

EK-4

ÖZGEÇMİŞ (ÖRNEK FORM)

- Adı Soyadı: Ayça Yalçın Özkumur**
- Doğum Tarihi: 01.02.1982**
- Unvanı: Yardımcı Doçent**
- Öğrenim Durumu:**

Derece	Alan	Üniversite	Yıl
Lisans	Elektrik-Elektronik Müh.	Bilkent Üniversitesi	2003
Y. Lisans	Fotonik / Işık bilimi	Boston University	2005
Doktora	Elektrik ve Bilgisayar Müh.	Boston University	2009

5. Akademik Unvanlar:

Yardımcı Doçentlik Tarihi : 01.09.2013

Doçentlik Tarihi :

Profesörlük Tarihi :

6. Yönetilen Yüksek Lisans ve Doktora Tezleri

6.1. Yüksek Lisans Tezleri

6.2. Doktora Tezleri

7. Yayınlar

7.1. Uluslararası hakemli dergilerde yayınlanan makaleler (SCI & SSCI & Arts and Humanities)

O. Avcı, N. Lortlar Ünlü, A. Yalçın Özkumur, M. S. Ünlü, "Interferometric Reflectance Imaging Sensor (IRIS)-A Platform Technology for Multiplexed Diagnostics and Digital Detection," Sensors, 15(7), 17649-17665 (2015)

A. Yalçın Özkumur, B. A. Goods, J. C. Love, "Development of a High-Throughput Functional Screen Using Nanowell-Assisted Cell Patterning," Small, doi: 10.1002/sml.201500674 (2015)

S. Ahn, C. Huang, E. Ozkumur, X. Zhang, J. Chinnala, A. Yalçın, S. Bandyopadhyay, S. Russek, M. S. Ünlü, C. DeLisi, and R. Irani, "TATA binding proteins can recognize nontraditional DNA sequences" Biophysical Journal, Vol. 103, pp. 1510-1517 (2012).

C. Pereira, A. Yalçın, M. Cretich, M. Chiari, M. S. Ünlü, D. Nunes, and D. A. Bergstein, "Synergetic Chemiluminescence and Label-Free Dual Detection for Developing a Hepatitis Protein Array" Journal of Immunological Methods, Vol. 371, No. 1-2, pp. 159-164 (2011).

P. S. Spuhler, J. Knezevic, A. Yalçın, Q. Bao, E. Pringsheim, P. Dröge, U. Rant, and M. S. Ünlü, "Platform for in situ real-time measurement of protein-induced conformational changes of DNA" Proc. of the National Academy of Science, 4 (2010).

E. Ozkumur, S. Ahn, A. Yalçın, C. Lopez, E. Cevik, R. Irani, C. DeLisi, M. Chiari, and M. S. Ünlü, "Label-free microarray imaging for direct detection of DNA hybridization and single-nucleotide mismatches" Biosensors and Bioelectronics, 25, 7, 15 (2010).

E. Ozkumur, C. Lopez, A. Yalçın, J. H. Connor, M. Chiari, M. S. Unlu, "Spectral reflectance imaging for a multiplexed, high-throughput, label-free, and dynamic biosensing platform" IEEE JSTQE, 16, 3 (2010).

E. Ozkumur, A. Yalçın, M. Cretich, C. Lopez, D. Bergstein, B.B. Goldberg, M. Chiari, M.S. Unlu, "Quantification of DNA and protein adsorption by optical phase shift" *Biosensors and Bioelectronics*, 25 (2009).

A. Yalçın, F. Damin, E. Ozkumur, G. di Carlo, B. B. Goldberg, M. Chiari, and M. S. Unlu, "Direct Observation of Conformation of a Polymeric Coating with Implications in Microarray Applications" *Analytical Chemistry*, Vol. 81, pp. 625-630 (2009).

M. Dogan, A. Yalçın, S. Jain, M. B. Goldberg, A. K. Swan, M. S. Unlu, and B. B. Goldberg, "Spectral Self-Interference Fluorescence Microscopy for Subcellular Imaging" *IEEE Journal of Selected Topics in Quantum Electronics*, 14, 1 (2008).

D. A. Bergstein, I. E. Ozkumur, A. C. Wu, A. Yalçın, J. Needham, R. Irani, J. Gershoni, B.B. Goldberg, C. DeLisi, M. F. Ruane, and M. S. Unlu, "Resonant Cavity Imaging: A Means Toward High-Throughput Label-Free Protein Detection" *IEEE Journal of Selected Topics in Quantum Electronics*, 14, 1 (2008).

A. Yalçın, K. C. Papat, J. C. Aldridge, T. A. Desai, J. Hryniewicz, N. Chbouki, B. E. Little, O. King, V. Van, S. Chu, D. Gill, M. F. Anthes-Washburn, M. S. Unlu, and B. B. Goldberg, "Optical Sensing of Biomolecules Using Microring Resonators" *IEEE Journal of Selected Topics in Quantum Electronics*, 12, 1, 148-155 (2006).

7.2. Uluslararası diğer hakemli dergilerde yayınlanan makaleler

7.3. Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (*Proceedings*) basılan bildiriler

U. Aygun, O. Avcı, E. Ç. Seymour, D.D. Sevenler, H. Urey, M. S. Ünlü, A. Yalçın Ozkumur, "Low-cost flatbed scanner label-free biosensor" *Photonics West 2016 - BIOS*, February 2016.

A. Yalçın, M. Cretich, G. di Carlo, L. Sola, M. Monroe, M. S. Unlu, M. Chiari, "Fluorescence enhancement on reflecting substrates for microarray applications" *IEEE Lasers and Electro-Optics Society 2009 Annual Meeting*, October 2009.

E. Özkumur, A. Yalçın, M. Cretich, F. Damin, C. Lopez, D. A. Bergstein, B. B. Goldberg, M. Chiari, M. S. Ünlü, "Optical Phase to Biological Mass Conversion for Label-free Interferometric Sensing Methods" *IEEE Lasers and Electro-Optics Society 2009 Annual Meeting*, October 2009.

E. Özkumur, A. Yalçın, S. Ahn, B. B. Goldberg, M. Chiari, M. S. Ünlü, "Spectral Reflectance Imaging Biosensor for high-throughput and label-free detection of biomolecular interactions" *IEEE Lasers and Electro-Optics Society 2009 Annual Meeting*, October 2009.

P. Spuhler, J. Knezevic, A. Yalçın, P. Droge, U. Rant, M. S. Unlu, "A Platform for in situ Real-Time Measurement of Protein Conformational Changes of DNA" *IEEE Lasers and Electro-Optics Society 2009 Annual Meeting*, October 2009.

P. Spuhler, J. Knezevic, A. Yalçın, P. Droge, U. Rant, M. S. Unlu, "Real-Time Kinetics Measurements of Protein Induced Conformational Changes in DNA" *IEEE Lasers and Electro-Optics Society 2009 Annual Meeting*, October 2009.

A. Yalçın, F. Damin, I. E. Ozkumur, G. di Carlo, L. Sola, M. S. Ünlü, and M. Chiari, "Nanoscale Determination of a Polymeric Coating for Microarray Applications" *23rd International Symposium on MicroScale Bioseparations (MSB) 2009*, February 2009

I. E. Ozkumur, A. Yalçın, M. Cretich, M. S. Ünlü, and M. Chiari, "Label-free, dynamic and quantitative measurement of biomolecular interactions" *23rd International Symposium on MicroScale Bioseparations (MSB) 2009*, February 2009

A. Yalçın, I. E. Ozkumur, B. B. Goldberg, and M. S. Ünlü, "High lateral resolution spectral self-interference fluorescence microscopy using annular apertures" *Photonics West 2009 - BIOS*, January 2009

I. E. Ozkumur, A. Yalçın, F. Damin, B. B. Goldberg, M. Chiari, and M. S. Ünlü, "Label-free and dynamic measurement of biomolecular interactions for high-throughput diagnostics" *Photonics West 2009 - BIOS*, January 2009

A. Yalçın, F. Damin, I. E. Ozkumur, G. di Carlo, B. B. Goldberg, M. Chiari, and M. S. Ünlü, "Nanoscale Determination of Conformation of a Polymeric Coating on Layered Surfaces" *AVS 55th International Symposium and Exhibition*, October 2008

M. S. Ünlü, I. E. Ozkumur, J. Needham, D. A. Bergstein, B. B. Goldberg, A. Yalçın, P. S. Spuhler, R. Irani, and C. DeLisi, "Applications of Optical Resonance to Biological Imaging and Label-free Protein Microarrays (invited paper)" *EMBC08, Vancouver, Canada, August 20-24, 2008*, 2008

A. Yalçın, F. Damin, I. E. Ozkumur, G. di Carlo, B. B. Goldberg, M. S. Ünlü, and M. Chiari, "Characterization of A Polymeric Coating for Microarray Applications using Spectral Self-Interference Fluorescence Microscopy" *Photonics West 2008 - BIOS*, 2008

A. Yalçın, F. Damin, I. E. Ozkumur, G. di Carlo, B. B. Goldberg, M. Chiari, and M. S. Ünlü, "Characterization of Swelling of A Polymeric Coating for DNA Microarray Applications Using Spectral Self-Interference Fluorescence Microscopy" *Proceedings of IEEE Lasers and Electro-Optics Society 2007 Annual Meeting*, October 2007

A. Yalçın, K. C. Popat, M. F. Anthes-Washburn, N. Chbouki, T. A. Desai, M. S. Ünlü, and B. B. Goldberg, "Microring resonators for biochemical sensing" *Proceedings of CLEO/QELS 2005*, May 2005

A. Yalçın, J. C. Aldridge, K. C. Popat, T. A. Desai, N. Chbouki, M. S. Ünlü, and B. B. Goldberg, "Microring resonators for biochemical sensing" *Bulletin of APS Meeting*, March 2005
P. Spuhler

7.4. Yazılan uluslararası kitaplar veya kitaplarda bölümler

A. Yalçın, Y. J. Yamanaka, J. C. Love, "Integrated single-cell analysis," "Single-Cell Analysis: Methods and Protocols," Series: "Methods in Molecular Biology", Humana Press, USA (Springer), Vol: 853, 211-235 (2012).

M.S. Unlu, A. Yalçın, M. Dogan, L. Moiseev, A. Swan, B.B. Goldberg, and C.R. Cantor, "Applications of Optical Resonance to Biological Sensing and Imaging: I. Spectral Self-Interference Microscopy," *Biophotonics, Biological and Medical Physics, Biomedical Engineering*, Springer (2008).

M.S. Unlu, E. Ozkumur, D. A. Bergstein, A. Yalçın, M. F. Ruane, B. B. Goldberg, "Applications of Optical Resonance to Biological Sensing and Imaging: II. Resonant Cavity Biosensors," *Biophotonics, Biological and Medical Physics, Biomedical Engineering*, Springer (2008).

7.5. Ulusal hakemli dergilerde yayınlanan makaleler

7.6. Ulusal bilimsel toplantılarda sunulan ve bildiri kitabında basılan bildiriler

7.7. Diğer yayınlar

8. Projeler

Tübitak 3501- Canlı Hücre Dizileri Ile Yüksek Ölçüm Kapasiteli Bir Fonksiyonel Ölçüm Sistemi Geliştirilmesi (Ekim 2015 - Eylül 2017)

Tübitak 2504- Ekstraselüler Veziküllerin Analizi İçin Optik Bir Biyosensör Aygıtının Geliştirilmesi (Mayıs 2014 - Nisan 2016)

Tübitak 2232- Hücre salgılarının gerçek-zamanlı ve niceliksel ölçümü (Mart 2014 - Şubat 2016)

9. İdari Görevler

10. Bilimsel ve Mesleki Kuruluşlara Üyelikler

IEEE Photonics Society, American Physical Society

IEEE Photonics Conference: Biophotonics Committee member (since 2010)

Photoptics Conference Organization Committee member (since 2014)

11. Ödüller

Graduate Student Poster Award

Boston University Photonics Center Future of Light Symposium, June 2008

Engineering Dean Award

“Nanoscale Determination of Molecular Conformation on Layered Surfaces”

Boston University Science and Engineering Day Research Symposium, April 2008

Boston University Photonics Center Fellowship

Including tuition waiver and full monthly stipend, September 2006 - May 2007

H. J. Berman “Future of Light” Prize in Photonics

“Optical Sensing of Biomolecules Using Microring Resonators”

Boston University Science and Engineering Research Symposium, April 2005

12. Son iki yılda verdiğiniz lisans ve lisansüstü düzeydeki dersler için aşağıdaki tabloyu doldurunuz.

Akademik Yıl	Dönem	Dersin Adı	Haftalık Saati		Öğrenci Sayısı
			Teorik	Uygulama	
2014-2015	Güz	Fundamentals of Electrical Eng.	3	2	100
		Physics of Semiconductor Devices	3	0	40
		Electronics I	3	2	70
	İlkbahar	Introduction to Electrical and Electronics Engineering	2	2	70
2015-2016	Güz	Fundamentals of Electrical Eng.	3	2	100
		Introduction to Photonics	3	0	30
	İlkbahar	Introduction to Electrical and Electronics Engineering	2	2	130

Not: Açılmışsa, yaz döneminde verilen dersler de tabloya ilave edilecektir.