

Yrd. Doç. Dr. ERSİN EMRE ÖREN

ADRES: [Biyonanotasarım Laboratuvarı](#)
Biyomedikal Mühendisliği Bölümü
Malzeme Bilimi ve Nanoteknoloji Mühendisliği Bölümü
TOBB Ekonomi ve Teknoloji Üniversitesi
Söğütözü Cad. No: 43,
Söğütözü, Ankara, 06560 TURKEY

TELEFON: +90 312 292 4514

E-POSTA: eeoren@etu.edu.tr **WWW:** <http://eeoren.etu.edu.tr/>
eeoren@gmail.com



EĞİTİM

Doktora, Metalurji ve Malzeme Mühendisliği Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE, Mezuniyet: Ocak 2003.
Danışman: Prof. Dr. Tarık Ömer Oğurtanı.

Y. Lisans, Metalurji ve Malzeme Mühendisliği Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE, Mezuniyet: Eylül 2000.
Danışman: Prof. Dr. Tarık Ömer Oğurtanı.

Lisans Ana Dal, Metalurji ve Malzeme Mühendisliği Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE, Mezuniyet: Haziran 1997.

Lisans Yan Dal, Katı Hal Fizigi, Fizik Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE, Mezuniyet: Haziran 1997.

İDARİ GÖREVLER

2012 – **Bölüm Başkan Yardımcısı**, Biyomedikal Mühendisliği Bölümü, TOBB Ekonomi ve Teknoloji Mühendisliği, Ankara, TÜRKİYE

2012 – **Fakülte Yönetim Kurulu**, Mühendislik Fakültesi, TOBB Ekonomi ve Teknoloji Mühendisliği, Ankara, TÜRKİYE

AKADEMİK KARIYER

2012 – **Afiliye Yardımcı Doçent**, Malzeme Bilimi ve Nanoteknoloji Mühendisliği Bölümü, TOBB Ekonomi ve Teknoloji Mühendisliği, Ankara, TÜRKİYE

2011 – **Yardımcı Doçent**, Biyomedikal Mühendisliği Bölümü, TOBB Ekonomi ve Teknoloji Mühendisliği, Ankara, TÜRKİYE

2011 – 2011 **Ziyaretçi Bilim Adamı**, Elektrik Mühendisliği Bölümü, University of Washington, Seattle, WA, ABD

2008 – 2010 **Okutman**, Genetically Engineered Materials Science and Engineering Center, GEMSEC, NSF/UW-MRSEC Malzeme Bilimi ve Mühendisliği Bölümü, University of Washington, Seattle, WA, ABD

2006 – 2007 **Doktora Sonrası Araştırmacı**, Hesaplamalı Biyoloji Gurubu, Mikrobiyoloji Bölümü, and Genetically Engineered Materials Science and Engineering Center, GEMSEC, NSF/UW-MRSEC Materials Science and Engineering Department, University of Washington, Seattle, WA, ABD

2003 – 2005 **Doktora Sonrası Araştırmacı** Malzeme Bilimi ve Mühendisliği Bölümü, University of Washington, Seattle, WA, ABD

1997 – 2003 **Araştırma Görevlisi**, Metalurji ve Malzeme Mühendisliği Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE

2001 – 2001 **Ziyaretçi Bilim Adamı**, Max-Planck-Institut für Metallforschung, Seestrasse 92, D-70174, Stuttgart, ALMANYA

1996 – 1997 **Öğrenci Asistan**, Metalurji ve Malzeme Mühendisliği Bölümü, Orta Doğu Teknik Üniversitesi, Ankara, TÜRKİYE

ÖDÜLLER ve BURSLAR

- **2012 Yılı TÜBA GEBİP Üstün Başarılı Genç Bilim İnsanı Ödülü**, Türkiye Bilimler Akademisi.
- **2012 Yılı Araştırma Teşvik Ödülü**, Prof. Dr. Mustafa N. Parlar Eğitim ve Araştırma Vakfı, ODTÜ, Ankara.
- **Doktora Sonrası Araştırmacı Bursu**, National Science Foundation (NSF) MRSEC Program through the University of Washington Genetically Engineered Materials Science and Engineering Center (DMR 0520567).
- **Doktora Sonrası Araştırmacı Bursu**, Army Research Office (ARO) DURINT program through the University of Washington (DAAD19-01-1-04999).
- **TCBG Computational Biophysics Workshop** (20/107 aday seçilmiştir). An NIH-sponsored Workshop on Theoretical and Computational Biophysics, University of Illinois at Urbana Champaign, Chicago, IL, USA, June 9-13, 2005.
- **TÜBİTAK-NATO-A2 Araştırma Bursu** (Max-Planck-Institut für Metallforschung, Stuttgart, ALMANYA, 2001).
- **Fulbright Konferans Seyahat Bursu** (MRS 2001 Sonbahar Toplantısı, Boston, MA, A.B.D.).
- **ODTÜ 2000 Yılı Yılın Tezi Ödülü**, Prof. Dr. Mustafa N. Parlar Eğitim ve Araştırma Vakfı, ODTÜ, Ankara.

PROJELER

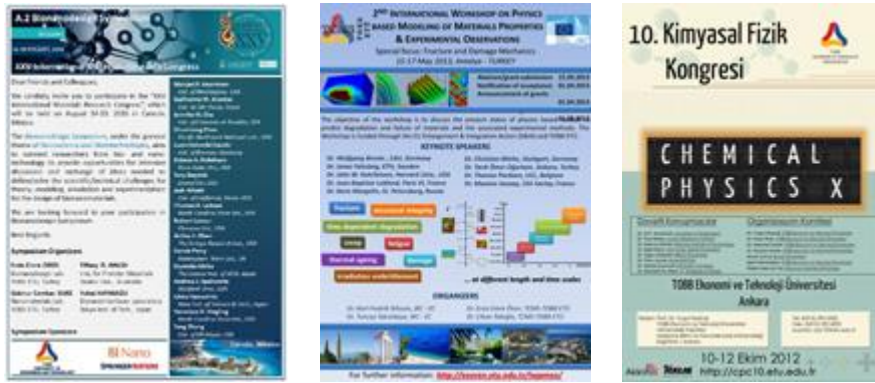
- **Yönetici**, 01.05.2016-Devam Ediyor (300600 TL)
TÜBİTAK 1001 Araştırma Projesi No. 315M222: Kristalli katı yüzeylerde kuantum nokta oluşumlarının elektrik ve gerinim alanları altında modellenmesi.
- **Araştırmacı**, 01.01.2017-Devam Ediyor
TÜBİTAK 1005 Ulusal Yeni Fikirler ve Ürünler Araştırma Projesi: Grafen – Bakır Lamine Yapılı Isı Dağıtıcı Plaka Geliştirilmesi. (Yürütücü: Göknur Cambaz Büke).
- **Araştırmacı**, 01.06.2014-Devam Ediyor (226926 TL)
TÜBİTAK 1001 Araştırma Projesi No. 213M481: Mikro/nano elektronik uygulamalarda kullanım potansiyeline sahip dik hizalanmış karbon nanoyapıların sentezi. (Yürütücü: Göknur Cambaz Büke).
- **Yönetici**, 01.11.2011-01.11.2013 (138000 TL)
TÜBİTAK 1001 Araştırma Projesi No. 111T343: Epitaksiyel gerginliğe ve yön bağımlı özelliklere sahip ince filmlerde film/altlık arayüzey denge(sizlik) durumlarının ve kuantum noktalarının oluşumunun bilgisayar modellemesi.
- **Araştırmacı**, 09.01.2007-09.01.2009 (134400 TL)
TÜBİTAK 1001 Araştırma Projesi No. 104M399: Mikroelektronik devrelerde metalik iletişim bağlarının elektrogöç sonucu tahribatının bilgisayar modellemesi: Özellikle difüzyon anisotropisinin ve termal streslerin yüzey morfolojisine ve katot tahribatına etkileri. (Yürütücü: Tarık Ömer Oğurtanı).
- **Araştırmacı**, 07.01.2005-07.01.2007 (120900 TL)
TÜBİTAK 1001 Araştırma Projesi No. 107M011: İnce film metalik iletişim bağlarında oluşan elektrogöç güdümündeki iç makro boşlukların ve yüzey tane oluklarının hidrostatik ve çift akslı gerilimler altındaki dinamiklerinin matematik modellemesi ve bilgisayar benzetimi. (Yürütücü: Tarık Ömer Oğurtanı).

PATENT

1. Method and system for designing polypeptides and polypeptide-like polymers with specific chemical and physical characteristics. A.B.D. Patent başvuru numarası: 20100070200, 2008.

KONFERANS / ÇALIŞTAY ORGANİZASYONLARI

- XXV International Materials Research Congress: Bionanodesign ([IMRC 2016](#)), 14-19 Ağustos, 2016, Cancun/Meksika.
- 2nd International Workshop on Physics Based Modeling of Material Properties & Experimental Observations ([IWPME0 II](#)), 15-17 Mayıs, 2013, Antalya/Türkiye.
- 10th Chemical Physics Congress ([CPC X](#)), 10-12 Ekim, 2012, Ankara/Türkiye.
- [Molecular Biomimetics & Bionanotechnology-IV](#): Protein-based Materials & Systems for Technology & Medicine, 24-28 Eylül, 2009, San Juan Islands, WA, USA.
- [Molecular Biomimetics & Bionanotechnology-III](#): Protein-based Materials & Systems for Technology & Medicine, 10-12 Eylül, 2008, San Juan Islands, WA, USA.
- [Molecular Biomimetics & Bionanotechnology-II](#): Protein-based Materials & Systems for Technology & Medicine, 4-7 Eylül, 2007, San Juan Islands, WA, USA.
- [Molecular Biomimetics-I](#): Protein-based Materials for Technology & Medicine, 6-8 Eylül, 2006, San Juan Islands, WA, USA.



BİLİMSEL YAYINLAR

Nisan 2017 itibarıyla: 49 tane: 35 makale, 7 basılı bildiri, 5 konferans özeti ve 2 tez;

[Science Citation Index:](#)

Toplam atf sayısı: 1057,

h-index: 18

[Google Scholars:](#)

Toplam atf sayısı: 1508,

h-index: 20

h-10 index: 22



Uluslararası Hakemli Dergilerde Yayınlanan Makaleler

1. E. Kayali, E. Mercan, E.E. Oren & G.C. Buke “Few layer graphene synthesis via SiC decomposition at low temperature and low vacuum” *Journal of Physics D: Applied Physics*, **49**, 165301 (2016). [doi:10.1088/0022-3727/49/16/165301](https://doi.org/10.1088/0022-3727/49/16/165301)
2. H. Yazici, M.B. O'Neill, T. Kacar, B.R. Wilson, **E.E. Oren**, M. Sarikaya & C. Tamerler “Engineered chimeric peptides as antimicrobial surface coating agents towards infection-free implants” *ACS Applied Materials & Interfaces*, **8** (8), 5070-81 (2016). [doi:10.1021/acsami.5b03697](https://doi.org/10.1021/acsami.5b03697)
3. H. Erdogan, E. Babur, M. Yilmaz, E. Candas, M. Goerdesel, Y. Dede, **E.E. Oren**, G. Demirel, M. Ozturk & G. Demirel “Morphological versatility in self-assembly of Val-Ala and Ala-Val dipeptides” *Langmuir*, **31**, 7337-7345 (2015). [doi:10.1021/acs.langmuir.5b01406](https://doi.org/10.1021/acs.langmuir.5b01406)

4. T.O. Ogurtani, A. Celik & **E.E. Oren**. “Stranski-Krastanow islanding initiated on the stochastic rough surfaces of the epitaxially strained thin films” *Journal of Applied Physics*, **115**, 224307 (2014). [doi:10.1063/1.4883295](https://doi.org/10.1063/1.4883295)
5. H. Yazici, H. Fong, B. Wilson, **E.E. Oren**, F.A. Amos, H. Zhang, J.S. Evans, M.L. Snead, M. Sarikaya & C. Tamerler. “Biological response on a titanium implant-grade surface functionalized with modular peptides” *Acta Biomaterialia*, **9**, 5341-5352 (2013). [doi:10.1016/j.actbio.2012.11.004](https://doi.org/10.1016/j.actbio.2012.11.004)
6. M. Gungormus, **E.E. Oren**, J.A. Horst, H. Fong, M. Hnilova, M.J. Somerman, M.L. Snead, R. Samudrala, C. Tamerler & M. Sarikaya. “Cementomimetics-constructing a cementum-like biomineralized microlayer via amelogenin-derived peptides” *International Journal of Oral Science*, **4**, 69-77 (2012). (Cover) [doi:10.1038/ijos.2012.40](https://doi.org/10.1038/ijos.2012.40)
7. S. Cetinel, S. Dincer, A. Cebeci, **E.E. Oren**, J.D. Whitaker, D.T. Schwartz, N.G. Karaguler, M. Sarikaya & C. Tamerler. “Peptides to bridge biological-platinum materials interface” *Bioinspired, Biomimetic and Nanobiomaterials*, **1**, 143-153 (2012). [doi:10.1680/bbn.12.00008](https://doi.org/10.1680/bbn.12.00008)
8. O. Akyildiz, **E.E. Oren** & T.O. Ogurtani. “Grain boundary grooving in bi-crystal thin films induced by surface drift-diffusion driven by capillary forces and applied uniaxial-tensile stresses” *Philosophical Magazine*, **92**, 804-829 (2012). [doi:10.1080/14786435.2011.634850](https://doi.org/10.1080/14786435.2011.634850)
9. M. Hnilova, C.R. So, **E.E. Oren**, B.R. Wilson, T. Kacar, C. Tamerler & M. Sarikaya. “Peptide-directed co-assembly of nanoprobe on multilateral patterned solid surfaces” *Soft Matter*, **8**, 4327-4334 (2012). [doi:10.1039/C2SM06426J](https://doi.org/10.1039/C2SM06426J)
10. M. Hnilova, D. Khatayevich, A. Carlson, **E.E. Oren**, C. Gresswell, S. Zheng, F. Ohuchi, M. Sarikaya, C. Tamerler. “Single-Step Fabrication of Patterned Gold Film Array by an Engineered Multi-Functional Peptide” *Journal of Colloid and Interface Science*, **365**, 97-102 (2012). [doi:10.1016/j.jcis.2011.09.006](https://doi.org/10.1016/j.jcis.2011.09.006)
11. O. Akyildiz, **E.E. Oren**, T.O. Ogurtani. “Mesoscopic nonequilibrium thermodynamics treatment of the grain boundary thermal grooving induced by the anisotropic surface drift diffusion” *Journal of Materials Science*, **46**, 6054-6064 (2011). [doi:10.1007/s10853-011-5567-8](https://doi.org/10.1007/s10853-011-5567-8)
12. **E.E. Oren**, R. Notman, I.W. Kim, J.S. Evans, T.R. Walsh, R. Samudrala, C. Tamerler, M. Sarikaya. “Probing the molecular mechanisms of quartz-binding peptides” *Langmuir*, **26**, 11003-11009 (2010). [doi:10.1021/la100049s](https://doi.org/10.1021/la100049s)
13. T.O. Ogurtani, A. Celik, **E.E. Oren**. “Generic role of the anisotropic surface free energy on the morphological evolution in a strained-heteroepitaxial solid droplet on rigid substrates” *Journal of Applied Physics*, **108**, 103516 (2010). [doi:10.1063/1.3512970](https://doi.org/10.1063/1.3512970)
14. R. Notman, **E.E. Oren**, C. Tamerler, M. Sarikaya, R. Samudrala, T. R. Walsh. “Solution studies of strong and weak quartz-binding peptides using replica exchange molecular dynamics” *Biomacromolecules*, **11**, 3266-3274 (2010). [doi:10.1021/bm100646z](https://doi.org/10.1021/bm100646z)
15. T.O. Ogurtani, A. Celik, **E.E. Oren**. “Morphological evolution in a strained-heteroepitaxial solid droplet on a rigid substrate: Dynamical simulations” *Journal of Applied Physics*, **108**, 063527 (2010). [doi:10.1063/1.3483937](https://doi.org/10.1063/1.3483937)
Editörler tarafından [Virtual Journal of Nanoscale Science & Technology September 27, 2010](https://doi.org/10.1002/vjs.201009027) dergisinde ayrıca yayınlanmak üzere seçilmiştir.
16. A. Dezieck, O. Acton, K. Leong, **E.E. Oren**, H. Ma, C. Tamerler, M. Sarikaya, A.K.-Y. Jen. “Threshold voltage control in organic thin film transistors with dielectric layer modified by a genetically engineered polypeptide” *Applied Physics Letters*, **97**, 013307 (2010). [doi:10.1063/1.3459978](https://doi.org/10.1063/1.3459978)
17. C. Tamerler, D. Khatayevich, M. Gungormus, T. Kacar, **E.E. Oren**, M. Hnilova, M. Sarikaya. “Molecular biomimetics: Gepi-based biological routes to technology” *Biopolymers: Peptide Science*, **94**, 78-94 (2010). [doi:10.1002/bip.21368](https://doi.org/10.1002/bip.21368)
18. C.R. So, J.L. Kulp, **E.E. Oren**, H. Zareie, C. Tamerler, J.S. Evans, M. Sarikaya. “Molecular recognition and supramolecular self-assembly of a genetically engineered gold binding peptide on Au{111}” *ACS Nano*, **3**, 1525-1531 (2009). [doi:10.1021/nn900171s](https://doi.org/10.1021/nn900171s)

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20. M. Hnilova, **E.E. Oren**, U.O.S. Seker, B. Wilson, S. Collino, J.S. Evans, C. Tamerler, M. Sarikaya. "Effect of molecular conformations on adsorption behavior of gold binding peptides" *Langmuir*, **24**, 12440-12445 (2008). [doi:10.1021/la801468c](https://doi.org/10.1021/la801468c)
21. T.O. Ogurtani, O. Akyildiz, **E.E. Oren**. "Morphological evolution of tilted grain-boundary thermal grooving by surface diffusion in bicrystal thin solid films having strong anisotropic surface Gibbs free energy" *Journal of Applied Physics*, **104**, 013518 (2008). [doi:10.1063/1.2952520](https://doi.org/10.1063/1.2952520)
22. J.S. Evans, R. Samudrala, T. Walsh, **E.E. Oren**, C. Tamerler. "The molecular design of inorganic-binding polypeptides" *MRS Bulletin*, **33**, (5) 514-518 (2008). (Cover designed by EEO) [doi:10.1557/mrs2008.103](https://doi.org/10.1557/mrs2008.103)
23. **E.E. Oren**, C. Tamerler, D. Sahin, M. Hnilova, U.O.S. Seker, M. Sarikaya, R. Samudrala. "A novel knowledge-based approach to design inorganic-binding peptides" *Bioinformatics*, **23**, (21), 2816-2822 (2007). [doi:10.1093/bioinformatics/btm436](https://doi.org/10.1093/bioinformatics/btm436)
24. T.O. Ogurtani, A. Celik, **E.E. Oren**. "Morphological evolution of edge-hillocks on single crystal films having anisotropic drift-diffusion under the capillary and electromigration forces" *Thin Solid Films*, **515** (5), 2974-2983 (2007). [doi:10.1016/j.tsf.2006.08.020](https://doi.org/10.1016/j.tsf.2006.08.020)
25. U.O.S. Seker, B. Wilson, S. Dincer, I.W. Kim, **E.E. Oren**, J.S. Evans, C. Tamerler, M. Sarikaya. "Adsorption behavior of linear and cyclic genetically engineered platinum binding peptides" *Langmuir*, **23**, 7895-7900 (2007). [doi:10.1021/la700446g](https://doi.org/10.1021/la700446g)
26. C. Tamerler, M. Duman, **E.E. Oren**, M. Gungormus, X. Xiong, B.A. Parviz, M. Sarikaya. "Materials specificity and directed assembly of a gold binding peptide" *Small*, **2** (11), 1372-1378 (2006). [doi:10.1002/smll.200600070](https://doi.org/10.1002/smll.200600070)
27. C. Tamerler, **E.E. Oren**, M. Duman, E. Venkatasubramanian, M. Sarikaya. "Adsorption kinetics of an engineered gold binding peptide by surface plasmon resonance spectroscopy and a quartz crystal microbalance" *Langmuir*, **22**, 7712-7718 (2006). [doi:10.1021/la0606897](https://doi.org/10.1021/la0606897)
28. **E.E. Oren**, C. Tamerler, M. Sarikaya. "Metal recognition of septapeptides via polypod molecular architecture" *Nano Letters*, **5** (3), 415-419 (2005). [doi:10.1021/nl048425x](https://doi.org/10.1021/nl048425x)
29. T.O. Ogurtani, **E.E. Oren**. "Irreversible thermodynamics of triple junctions during the intergranular void motion under the electromigration forces" *International Journal of Solids and Structures*, **42** (13), 3918-3952 (2005). [doi:10.1016/j.ijstr.2004.11.013](https://doi.org/10.1016/j.ijstr.2004.11.013)
30. T.O. Ogurtani, **E.E. Oren**. "Electromigration-induced void grain-boundary interactions: the mean time to failure for copper interconnects with bamboo and near-bamboo structures" *Journal of Applied Physics*, **96** (12), 7246-7253 (2004). [doi:10.1063/1.1815389](https://doi.org/10.1063/1.1815389)
31. A. Kalkanli, **E.E. Oren**. "Effect of spraying rate on microstructure of spray deposited Al-Fe-V-Si alloy" *Powder Metallurgy*, **46** (4), 324-328 (2003). [doi:10.1179/003258903225008571](https://doi.org/10.1179/003258903225008571)
32. T.O. Ogurtani, M.R. Gungor, **E.E. Oren**. "Simulation of dislocation damping spectra associated with the collective motion of point defects and kink chain subjected to the bulk segregation" *Journal of Applied Physics*, **91** (4), 1860-1870 (2002). [doi:10.1063/1.1429769](https://doi.org/10.1063/1.1429769)
33. T.O. Ogurtani, **E.E. Oren**. "Computer simulation of void growth dynamics under the action of electromigration and capillary forces in narrow thin interconnects" *Journal of Applied Physics*, **90** (3), 1564-1572 (2001). [doi:10.1063/1.1382835](https://doi.org/10.1063/1.1382835)
34. **E.E. Oren**, A.C. Tas. "Hydrothermal synthesis of pure & Dy doped BaTiO₃ powders at 90 °C" *Metallurgical and Materials Transactions B*, **30**, 1089-93 (1999). [doi:10.1007/s11663-999-0115-5](https://doi.org/10.1007/s11663-999-0115-5)
35. **E.E. Oren**, E. Taspinar, A.C. Tas. "Preparation of lead zirconate (PbZrO₃) by homogeneous precipitation and calcinations" *Journal of American Ceramic Society*, **80** (10), 2714-2716 (1997). [doi:10.1111/j.1151-2916.1997.tb03181.x](https://doi.org/10.1111/j.1151-2916.1997.tb03181.x)

Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

36. R. Samudrala, **E.E. Oren**, C. Cheng, J. Horst, B. Bernard, M. Gungormus, M. Hnilova, H. Fong, C. Tamerler, M. Sarikaya. “Knowledge-based design of inorganic-binding peptides” [*The FNANO08 Conference Proceedings*, 75-80 \(2008\).](#)
37. T.O. Ogurtani, M.R. Gungor, **E.E. Oren**. “Interactive computer simulation of dislocation damping spectra associated with the coupled motion of geometric kinks and point defects subjected to the bulk segregation phenomenon” [*Solid State Phenomena*, **89**, 141-190 \(2003\).](#)
38. **E.E. Oren**, T.O. Ogurtani. “Void intergranular motion under the action of electromigration forces in thin film interconnects with bamboo structure” [*MRS Symp. Proc.*, **695**, 209-215 \(2002\).](#)
39. **E.E. Oren**, T.O. Ogurtani. “The effect of initial void configuration on the morphological evolution under the action of normalized electron wind forces” [*MRS Symp. Proc.*, **714E**, L9.2.1-L9.2.6 \(2001\).](#)
40. T.O. Ogurtani, **E.E. Oren**, “A computer simulation of void dynamics under the action of electromigration and capillary forces in narrow thin interconnects” [*Advanced Metallization Conference*, **16**, 483-487 \(2000\).](#)
41. **E.E. Oren**, A.C. Tas. “Hydrothermal synthesis of pure and Dy:BaTiO₃ powders at 90°C, the sintering behavior and microstructures of Dy:BaTiO₃ powders heated on Ti-strips” [*Dielectric Ceramic Materials: Ceramic Transactions \(Wiley-Am. Ceram. Soc.\)*, **100**, 95-104 \(1999\).](#)
42. **E.E. Oren** & A.C. Tas. “Preparation of piezoelectric lead zirconate titanate (PbZr_{0.52}Ti_{0.48}O₃) powders by homogeneous precipitation and calcinations” [*Dielectric Ceramic Materials: Ceramic Transactions \(Wiley-Am. Ceram. Soc.\)*, **100**, 105-114 \(1999\).](#)

Konferans Özetleri (SCI tarafından taranan)

43. M. Gungormus, H. Fong, **E.E. Oren**, C. Tamerler, M. Somerman, M. Sarikaya. “Cementum-analogs using hydroxyapatite binding peptides: Toward periodontal regeneration” [*Abstracts of Papers of the American Chemical Society*, **237**, 25-NANO \(2009\).](#)
44. R. Samudrala, **E.E. Oren**, C. Tamerler, M. Sarikaya. “In silico design of solid binding peptides as molecular building blocks in technology and medicine” [*Abstracts of Papers of the American Chemical Society*, **237**, 32-NANO \(2009\).](#)
45. T. Kacar, J. Ray, M. Gungormus, **E.E. Oren**, C. Tamerler, M. Sarikaya. “Quartz binding peptides as molecular linkers for co-assembling nanoentities on multifunctional micropatterned substrates” [*Abstracts of Papers of the American Chemical Society*, **237**, 13-NANO \(2009\).](#)
46. D. Sahin, H. Kahraman, **E.E. Oren**, C. Tamerler, M. Sarikaya. “Peptide (GEPI)-protein molecular hybrid construction for materials and medical applications – ‘GEPI-based tag application’” [*FEBS Journal*, **275**, 371-371 \(2008\).](#)
47. A. Sert, N.G. Karaguler, D. Sahin, **E.E. Oren**, M. Sarikaya, C. Tamerler. “Construction and expression of a bi-functional peptide by using genetic engineering methods for bionanotechnologies” [*FEBS Journal*, **275**, 372-372 \(2008\).](#)

Tezler

48. **E.E. Oren**. “Computer simulation of electromigration induced void – grain boundary interactions with a special reference to the prediction of cathode failure times in bamboo structures” [*Ph. D. Thesis, Middle East Technical University, January 2003.*](#)
49. **E.E. Oren**. “Electromigration – induced transgranular void motion in interconnects with special reference to computer simulation” *M. Sc. Thesis, Middle East Technical University, Sept. 2000.*

KONFERANS SUNUMLARI

(16 davetli, 39 sunu, 20 poster bildirisi)

Davetli Konuşmalar

1. **E. E. Oren** “Bionanodesign: Computational Methods in Bionanotechnology” *Department of Chemical Engineering, Shriram Center for Bioengineering & Chemical Engineering, Stanford University, Palo Alto, CA, USA, 6 Mart, 2017.*
2. **E.E. Oren** “Computational Methods in Bionanotechnology” *Department of Biomedical Engineering, ODTÜ, Ankara, Türkiye, 10 Kasım, 2016.*
3. **E.E. Oren** “Bionanodesign” *2nd Turkish-Mexican Workshop on Science and Technology, CONACYT, Meksiko, Meksika, 11-12 Haziran, 2015.*
4. **E.E. Oren** “Quantum dot formation models: Topologic instabilities in epitaxially strained solids” *20th Condensed Matter Physics Conference, Hacettepe Üniversitesi, Ankara, Türkiye, 26 Aralık, 2014.*
5. **E.E. Oren** “Computational Methods in Bionanotechnology” *Department of Chemistry, Gazi Üniversitesi., Ankara, Türkiye, 12 Kasım, 2014.*
6. **E.E. Oren** “Computational Methods in Nanobiotechnology” *Ulusal Nanoteknoloji Enstitüsü, BİLKENT, Ankara, Türkiye, 27 Aralık, 2013.*
7. **E.E. Oren** “Computational Methods in Nanobiotechnology” *Uygulamalı Matematik Enstitüsü, ODTÜ, Ankara, Türkiye, 30 Nisan, 2013.*
8. **E.E. Oren** ““Homology Modeling in Membrane Proteins” *Molecular Dynamics Workshop II, Ankara, Türkiye, 13 Eylül, 2011.*
9. **E.E. Oren** “Morphological Evolution of Surfaces and Interfaces: Electromigration - Grain Grooving - Thin Film Growth” *Seminar: Nanoscale Devices, Seattle, WA, ABD, 5 Temmuz 2011.*
10. **E.E. Oren** “Bioinformatics design of solid binding peptides for bionanotechnology” *Biomaterials Seminar, Univ. of Washington, Seattle, WA, ABD, 11 Mart 2010.*
11. **E.E. Oren** and R. Samudrala “Knowledge-based peptide design” *Molecular Biomimetics & Bionanotechnology-IV: Protein-based Materials & Systems for Technology & Medicine, Friday Harbor, WA, ABD, 24-28 Ağustos 2009.*
12. **E.E. Oren**, R. Samudrala, C. Tamerler and M. Sarikaya “Knowledge-based design of GEPIs as molecular building blocks in bionanotechnology” *SimBioMa Workshop: Challenges in modeling the interface between biomolecules and inorganic surfaces, Mainz, Almanya, 18-20 Mart 2009.*
13. **E.E. Oren**, “Design of inorganic binding peptides for nanotechnology applications” *Nanoteknoloji Araştırma Merkezi, Bilkent Univ., Davetli Sunu, Ankara, Türkiye, 18/07/2008.*
14. **E.E. Oren**, “Modeling biomolecules on inorganic surfaces” *Centre for Scientific Computing, Department of Chemistry, University of Warwick, Coventry, İngiltere, 9-15 Temmuz 2008.*
15. **E.E. Oren**, “Knowledge based design of inorganic binding peptides” *5th Annual Conference on Foundations of Nanoscience: Self-assembled architectures & devices, Symposium: Self-assembly of peptide/protein nanostructures, Snowbird, UT, ABD, 18-21 Nisan 2008.*
16. T.O. Ogurtani, M.R. Gungor & **E.E. Oren**, “Computer simulation of internal friction spectrum utilizing an interactive kink chain mobile foreign interstitials model” *Second International School on Mechanical Spectroscopy – 2, Kraków-Krynica, Polanya, 3-8 Aralık 2000.*

Konferans Sunumları

17. N.S. Aydın & **E.E. Oren** “Theory and Simulation of Quantum Dot Formation in Heteroepitaxially Grown Thin Films under External Forces” *TMS 2017, Symposium: Computational Thermodynamics and Kinetics, San Diego, CA, USA, February 26-March 02, 2017.*

18. N.S. Aydın & **E.E. Oren** “Design of Heteroepitaxially Grown Quantum Dots Under External Force Fields” TMS 2017, Symposium: Computational Approaches to Materials for Energy Applications, San Diego, CA, USA, February 26-March 02, 2017.
19. N.S. Aydın, M.Y. Sengul & **E.E. Oren** “Design of quantum dots via adjusting the material and process properties in heteroepitaxial growth” IMRC 2016, Symposium A2: Bionanodesign, Cancun, Mexico, August 14-19, 2016.
20. G. Gokce, E. Candas, N.S. Aydın & **E.E. Oren** “Forecasting antiviral drug resistance development among influenza viruses” IMRC 2016, Symposium A2: Bionanodesign, Cancun, Mexico, August 14-19, 2016.
21. H.T. Yener, M. Sahin & **E.E. Oren** “Controlled drug release systems from bulk-degrading polymers” IMRC 2016, Symposium A2: Bionanodesign, Cancun, Mexico, August 14-19, 2016.
22. B. Demir, J. Qi, S. Gokce, **E.E. Oren** & M.P. Anantram “Environmental effects on DNA backbone and conductance” IMRC 2016, Symposium A2: Bionanodesign, Cancun, Mexico, August 14-19, 2016.
23. E. Candas, G. Gokce, B. Demir, G. Demirel & **E.E. Oren** “Modeling of morphological versatility in self-assembly of Val-Ala and Ala-Val dipeptides” *MRS 2015 Fall Meeting, Symposium WW: Modeling and theory-driven design of soft materials*, Boston, MA, ABD, 29 Kasım - 4 Aralık, 2015.
24. E. Kayali, E. Mercan, M. Sahin, H.T. Yener, N.S. Aydın, G.K. Dogu, **E.E. Oren** & G.C. Buke “Investigation of catalyst effect on the formation of 1D carbon nanostructures via low temperature vacuum decomposition of SiC” *MRS 2015 Fall Meeting, Symposium Q: Nano carbon materials - 1D to 3D*, Boston, MA, ABD, 29 Kasım - 4 Aralık, 2015.
25. M.Y. Sengul, S. Haddadian, A. Celik, T. Ogurtani & **E.E. Oren** “Simulation of strained-heteroepitaxial quantum dot formation under the effect of anisotropic surface properties” *MRS 2014 Spring Meeting" Symposium WW: Materials by Design-Merging Advanced In-Situ Characterization with Predictive Simulation*, San Francisco, CA, ABD, 21-25 Nisan 2014.
26. T.O. Ogurtani, A. Celik, O. Akyildiz & **E.E. Oren** “Nonequilibrium thermodynamics of surfaces and interfaces in solids with applications” IWPME0 II: International Workshop on the Physics based Modeling of Material Properties & Experimental Observations, Antalya, Türkiye, 15-17 Mayıs 2013.
27. T.O. Ogurtani, L.N. Brush & **E.E. Oren** “Effects of electromigration stressing on the topological instabilities of the Stranski-Krastanow islanding” *MRS 2012 Spring Meeting" Symposium XX: Computational Materials Design in Heterogeneous Systems*, San Francisco, CA, ABD, 9-13 Nisan 2012.
28. J. Qi, S. Edirisinghe, **E.E. Oren** & M.P. Anantram “Charge Transport in Biomolecules” *IWPSD 2011: XVI International Workshop on the Physics of Semiconductor Devices*, Kanpur, India, December 19-22, 2011.
29. **E.E. Oren**, R. Samudrala, J.S. Evans, Malcolm L. Snead, Martha J. Somerman, C. Tamerler & M. Sarikaya “Computational biomimetic design of materials specific peptides” *TMS 2010 139th Annual Meeting & Exhibition" Bio-inspired Materials Design and Processing I: Macromolecular Concepts and Applications*, Seattle, WA, ABD, 14-18 Şubat 2010.
30. C. So, M. Noyes, **E.E. Oren**, H. Meskine, H. Yazici, P. Mulheren, C. Tamerler, J.S. Evans & M. Sarikaya “Binding and Assembly of Material-Specific Peptides on Solid Substrates by Atomic Force Microscopy” *TMS 2010 139th Annual Meeting & Exhibition" Biological Materials Science: Computational Materials Science*, Seattle, WA, ABD, 14-18 Şubat 2010.
31. Y. Hayamizu, M. Hnilova, **E.E. Oren**, C. Zhong, C. Tamerler, M. Rolandi & M. Sarikaya “Electronic Transport through Solid-Binding Peptides” *TMS 2010 139th Annual Meeting & Exhibition" Biological Materials Science: Bio-inspired Materials Design and Processing I: Macromolecular Concepts and Applications*, Seattle, WA, ABD, 14-18 Şubat 2010.

32. T. Kacar, M. Hnilova, B. Taktak, Y. Hayamizu, **E.E. Oren**, J. Evans, C. Tamerler & M. Sarikaya "Bridging Inorganic Nanoparticles and Biomolecules via Genetically Engineered Peptides" *TMS 2010 139th Annual Meeting & Exhibition" Biological Materials Science: Bio-inspired Materials Design and Processing I: Macromolecular Concepts and Applications*, Seattle, WA, ABD, 14-18 Şubat 2010.
33. **E.E. Oren**, R. Samudrala, C. Tamerler & M. Sarikaya. "In silico design of solid binding peptides as molecular building blocks in technology and medicine" *237th ACS National Meeting Division of Medicinal Chemistry*, Salt Lake City, UT, ABD, 22-26 Mart 2009.
34. T. Kacar, J. Ray, M. Gungormus, **E.E. Oren**, C. Tamerler & M. Sarikaya. "Quartz binding peptides as molecular linkers for co-assembling nanoentities on multifunctional micropatterned substrates" *237th ACS National Meeting Division of Medicinal Chemistry*, Salt Lake City, UT, ABD, 22-26 Mart 2009.
35. M. Gungormus, H. Fong, **E.E. Oren**, C. Tamerler, M. Somerman & M. Sarikaya. "Cementum-analogs using hydroxyapatite binding peptides: Toward periodontal regeneration" *237th ACS National Meeting Division of Medicinal Chemistry*, Oral Presentation, Salt Lake City, UT, ABD, 22-26 Mart 2009.
36. C. Tamerler, R. Samudrala, **E.E. Oren**, J.S. Evans, B. Traxler & M Sarikaya. "Molecular Biomimetics – Coupling Peptides and Nanoparticles for Nanotechnology and Medicine" *6th Annual Conference on Foundations of Nanoscience: Biomedical Nanotechnology*, Snowbird, UT, ABD, 20-24 Nisan 2009.
37. **E.E. Oren**, R. Samudrala, J.S. Evans, C. Tamerler & M. Sarikaya "Bioinformatics-based design of multifunctional solid-binding peptides" *MRS 2008 Fall Meeting, "Symposium UU: Molecular Biomimetics and Materials Design*, Boston, MA, ABD, 1-2 Aralık 2009.
38. C. So, J. Kulp, H. Meshine, P. Mulheran, **E.E. Oren**, C. Tamerler, J.S. Evans & M. Sarikaya. "Binding, Molecular Recognition, and Supramolecular Assembly of Solid Binding Peptides on Solid Substrates: A Multi-Scale Perspective" *MRS 2009 Fall Meeting, Symposium UU: Biomimetics and Materials Design*, Boston, MA, ABD, 30 Kasım - 2 Aralık, 2009.
39. T. Kacar, M. Gungormus, Y. Hayamizu, **E.E. Oren**, J.S. Evans, C. Tamerler & M. Sarikaya. "Nanoparticle Assembly via Bifunctional Genetically Engineered Peptides for Inorganics" *MRS 2009 Fall Meeting, Symposium TT: Nanobiotechnology and Nanobiophotonics-Opportunities and Challenges*, Boston, MA, ABD, 30 Kasım - 2 Aralık 2009.
40. **E.E. Oren**, R. Samudrala, J.A. Horst, M. Gungormus, H. Fong, Hnilova, C. Tamerler & M. Sarikaya. "In silico prediction of functional binding domains of natural proteins" *MRS 2008 Spring Meeting, Symposium DD: From biological materials to biomimetic material synthesis*, San Francisco, CA, ABD, 24-28 Mart 2008.
41. T. Kacar, M. Gungormus, M. Hnilova, **E.E. Oren**, C. Tamerler & M. Sarikaya. "Optically Active Metal Nanoparticle and Quantum Dot Co-Immobilization Using Genetically Engineered Peptides for Inorganics" *MRS 2008 Fall Meeting, Symposium FF: Nanofunctional Materials, Structures, and Devices for Biomedical Applications*, Boston, MA, ABD, 30 Kasım - 5 Aralık 2008.
42. **E.E. Oren**, M. Gungormus & R. Samudrala, J.A. Horst, H. Fong, M. Hnilova, J. Evans, M. Snead, M. Somerman, C. Tamerler, M. Sarikaya. "A knowledge-based quest for amelogenin function in enamel biomineralization" *MRS 2008 Fall Meeting, "Symposium Y: Biomineral Interfaces – From Experiment to Theory* Boston, MA, ABD, 1-5 Aralık 2008.
43. **E.E. Oren**, R. Samudrala, D. Sahin, T. Kacar, M. Hnilova, C. Tamerler & M. Sarikaya. "Design of multifunctional binding peptides" *MRS 2007 Fall Meeting, Symposium NN: Protein and peptide engineering for therapeutic and functional materials*, Boston, MA, ABD, 26-30 Kasım 2007.
44. J.S. Evans, J.L. Kulp, I.W. Kim, S. Collino, **E.E. Oren**, H. Zareie, C. So, C. Tamerler & M. Sarikaya. "Guiding theory: Materials genomics and lessons learned from polypeptide "interactions" with natural and artificial inorganic solids" *Centre Europeen de Calcul Atomique*

et Moleculaire (CECAM) Workshop on "Modeling the interaction of biomolecules with inorganic surfaces, Lyon, Fransa, 25-27 Temmuz 2007.

45. **E.E. Oren**, R. Samudrala, D. Sahin, M. Hnilova, M. Gungormus, U.O.S. Seker, S. Cetinel, A. Cebeci, N.G. Karaguler, C. Tamerler & M. Sarikaya. "A novel informatics-based approach for the design of inorganic binding peptides" *MRS 2007 Spring Meeting, "Symposium T: The nature of design-utilizing biology's portfolio*, San Francisco, CA, ABD, 10-13 Nisan 2007.
46. J.S. Evans. W.K. II, J.L. Kulp, S. Collino, K. Delak, U.O.S. Seker, C. So, **E.E. Oren**, C. Tamerler & M. Sarikaya. "Molecular Structures of Engineered Inorganic-Binding Peptides" *MRS 2007 Fall Meeting, Symposium NN: Protein and Peptide Engineering for Therapeutic and Functional Materials*, Boston, MA, ABD, 26-28 Kasım 2007.
47. C. So, **E.E. Oren**, U. Seker, B.R. Wilson, J. Kulp, C. Tamerler, J.S. Evans & M. Sarikaya. "Supramolecular Self-Assembly of a Metal-binding Polypeptide and Implications for Molecular Recognition" *MRS 2007 Fall Meeting, Symposium NN: Protein and Peptide Engineering for Therapeutic and Functional Materials*, Boston, MA, ABD, 26-28 Kasım 2007.
48. M. Sarikaya, C. Tamerler, M. Duman, E. Venkatasubramanian, S. Dincer, **E. E. Oren**, H. Dai, C. Nguyen, D. T. Schwartz and F. Baneyx. "Recognition and binding of engineered polypeptides on functional inorganics" *MRS 2004 Spring Meeting, Symposium Z: Hybrid Biological-Inorganic Interfaces*, San Francisco, CA, ABD, 12-16 Nisan, 2004.
49. M. Sarikaya, C. Tamerler, **E. E. Oren**, M. H. Zaraie, H. Fong and F. Baneyx. "Molecular biomimetics: Biomaterialization and assembly using engineered polypeptides" *8th International Conference on the Chemistry and Biology of Mineralized Tissues*, Alberta, Kanada, 17-22 Ekim, 2004.
50. E. Venkatasubramanian, M. Duman, T. Kacar, D. Heidel, **E.E. Oren**, C. Tamerler & M. Sarikaya. "Binding and Specificity of Engineered Polypeptides on Functional Inorganics" *MRS 2004 Fall Meeting, Symposium Z: Bio-Inspired and Bio-Derived Materials and Processes*, Boston, MA, ABD, November 29 Kasım - 2 Aralık 2004.
51. U.O.S. Seker, **E.E. Oren**, C. Selcuki, C. Tamerler & M. Sarikaya. "Molecular Modeling of Engineered Polypeptides" *MRS 2004 Fall Meeting, Symposium Z: Bio-Inspired and Bio-Derived Materials and Processes*, Boston, MA, ABD, 29 Kasım - 2 Aralık 2004.
52. **E.E. Oren** & T.O. Ogurtani. "Mathematical modeling of the void evolution dynamics under the action of electromigration and capillary forces in thin interconnects" *International Conference on Mathematical Modeling and Scientific Computing, Middle East Technical University and Selçuk University*, Ankara ve Konya, Türkiye, 2-6 Nisan 2001.
53. **E.E. Oren** & T.O. Ogurtani. "Void Intergranular Motion under the Action of Electromigration Forces in Thin Film Interconnects with Bamboo Structure" *MRS 2001 Fall Meeting, Symposium L: Thin Films, Stresses and Mechanical Properties IX*, Boston, MA, ABD, 26-30 Kasım 2001.
54. **E.E. Oren** & A.C. Tas, "Hydrothermal Synthesis of Pure and Dy:BaTiO₃ Powders at 90°C, Their Sintering Behavior, and Microstructures of Dy:BaTiO₃ Powders Heated on Ti-Strips" *Journal of American Ceramic Society, 100th Annual Meeting & Exposition*, Cincinnati, OH, ABD, 3-6 Mayıs 1998.
55. **E.E. Oren** & A.C. Tas, "Preparation of Piezoelectric Lead Zirconate Titanate (PbZr_{0.52}Ti_{0.48}O₃) Powders by Homogeneous Precipitation and Calcination" *Journal of American Ceramic Society, 100th Annual Meeting & Exposition*, Cincinnati, OH, ABD, 3-6 Mayıs 1998.

Poster Bildirileri

56. M. Sahin, H.T. Yener, N.S. Aydin, E. Kayali, E. Mercan, G.C. Buke & **E.E. Oren** "Modeling of morphological evolution of catalyst for the synthesis of 1D carbon nanostructures on SiC" *MRS 2015 Fall Meeting, Symposium TT: Topology in materials science - biological and functional nanomaterials, metrology and modeling*, Boston, MA, ABD, 29 Kasım - 4 Aralık 2015.

57. A. Celik, M.Y. Sengul, S. Haddadian, T.O. Ogurtani & **E.E. Oren** “Quantum dot formation via the topological instabilities of the epitaxially strained thin films” *MRS 2014 Fall Meeting, Symposium NN: Mathematical and Computational Aspects of Materials Science*, Boston, MA, ABD, 30 Kasım - 5 Aralık 2014.
58. M.Y. Sengul, S. Haddadian, A. Celik, T.O. Ogurtani & **E.E. Oren** “The effect of anisotropic surface properties on the formation of strained-heteroepitaxial quantum dots” *Chemical Physics Congress X*, Poster Presentation, Ankara, Türkiye, 10-12 Ekim 2012.
59. T. Kacar, M. Gungormus, M. Hnilova, C. So, **E.E. Oren**, C. Tamerler & M Sarikaya. “Optoelectronic properties of ZnO nanoparticles deposition on porous silicon” *6th Annual Conference on Foundations of Nanoscience: Nanoplasmonics & Nanophotovoltaics*, Snowbird, UT, ABD, 20-24 Nisan 2009.
60. M. Hnilova, B. Taktak, **E.E. Oren**, C. So, T. Kacar, C. Tamerler & M. Sarikaya. "Targeted immobilization of nanostructures and biomolecules through peptide-based biolinkers towards nanosensing platforms" *MRS 2008 Fall Meeting, Symposium FF: Nanofunctional Materials, Structures, and Devices for Biomedical Applications*, Boston, MA, ABD, 30 Kasım-2 Aralık 2008.
61. M. Gungormus, S. Cetinel, **E.E. Oren**, B.R. Wilson, C. So, M. Somerman, C. Tamerler & M. Sarikaya. "Surface Bio-Engineering Using Peptides for Enhanced Cell Adhesion and Proliferation" *MRS 2008 Spring Meeting, Symposium DD: From Biological Materials to Biomimetic Material Synthesis*, San Francisco, CA, ABD, 25-28 Mart 2008.
62. M. Hnilova, **E.E. Oren**, C. So, T. Kacar, B.A. Parviz, C. Tamerler & M. Sarikaya. "Peptide-Directed Immobilization of Optical Active Nanostructures and Fluorophores towards Nanosensing Platforms" *MRS 2008 Spring Meeting, Symposium DD: From Biological Materials to Biomimetic Material Synthesis*, San Francisco, CA, ABD, 25-28 Mart 2008.
63. T. Kacar, M. Gungormus, **E.E. Oren**, M. Hnilova, C. Tamerler & M. Sarikaya. "LSPR Based Nanophotonic Detection of Biomolecules through Genetically Engineered Peptides and Molecular Constructs" *MRS 2008 Spring Meeting, Symposium EE: Responsive Biomaterials for Biomedical Applications*, Poster Presentation, San Francisco, CA, ABD, 25-28 Mart 2008.
64. C. So, **E.E. Oren**, J. Kulp, H. Zereie, C. Tamerler & J. Evans. “Molecular Basis for Patterned Supramolecular Self Assembly of a Genetically Engineered Gold Binding Protein on Au {111}” *4th Annual Conference on Foundations of Nanoscience: Self-assembled architectures and devices, Symposium: Self-assembly of Peptide-Protein Nanostructures*, Snowbird, UT, ABD, 18-21 Nisan 2007.
65. M. Hnilova, **E.E. Oren**, U.O.S. Seker, B. Wilson, X. Xiorong, C. Tamerler & M. Sarikaya. "Selection of Specific Gold-Binding Peptides via Cell Surface Display" *MRS 2007 Spring Meeting, Symposium T: The Nature of Design--Utilizing Biology's Portfolio*, San Francisco, CA, ABD, 10-13 Nisan, 2007.
66. **E.E. Oren**, R. Samudrala, D. Sahin, M. Hnilova, U.O.S. Seker, M. Gungormus, S. Cetinel, N.G. Karaguler, C. Tamerler & M. Sarikaya. “*In silico* design of inorganic binding peptides” *Molecular Biomimetics and Bionanotechnology Workshop*, İstanbul, Türkiye, 21-23 Mayıs 2007.
67. **E.E. Oren**, R. Samudrala, D. Sahin, M. Hnilova, C. Tamerler & M. Sarikaya. “*In silico* design of inorganic binding peptides” *4th Annual Conference on Foundations of Nanoscience: Self-assembled architectures and devices, Symposium: Self-assembly of Peptide-Protein Nanostructures*, Snowbird, UT, ABD, 18-21 Nisan 2007.
68. **E.E. Oren**, C. Tamerler, M. Sarikaya & R. Samudrala. “A novel informatics-based approach for the design of inorganic binding peptides” *Molecular Biomimetics I: Protein Based Materials for Technology and Medicine*, San Juan Island, WA, ABD, 6-8 Eylül 2006.
69. **E.E. Oren**, C. Tamerler & M. Sarikaya. “Metal recognition of GEPI’s via polypod molecular architecture” *Molecular Biomimetics I: Protein Based Materials for Technology and Medicine*, San Juan Island, WA, ABD, 6-8 Eylül 2006.

70. **E.E. Oren**, R. Samudrala, D. Sahin, S. Dincer, C. Tamerler & M. Sarikaya. “*De novo* design of inorganic binding polypeptides” *MRS 2005 Fall Meeting, Symposium LL: Combinatorial methods and informatics in materials science*, Boston, MA, ABD, 28 Kasım - 1 Aralık 2005.
71. **E.E. Oren**, R. Samudrala, D. Sahin, N. Gul-Karaguler, C. Tamerler & M. Sarikaya. “Bioinformatics-based *de novo* design of biocombinatorially pregenerated quartz binding peptides” *Nanoscale Science and Technology Workshop*, Seattle, WA, ABD, 20-21 Eylül 2005.
72. **E.E. Oren**, R. Samudrala, D. Sahin, C. Tamerler & M. Sarikaya. “Structure prediction of biocombinatorially generated quartz binding peptides” *Nanoscale Science and Technology Workshop*, Snowbird, WA, ABD, 20-21 Eylül 2005.
73. **E.E. Oren**, R. Samudrala, D. Sahin, S. Dincer, C. Tamerler & M. Sarikaya. “Similarity analysis of polypeptides generated via directed evolution” *2nd Annual Conference on Foundations of Nanoscience: Self-assembled architectures and devices, Symposium: Principles and Theory of Self-Assembly*, Snowbird, UT, ABD, 24-28 Nisan 2005.
74. **E.E. Oren**, D. Sahin, C. Tamerler & M. Sarikaya. “Similarity analysis of genetically engineered polypeptides for inorganics” *MRS 2004 Fall Meeting, Symposium Z: Bio-inspired and bio-derived materials and processes*, Boston, MA, ABD, 29 Kasım - 3 Aralık, 2004.
75. **E.E. Oren** & T. O. Ogurtani. “Interactive computer simulation of dislocation damping spectra associated with the coupled motion of geometric kinks and point defects subjected to the bulk segregation” *ICIFUAS 13*, Bilbao, İspanya, 8-12 Temmuz 2002.

EĞİTİM FAALİYETLERİ

Dersler

- BMM 101 Biyomedikal Mühendisliğine Giriş
- BMM 205/205L Malzeme Biliminin Temelleri
- BMM 305 Biyomalzemeler
- BMM 310/311L Biyomedikal Mühendisliğinde Sayısal Yöntemler
- MAK 217/217L Malzeme Bilimi
- MAK 536 Nanomalzemeler ve Nanoteknoloji
- MBN 305 Faz Diyagramları ve Dönüşümleri
- MBN 310 Malzeme Bilimi ve Nanoteknolojide Bilgisayar Uygulamaları
- MNT 521 Biyo ve Nanoteknolojide Bilgisayar Modellemesi

Davetli Dersler

- MSE 298 Introduction to Modern Materials
- MSE 555 Biomimetics: Bioinspired Design and Processing of Materials
- CONJ 548 Modelling Proteins and Proteomes
- BioE/ChemE 511 Biomaterials Seminar
- Phys576/Chem560 Frontiers in Nanotechnology

Bilgisayar Laboratuvarı Geliştirilen Dersler

- Met.E. 502 Diffusion Phenomenon
- Met.E. 503/504 Mathematical Methods in Materials Science I/II
- Met.E. 528 Computer Applications in Material Science

Organize Edilen Seminerler

- [GEMSEC Student Research Discussion Seminar Series](#)

Sosyal Aktiviteler

- [UW Engineering Discovery Days](#), 23-24 Nisan, 2010
- [Paws-On Science: Huskies Weekend at Pacific Science Center](#), 9-11 Nisan, 2010.
- [Pacific Science Center Discovery Corps Visits GEMSEC](#), 2 Mart, 2008.
- [Strange Matter Exhibition at Pacific Science Center](#), 2 Şubat - 4 Mayıs, 2008.

PROFESYONEL GÖREVLER

- Üye, Materials Research Society (MRS)
- Üye, American Chemical Society (ACS)
- Üye, The Minerals Metals & Materials Society (TMS)
- Hakemlik Yaptığı Bilimsel Dergiler: *Journal of Applied Physics; Nano Letters; Langmuir; Journal of Materials Research; Journal of Materials Science; ChemPhysChem; Small; MRS Proceedings.*

İLGİ ALANLARI

• Malzeme Bilimi

✓ *Teorik ve Hesaplamalı Malzeme Bilimleri*

Yüzey ve arayüzeylerin tersinmez termodinamiği; Continuum mechanics; Sınırlı ve Sonlu elemanlar yöntemleri; Elektrogöç; İç sürtünme; Tozların sinterlenme davranışları; İnce film büyüme modları (Volmer-Weber, Frank-van der Merwe, Stranski-Krastanov); Nano ölçekli yapıların (kuantum noktalar) epitaksiyel yöntemlerle üretimi; Mikro ve nano ölçekli malzemelerin mekanik davranışları; inorganik bağlayıcı peptidlerin modellenmesi ve tasarımı.

✓ *Yüksek Teknoloji Seramikleri*

Seramik tozlar (*i.e. PbZrO₃, PbZr_{0.52}Ti_{0.48}O₃, BaTiO₃*) ve Seramik toz sentezleme teknikleri: Homojen çöktürme, hidrotermal sentezleme.

✓ *Biyobenzeşim*

Protein-inorganic interactions and their binding kinetic analysis (QCM, SPR); Peptide directed assembly and material synthesis.

• Fizik

✓ *Katı Hal Fiziği*

Malzemeleri, elektrik, manyetik ve optik özellikleri.

✓ *Astronomi*

Amatör gözlemler.

• Biyoloji/Biyoteknoloji/Biyomedikal Mühendisliği

✓ *Moleküler Biyoloji*

Protein yapı tahmini: Homoloji ve şablon tabanlı modelleme; Atomistik moleküler dinamik modelleme, *Ab initio* kuantum mekanik yöntemler, protein-protein etkileşimleri (şekil tamamlayıcılık ve elektrostatik).

✓ *Biyoenformatik*

Protein / Peptid bilgi (dizisi) tabanlı tasarım ve karakterizasyonu.

✓ *Biyomalzemeler*

Biyomineral oluşumu, Biyouyumluluk.

• Bilgisayar Bilgisi

✓ *İşletim Sistemleri*

Unix / Linux / Windows 9X/NT/2000/XP/Vista/7.

✓ *Programlama Dilleri*

Pascal / Fortran / C ve C++ / Perl / Python, MathCad, MatLab.

✓ *Yazılımlar*

HyperChem, NAMD, Tinker, Modeller, Hex, Raptor, YASARA, VMD, Jmol, PyMOL, RasMol, moleküler modelleme ve görselleştirme sistemleri; Diamond, CrystalMaker ve Crystal studio kristalografi programları.

✓ *WEB İdaresi*

<http://eeoren.etu.edu.tr>

<http://bmm.etu.edu.tr>

<http://www.turkishpm.org/ipmc2017/>

<http://depts.washington.edu/gemsec/>

<http://depts.washinton.edu/bionano/>

<http://www.csl.mete.metu.edu/>

Atıf Raporu

Yazar: (oren ee) (Ersin Emre Oren)

Kapsam: Tüm yıllar

Veri Tabanları: SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH

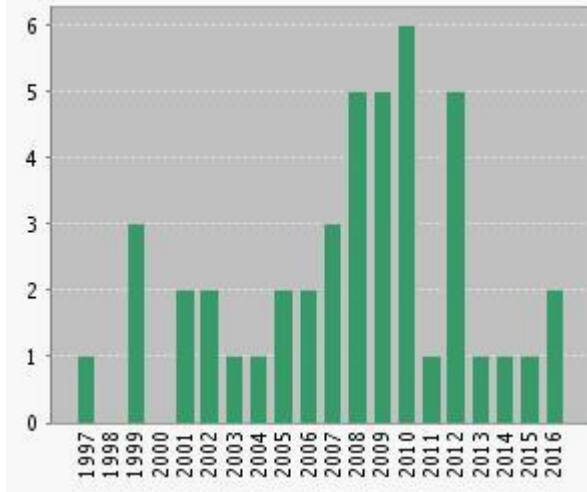
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Toplam Atıf Sayısı: 1057

Yıllık Ortalama Atıf Sayısı: 24.58

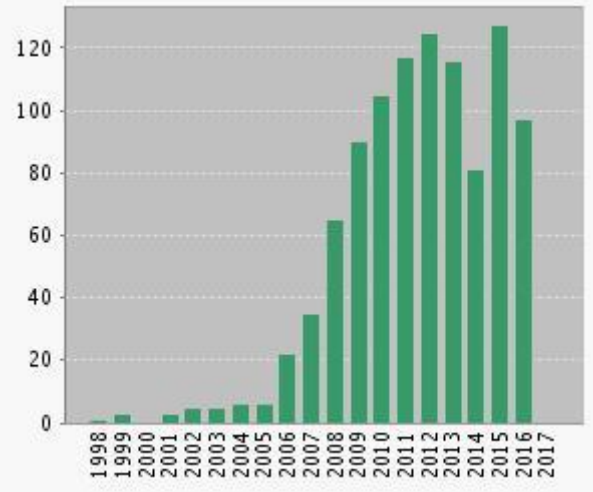
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Yıllara Göre Yayın Sayıları



Yıllar

Yıllara Göre Atıf Sayıları



Yıllar

Yayın İstatistikleri

Dergi Adı	Yayın Sayısı	Taranan Index	Etki Faktörü
Advanced Materials	1	SCI	18.960
Nano Letters	1	SCI	13.779
ACS Nano	1	SCI	13.334
Small	1	SCI	8.320
ACS Applied Materials & Interfaces	1	SCI	7.145
MRS Bulletin	1	SCI	6.060
ACTA Biomaterialia	1	SCI	6.008
Bioinformatics	1	SCI	5.766
Biomacromolecules	1	SCI	5.583
Langmuir	5	SCI	3.993
Soft Matter	1	SCI	3.798
Journal of Colloid and Interface Science	1	SCI	3.368
Applied Physics Letters	1	SCI	3.302
Journal of Physics D: Applied Physics	1	SCI	2.721
Journal of the American Ceramic Society	1	SCI	2.610
International Journal of Oral Science	1	SCI	2.531
Biopolymers (Peptide Science)	1	SCI	2.385
Journal of Materials Science	1	SCI	2.371
International Journal of Solids and Structures	1	SCI	2.214
Journal of Applied Physics	7	SCI	2.183
Philosophical Magazine	1	SCI	1.825
Thin Solid Films	1	SCI	1.759
Metallurgical and Materials Transactions B	1	SCI	1.461
Bioinspired, Biomimetic and Nanobiomaterials	1	SCI	0.978
Powder Metallurgy	1	SCI	0.772