6800-6809, 2020 (SCI-Expanded)
- V. **Study on the Effect of Chemically Different Substrates on Nucleation and Growth Mechanism of Perfluoropentacene Thin Films**
Yavuz A., DANIŞMAN M. F.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.123, no.32, pp.19610-19618, 2019 (SCI-Expanded)
- VI. **Discrimination of chemicals via refractive index by EF-FLRD**
Yolalmaz A., Danışman M. F., Esentürk O.
APPLIED PHYSICS B-LASERS AND OPTICS, vol.125, 2019 (SCI-Expanded)
- VII. **Leading to a Better Understanding of the Particle-in-a-Quantum-Corral Model**
Agcali R. Y., Atik B., Bilgen E., Karli B., DANIŞMAN M. F.
JOURNAL OF CHEMICAL EDUCATION, vol.96, no.1, pp.82-88, 2019 (SCI-Expanded)
- VIII. **Mixed carboranethiol self-assembled monolayers on gold surfaces**
Yavuz A., Sohrabnia N., Yılmaz A., Danışman M. F.
APPLIED SURFACE SCIENCE, vol.413, pp.233-241, 2017 (SCI-Expanded)
- IX. **Intracavity gas detection with fiber loop ring down spectroscopy**
Yolalmaz A., Sadroud F. H., Danışman M. F., Esentürk O.
OPTICS COMMUNICATIONS, vol.396, pp.141-145, 2017 (SCI-Expanded)
- X. **A van der Waals DFT study of chain length dependence of alkanethiol adsorption on Au(111): physisorption vs. chemisorption**
Mete E., Yortanlı M., DANIŞMAN M. F.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.19, no.21, pp.13756-13766, 2017 (SCI-Expanded)
- XI. **Study of the helium cross-section of unsymmetric disulfide self-assembled monolayers on Au(111)**
ALBAYRAK E., KARABUĞA Ş., Bracco G., DANIŞMAN M. F.
APPLIED SURFACE SCIENCE, vol.390, pp.283-288, 2016 (SCI-Expanded)

- XII. **A van der Waals density functional investigation of carboranethiol self-assembled monolayers on Au(111)**
Mete E., YILMAZ A., DANIŞMAN M. F.
PHYSICAL CHEMISTRY CHEMICAL PHYSICS, vol.18, no.18, pp.12920-12927, 2016 (SCI-Expanded)
- XIII. **Dispersion Corrected DFT Study of Pentacene Thin Films on Flat and Vicinal Au(111) Surfaces**
METE E., DANIŞMAN M. F.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.119, no.7, pp.3596-3604, 2015 (SCI-Expanded)
- XIV. **Investigation of the deposition and thermal behavior of striped phases of unsymmetric disulfide self-assembled monolayers on Au(111): The case of 11-hydroxyundecyl decyl disulfide**
ALBAYRAK E., KARABUĞA Ş., Bracco G., DANIŞMAN M. F.
JOURNAL OF CHEMICAL PHYSICS, vol.142, no.1, 2015 (SCI-Expanded)
- XV. **11-Hydroxyundecyl octadecyl disulfide self-assembled monolayers on Au(111)**
ALBAYRAK E., KARABUĞA Ş., Bracco G., DANIŞMAN M. F.
APPLIED SURFACE SCIENCE, vol.311, pp.643-647, 2014 (SCI-Expanded)
- XVI. **Helium diffraction study of pentacene films on Au(111)**
ALBAYRAK E., DANIŞMAN M. F.
APPLIED SURFACE SCIENCE, vol.295, pp.54-58, 2014 (SCI-Expanded)
- XVII. **Helium Diffraction Study of Low Coverage Phases of Mercaptoundecanol and Octadecanethiol Self-Assembled Monolayers on Au(111) Prepared by Supersonic Molecular Beam Deposition**
ALBAYRAK E., DANIŞMAN M. F.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.117, no.19, pp.9801-9811, 2013 (SCI-Expanded)
- XVIII. **Helium atom diffraction study of low coverage phases of decanethiol self-assembled monolayers prepared by supersonic molecular beam deposition**
Albayrak E., DUMAN S., Bracco G., DANIŞMAN M. F.
APPLIED SURFACE SCIENCE, vol.268, pp.98-102, 2013 (SCI-Expanded)
- XIX. **Influence of Steps on the Tilting and Adsorption Dynamics of Ordered Pentacene Films on Vicinal Ag(111) Surfaces**
METE E., Demiroglu I., Albayrak E., Bracco G., Elliahtoglu S., DANIŞMAN M. F.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.116, no.36, pp.19429-19433, 2012 (SCI-Expanded)
- XX. **Simultaneous detection of surface coverage and structure of krypton films on gold by helium atom diffraction and quartz crystal microbalance techniques**
DANIŞMAN M. F., Ozkan B.
REVIEW OF SCIENTIFIC INSTRUMENTS, vol.82, no.11, 2011 (SCI-Expanded)
- XXI. **Pentacene Multilayers on Ag(111) Surface**
METE E., Demiroglu I., DANIŞMAN M. F., Elliahtoglu S.
JOURNAL OF PHYSICAL CHEMISTRY C, vol.114, no.6, pp.2724-2729, 2010 (SCI-Expanded)
- XXII. **Simultaneous detection of surface coverage by helium atom diffraction and quartz crystal microbalance techniques**
DANIŞMAN M. F., Scoles G.
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY, vol.237, 2009 (SCI-Expanded)
- XXIII. **Organosilane self-assembled monolayer growth from supercritical carbon dioxide in microstructured optical fiber capillary arrays**
Danisman M. F., Calkins J. A., Sazio P. J. A., Allara D. L., Badding J. V.
LANGMUIR, vol.24, no.7, pp.3636-3644, 2008 (SCI-Expanded)
- XXIV. **Growth of pentacene on Ag(111) surface: A NEXAFS study**
Pedio M., Doyle B., Mahne N., Giglia A., Borgatti F., Nannarone S., Henze S. K. M., Temirov R., Tautz F. S., Casalis L., et al.
APPLIED SURFACE SCIENCE, vol.254, no.1, pp.103-107, 2007 (SCI-Expanded)
- XXV. **Structure of a CH₃S monolayer on Au(111) solved by the interplay between molecular dynamics calculations and diffraction measurements**
Mazzarello R., Cossaro A., Verdini A., Rousseau R., Casalis L., Danisman M. F., Floreano L., Scandolo S., Morgante A.,

- Scoles G.
PHYSICAL REVIEW LETTERS, vol.98, no.1, 2007 (SCI-Expanded)
- XXVI. **Supersonic molecular beam deposition of pentacene thin films on two Ag(111) surfaces with different step densities**
Danisman M. F., Casalis L., Scoles G.
PHYSICAL REVIEW B, vol.72, no.8, 2005 (SCI-Expanded)
- XXVII. **Bonding self-assembled, compact organophosphonate monolayers to the native oxide surface of silicon**
Hanson E., Schwartz J., Nickel B., Koch N., Danisman M. F.
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.125, no.51, pp.16074-16080, 2003 (SCI-Expanded)
- XXVIII. **Transition structures and energetics for the Cope rearrangement of cis-1,2-divinylcyclopropane: an ab initio study**
Zora M., Ozkan I., Danisman M.
JOURNAL OF MOLECULAR STRUCTURE-THEOCHEM, vol.636, pp.9-13, 2003 (SCI-Expanded)
- XXIX. **Hyperthermal molecular beam deposition of highly ordered organic thin films**
Casalis L., Danisman M. F., Nickel B., Bracco G., Toccoli T., Iannotta S., Scoles G.
PHYSICAL REVIEW LETTERS, vol.90, no.20, 2003 (SCI-Expanded)
- XXX. **Structural investigation of monolayers prepared by deposition of (CH₃S)₂ on the (111) face of single-crystal gold**
Danisman M. F., Casalis L., Bracco G., Scoles G.
JOURNAL OF PHYSICAL CHEMISTRY B, vol.106, no.45, pp.11771-11777, 2002 (SCI-Expanded)

Refereed Congress / Symposium Publications in Proceedings

- I. **Perfluoropentacene Films on Metal Surfaces**
DANIŞMAN M. F., Yavuz A.
NanoTr-13, 22 - 25 October 2017
- II. **Construction of a New Multi-technique Helium Diffraction System**
DANIŞMAN M. F., Yavuz A., Bracco G.
NanoTr-13, 22 - 25 October 2017
- III. **Au(111) yüzeyler üzerinde alkantiyol filmlerin van der Waals DFT metoduyla incelenmesi**
METE E., Yortanlı M., DANIŞMAN M. F.
3. Hesaplamalı Kimya KONGresi, Turkey, 12 - 14 October 2017
- IV. **Au(111) yüzeyler üzerinde PFP filmlerin karakterizasyonu**
DANIŞMAN M. F., Yavuz A., Bracco G.
29. Ulusal Kimya Kongresi, Turkey, 10 - 14 September 2017
- V. **Carboranethiol self-assembled monolayers on gold surfaces**
Sohrabnia N., Yavuz A., YILMAZ A., DANIŞMAN M. F.
253rd National Meeting of the American-Chemical-Society (ACS) on Advanced Materials, Technologies, Systems, and Processes, San-Francisco, Costa Rica, 2 - 06 April 2017, vol.253
- VI. **Perfluoropentacene films on gold surfaces grown by supersonic molecular beam deposition**
Yavuz A., Sohrabnia N., Bracco G., DANIŞMAN M. F.
253rd National Meeting of the American-Chemical-Society (ACS) on Advanced Materials, Technologies, Systems, and Processes, San-Francisco, Costa Rica, 2 - 06 April 2017, vol.253
- VII. **ORGANİK İNCE FİLMLEİN DENEYSEL VE HESAPLAMALI YÖNTEMLER İLE İNCELENMESİ**
DANIŞMAN M. F.
TÜBA-GEBİP YILLIK DEĞERLENDİRME TOPLANTISI VE AKADEMİ KONFERANSI, Turkey, 14 - 16 October 2016
- VIII. **CHEMICAL DETECTION WITH FIBER LOOP RING DOWN SPECTROSCOPY**
Yolalmaz A., Hanifehpour F., ESENTÜRK O., DANIŞMAN M. F.
European Network on New Sensing Technologies for Air-Pollution Control and Environmental Sustainability Sixth

Scientific Meeting, 5 - 07 October 2016

- IX. **Fiber loop ring down spectrometer optical based sensor for trace chemical detection**
Yolalmaz A., ESENTÜRK O., DANIŞMAN M. F., Hanifehpour F.
14th IUVESTA School, 11 - 15 April 2016
- X. **FPF filmlerin karakterizasyonu için yeni bir helyum kırınım sisteminin kurulumu**
YAVUZ A., DANIŞMAN M. F.
IV. YUKPOP International Vacuum Workshop, 28 - 30 March 2016
- XI. **A Density Functional Theory Investigation of Carboranethiol Self Assembled Monolayers on Au 111**
YILMAZ A., METE E., DANIŞMAN M. F.
American Chemical Society National Meeting, 13 - 17 March 2016
- XII. **Theoretical investigation of carboranethiols on gold 111 surface**
METE E., GÜLDEN G., YILMAZ A., DANIŞMAN M. F.
European Conference on Surface Science, 30 August - 04 September 2015
- XIII. **Experimental investigation of Gold 111 surface modified with Carboranethiol self assembled monolayer**
YAVUZ A., SOHRABNIA N., YILMAZ A., DANIŞMAN M. F.
9th International Physics Conference of the Balkan Physical Union, 24 - 27 August 2015
- XIV. **Theoretical Investigation of Gold 111 Surfaces Modified with Carboranethiol Self Assembled Monolayers**
METE E., YAVUZ A., ASHIROV T., GUNEY G., YILMAZ A., DANIŞMAN M. F.
9th International Physics Conference of the Balkan Physical Union, 24 - 27 August 2015
- XV. **Thermal behavior of an unsymmetric disulfide self assembled on Au 111 11 hydroxyundecyl decyl disulfide**
GIANANGELO B., ALBAYRAK E., KARABUĞA Ş., DANIŞMAN M. F.
14th European Conference on Organized Films, 29 June - 02 July 2015
- XVI. **Theoretical Investigation of Gold 111 Surface Modified with Carboranethiol Self Assembled Monolayers**
YILMAZ A., DANIŞMAN M. F., METE E., Adem Y., Timur A., Gülden G.
9th International Physics Conference of the Balkan Physical Union, 21 - 24 April 2015
- XVII. **Experimental Investigation of Gold 111 Surface Modified with Carboranethiol Self Assembled Monolayers**
YILMAZ A., DANIŞMAN M. F., Nima S., Adem Y.
9th International Physics Conference of the Balkan Physical Union, 21 - 24 April 2015
- XVIII. **Pentacene thin films on flat and vicinal Au 111 surfaces**
DANIŞMAN M. F., METE E., ALBAYRAK E.
American Physical Society National Meeting, 1 - 06 March 2015

Supported Projects

DANIŞMAN M. F., GÜN S., Project Supported by Higher Education Institutions, ALTIN YÜZEY ÜZERİNDE KARBOKSİLİK ASİT İLE FONKSİYONLANDIRILMIŞ KARBORANTİYOL FİLMERİNİN KARAKTERİZASYON ÇALIŞMALARI, 2018 - 2019
Yılmaz A., Esentürk O., Çırpan A., Danışman M. F., TÜBİTAK Project, Metal İyonları Katkılanmış Çeşitli Borat Bileşiklerinin Luminesan Özelliklerinin Ve Metal Yüzeyler Üzerinde Oluşturulmuş Karborantiol Filmlerin İncelenmesi, 2014 - 2019
DANIŞMAN M. F., Project Supported by Higher Education Institutions, FEN BİLİMLERİ ENSTİTÜSÜ/LİSANSÜSTÜ TEZ PROJESİ, 2014 - 2016
DANIŞMAN M. F., CENGİZ B., Project Supported by Higher Education Institutions, ESER MALZEME TAYİNİ İÇİN FİBER RİNG-DOWN SEKTROSKOPİ SİSTEMİ GELİŞTİRİLMESİ, 2013 - 2013
DANIŞMAN M. F., TÜBİTAK Project, Muhtemel Aşağıdan Yukarı Kalıp Ajanı Uygulamaları İçin Asimetrik Disülfid Kendiliğinden Düzenlenmiş Tek Tabakaların KDT Araştırılması, 2010 - 2013
DANIŞMAN M. F., TÜBİTAK Project, Ag 111 ve Au 111 Yüzeyleri Üzerinde Süpersonik Moleküler Işın Tekniğiyle Üretilen

Pentacene İnce Filimlerin Kuvars Kristal Mikro Terazı ve Helyum Atomu Difraksiyonu Teknikleri ile İncelenmesi ve Optimizasyonu, 2007 - 2011

Scientific Refereeing

SURFACE & COATINGS TECHNOLOGY, SCI Journal, January 2018

Metrics

Publication: 49

Citation (WoS): 911

Citation (Scopus): 826

H-Index (WoS): 11

H-Index (Scopus): 11

Awards

Danışman M. F., Bilim Akademisi Genç Bilim İnsanları Ödül Programı, Bilim Akademisi, April 2018

Danışman M. F., ODTÜ PROF. DR. MUSTAFA N. PARLAR EĞİTİM VE ARAŞTIRMA VAKFI ARAŞTIRMA TEŞVİK ÖDÜLÜ, Odtü Prof. Dr. Mustafa N. Parlar Eğitim Ve Araştırma Vakfı, December 2017

Danışman M. F., Türkiye Bilimler Akademisi Üstün Başarılı Genç Bilim İnsanı Ödülleri Programı , Türkiye Bilimler Akademisi, June 2014

Non Academic Experience

The Pennsylvania State University