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### Education Information

Doctorate, Georgia Institute of Technology, College of Sciences, School Of Chemistry and Biochemistry, United States Of America 2002 - 2008

Undergraduate, Koç Üniversitesi, Fen Fakültesi, Kimya Bölümü, Turkey 1997 - 2002

### Foreign Languages

English, C1 Advanced

### Dissertations

Doctorate, SMALL MOLECULE RECOGNITION OF HOMOPURINE NUCLEIC ACID STRUCTURES, Georgia Institute Of Technology, School Of Chemistry And Biochemistry, 2008

### Research Areas

Chemistry, Biochemistry, Natural Sciences

### Academic Titles / Tasks

Associate Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Chemistry, 2018 - Continues

Assistant Professor, Middle East Technical University, Faculty Of Arts And Sciences, Department Of Chemistry, 2015 - 2018

Assistant Professor, Doğu Üniversitesi, Fen-Edebiyat Fakültesi, Kimya Bölümü, 2010 - 2012

Research Assistant, Lawrence Berkeley National Laboratory, Physical Biosciences Division, Joint Bioenergy Institute, 2008 - 2010

Research Assistant, Georgia Institute Of Technology, College Of Sciences, School Of Chemistry And Biochemistry, 2002 - 2008

### Courses

## Advising Theses

PERSİL ÇETİNKOL Ö., Investigating the interactions of azacyanines with triplex nucleic acids, Postgraduate, S.Tütüncü(Student), 2020

Persil Çetinkol Ö., Targeting human telomeric DNA with azacyanines, Postgraduate, A.DOĞU(Student), 2019

PERSİL ÇETİNKOL Ö., INSIGHTS INTO THE ACTION MECHANISM OF AZACYANINES: THEIR TOPOISOMERASE II? INHIBITION POTENTIAL AND NUCLEIC ACID SELECTIVITY, Postgraduate, S.Güloğlu(Student), 2018

Persil Çetinkol Ö., Insights into the action mechanism of azacyanines: Their topoisomerase ii $\alpha$  inhibition potential and nucleic acid selectivity, Postgraduate, S.GÜLOĞLU(Student), 2018

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

- I. **A CpG island promoter drives the CXXC5 gene expression**  
Yasar P., Kars G., Yavuz K., Ayaz G., Oguztuzun C., Bilgen E., Suvaci Z., Cetinkol Ö., CAN T., MUYAN M.  
SCIENTIFIC REPORTS, vol.11, no.1, 2021 (Journal Indexed in SCI)
- II. **Highly-sensitive and fast detection of human telomeric G-Quadruplex DNA based on a hemin-conjugated fluorescent metal-organic framework platform**  
Javan Kouzegaran V., Farhadi K., Forough M., Bahram M., Persil Çetinkol Ö.  
Biosensors and Bioelectronics, vol.178, 2021 (Journal Indexed in SCI Expanded)
- III. **Construction of amperometric biosensor modified with conducting polymer/carbon dots for the analysis of catechol**  
Yasa M., Deniz A., Forough M., YILDIRIM E., PERSİL ÇETİNKOL Ö., Udum Y. A., TOPPARE L. K.  
Journal of Polymer Science, vol.58, no.23, pp.3336-3348, 2020 (Journal Indexed in SCI Expanded)
- IV. **Doxorubicin exhibits strong and selective association with VEGF Pu22 G-quadruplex**  
Bilgen E., Persil Çetinkol Ö.  
Biochimica et Biophysica Acta - General Subjects, vol.1864, 2020 (Journal Indexed in SCI)
- V. **Novel fluorescent azacyanine compounds: Improved synthesis and optical properties**  
Doğan K., Gülkaya A., Forough M., Persil Ç.  
ACS Omega, vol.5, no.36, pp.22874-22882, 2020 (Journal Indexed in SCI Expanded)
- VI. **A conjugated gold nanoparticle-azacyanine off-on-off fluorescence probe for sensitive and selective detection of G-quadruplexes**  
Bilgen E., Forough M., PERSİL ÇETİNKOL Ö.  
Talanta, vol.217, 2020 (Journal Indexed in SCI Expanded)
- VII. **Azacyanines as novel topoisomerase II alpha inhibitors**  
Guloglu S., Kirmaci F. N. , PERSİL ÇETİNKOL Ö., Forough M., Gulkaya A.  
Letters in Drug Design and Discovery, vol.17, no.5, pp.664-669, 2020 (Journal Indexed in SCI Expanded)
- VIII. **A DNA-free colorimetric probe based on citrate-capped silver nanoparticles for sensitive and rapid detection of coralyne**  
Usta H. M. , Forough M., Cetinkol Ö.  
Sensors and Actuators, B: Chemical, vol.298, 2019 (Journal Indexed in SCI Expanded)
- IX. **Targeting human telomeric DNA with azacyanines**  
Kucukakdag Dogu A., Persil Çetinkol Ö.  
TURKISH JOURNAL OF CHEMISTRY, vol.43, pp.1040-1051, 2019 (Journal Indexed in SCI)
- X. **Selective High Binding Affinity of Azacyanines to polyd(A) center dot polyd(T) center dot polyd(T) Triplex: The Effect of Chain Length and Branching on Stabilization, Selectivity and Affinity**  
Tutuncu S., Guloglu S., Kucukakdag A., Persil Çetinkol Ö.

CHEMISTRYSELECT, vol.3, no.45, pp.12878-12887, 2018 (Journal Indexed in SCI)

- XI. **How Alkyl Chain Length of Alcohols Affects Lignin Fractionation and Ionic Liquid Recycle During Lignocellulose Pretreatment**  
SATHITSUKSANO N., Sawant M., TRUONG Q., Tan J., Canlas C. G. , Sun N., Zhang W., Rennecker S., Prasomsri T., Shi J., et al.  
BIOENERGY RESEARCH, vol.8, no.3, pp.973-981, 2015 (Journal Indexed in SCI)
- XII. **Structural and Chemical Characterization of Hardwood from Tree Species with Applications as Bioenergy Feedstocks**  
PERSİL ÇETİNKOL Ö., SMITHMORITZ A., CHENG G., LAO J., GEORGE A., HONG K., HENRY R., HEAZLEWOOD J., SIMMONS B., HOLMES B.  
PLOS ONE, vol.7, no.12, 2012 (Journal Indexed in SCI)
- XIII. **Biosynthesis and incorporation of side-chain-truncated lignin monomers to reduce lignin polymerization and enhance saccharification**  
EUDES A., GEORGE A., MUKERJEE P., KIM J., POLLET B., BENKE P., YANG F., MITRA P., SUN L., PERSİL ÇETİNKOL Ö., et al.  
PLANT BIOTECHNOLOGY JOURNAL, vol.10, no.5, pp.609-620, 2012 (Journal Indexed in SCI)
- XIV. **The impact of ionic liquid pretreatment on the chemistry and enzymatic digestibility of Pinus radiata compression wood**  
TORR K., LOVE K., PERSİL ÇETİNKOL Ö., DONALDSON L., GEORGE A., HOLMES B., SIMMONS B.  
GREEN CHEMISTRY, vol.14, no.3, pp.778-787, 2012 (Journal Indexed in SCI)
- XV. **A facile method for the recovery of ionic liquid and lignin from biomass pretreatment**  
DIBBLE D., LI C., LAN S., GEORGE A., CHENG A., PERSİL ÇETİNKOL Ö., BENKE P., HOLMES B., SINGH S., SIMMONS B.  
GREEN CHEMISTRY, vol.13, no.11, pp.3255-3264, 2011 (Journal Indexed in SCI)
- XVI. **Molecular dynamics simulations and coupled nucleotide substitution experiments indicate the nature of A center dot A base pairing and a putative structure of the coralyne-induced homo-adenine duplex**  
Joung I. S., Cetinkol O. P., HUD N. V., Cheatham T. E.  
NUCLEIC ACIDS RESEARCH, vol.37, no.22, pp.7715-7727, 2009 (Journal Indexed in SCI)
- XVII. **Molecular recognition of poly(A) by small ligands: an alternative method of analysis reveals nanomolar, cooperative and shape-selective binding**  
Cetinkol O. P., Hud N. V.  
NUCLEIC ACIDS RESEARCH, vol.37, no.2, pp.611-621, 2009 (Journal Indexed in SCI)
- XVIII. **Submicromolar, selective G-quadruplex ligands from one pot: Thermodynamic and structural studies of human telomeric DNA binding by azacyanines**  
Cetinkol O. P., ENGELHART A. E., Nanjunda R. K., Wilson W. D., HUD N. V.  
CHEMBIOCHEM, vol.9, no.12, pp.1889-1892, 2008 (Journal Indexed in SCI)
- XIX. **Harnessing DNA intercalation**  
Persil O., HUD N. V.  
TRENDS IN BIOTECHNOLOGY, vol.25, no.10, pp.433-436, 2007 (Journal Indexed in SCI)
- XX. **Assembly of an antiparallel homo-adenine DNA duplex by small-molecule binding**  
Persil O., SANTAI C., JAIN S., HUD N.  
JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, vol.126, no.28, pp.8644-8645, 2004 (Journal Indexed in SCI)
- XXI. **Na<sub>12</sub>Ge<sub>17</sub>: A compound with the zintl anions [Ge-4](4-) and [Ge-9](4-) - Synthesis, crystal structure, and Raman spectrum**  
CARRILLO-CABRERA W., GIL R., SOMER M., Persil O., VON SCHNERING H.  
ZEITSCHRIFT FUR ANORGANISCHE UND ALLGEMEINE CHEMIE, vol.629, no.4, pp.601-608, 2003 (Journal Indexed in SCI)

## Articles Published in Other Journals

I. **Understanding the impact of ionic liquid pretreatment on eucalyptus**

PERSİL ÇETİNKOL Ö., DIBBLE D., CHENG G., KENT M., KNIERIM B., AUER M., WEMMER D., PELTON J., SIMMONS B., MELNICHENKO Y., et al.

Biofuels, vol.1, pp.33-46, 2010 (Refereed Journals of Other Institutions)

## Books & Book Chapters

I. **Small molecule recognition of poly(A)**

PERSİL ÇETİNKOL Ö.

in: Polyadenylation Methods and Protocols, Rorbach Joanna, Bobrowicz Agnieszka J., Editor, Springer, New-York, pp.81-108, 2014

II. **Metal Ion Interactions with G-Quadruplex Structures**

AARON E., PLAVEC J., PERSİL ÇETİNKOL Ö., HUD N.

in: Nucleic Acid Metal Ion Interactions, Hud, Nicholas, Editor, RSC Publishing, Cambridge, pp.118-153, 2009

## Refereed Congress / Symposium Publications in Proceedings

I. **DNA Metilasyonunun DNA Yapısı ve DNA-Doksorubisin Etkileşimleri Üzerindeki Etkileri**

ÇAVDAR G., PERSİL ÇETİNKOL Ö.

Uluslararası Katılımlı 20. Biyoteknoloji Kongresi, Turkey, 10 - 12 October 2019

II. **Benzimidazol Türevi Azasiyaninlerin Seçiciliği**

TUTUNCU S., KUCUKAKDAG A., GULOGLU S., PERSİL ÇETİNKOL Ö.

Uluslararası Katılımlı 6. İlaç Kimyası: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu Kongresi, 22 - 25 March 2018

III. **G Dörtlü Sarmal Yapısına Sahip Telomerik Dna Dizinleri ile Azasiyaninlerin Etkileşimleri**

PERSİL ÇETİNKOL Ö.

4. İlaç Kimyası Kongresi: İlaç Etkin Maddesi Tasarımı, Sentezi, Üretimi ve Standardizasyonu KONGresi, Turkey, 17 - 20 March 2016

IV. **Structural characterization of Eucalyptus species**

PERSİL ÇETİNKOL Ö., SMITH M., GEORGE A., CHENG G., BRENNAN T., HENRY R., SIMMONS B., HOLMES B.

ACS Spring 2010 National Meeting & Exposition, 21 - 25 March 2010

V. **Harnessing the effect of ionic liquid pretreatment on Eucalyptus**

PERSİL ÇETİNKOL Ö.

ACS Spring 2010 National Meeting & Exposition, 21 - 25 March 2010

VI. **Selective High Affinity Synthetically Accessible Ligands for G Quadruplex DNA Thermodynamic and Structural Studies of Azacyanines**

ENGELHART A., PERSİL ÇETİNKOL Ö., NANJUNDA R., WILSON D., HUD N.

Albany 2009: The 16th Conversation, 16 - 20 June 2009

VII. **Small molecules that enhance GAA TTC fragility**

LOBACHEV K., KIM H., NARAYANAN V., PERSİL ÇETİNKOL Ö., HUD N.

Albany 2009: The 16th Conversation, 16 - 20 June 2009

VIII. **2 D NMR Investigation of Ionic Liquid Pretreatment on Eucalyptus**

PERSİL ÇETİNKOL Ö., DIBBLE D., PELTON J., WEMMER D., SIMMONS B., HOLMES B., RALPH J.

31st Symposium on Biotechnology for Fuels&Chemicals, 3 - 06 May 2009

IX. **Identification of Genes Involved in Acetylation of Cell Wall Polysaccharides in Arabidopsis thaliana**

MANABE Y., SMITH M., ORFILA C., MANISSERI C., PERSİL ÇETİNKOL Ö., HOLMES B., HEAZLEWOOD J., SCHELLER H.

Genomics of Energy and Environment; Fourth Annual DOE Joint Genome Institute User Meeting, 25 - 27 March 2009

X. **Nanomolar Selective G Quadruplex Ligands from One Pot Thermodynamic and Structural Studies of**

## **Azacyanines**

ENGELHART A., PERSİL ÇETİNKOL Ö., NANJUNDA R., WILSON D., HUD N.  
Southeast Regional Meeting of the ACS, 12 - 15 November 2008

### **XI. Exploring small molecules that promote the poly rA self structure**

PERSİL ÇETİNKOL Ö., HUD N.

Southeast Regional Meeting of the ACS, 1 - 04 November 2006

### **XII. Controlling nucleic acid assembly by small molecule binding Formation of antiparallel dA n dA n duplexes in the presence of coralyne**

PERSİL ÇETİNKOL Ö., SANTAI C., JAIN S., HUD N.

Albany 2005: The 14th Conversation, 14 - 18 June 2005

## **Supported Projects**

PERSİL ÇETİNKOL Ö., TUBITAK Project, Azasiyanin 3 ve Türevi Bileşiklerinin Üçlü Sarmal Yapıya Sahip Nükleik Asitler ile Etkileşimlerinin İncelenmesi, 2017 - Continues

Persil Çetinkol Ö., TUBITAK Project, Anti-kanser ilacı Doksorubisin'in G-dörtlü sarmal yapı oluşturan VEGF promoter dizinlerine bağlanma özelliklerinin incelenmesi, 2019 - 2020

PERSİL ÇETİNKOL Ö., KÜÇÜKAKDAĞ A., Project Supported by Higher Education Institutions, BENZİMİDAZOL TÜREVİ İLAÇ ADAYI BİLEŞİĞİNİN İNSAN TELEMORİK DNA'SI İLE ETKİLEŞİMLERİNİN İNCELENMESİ, 2018 - 2019

YILMAZ A., AKMAN P., GÖKAĞAÇ ARSLAN G., ÇORUH N., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, Lüminesan MCM-41 Mezogözenekli Silika Nanoparçacıklarına Selekoksib Yükleme Çalışmaları: İlaç Yükleme ve Bırakma Özellikleri, 2018 - 2019

PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, AZA3 MOLEKÜLÜNÜN TOPOİZOMERAZ I ENZİMİ İLE OLAN ETKİLEŞİMLERİNİN İNCELENMESİ, 2017 - 2017

GÖKAĞAÇ ARSLAN G., YILMAZ A., ÇORUH N., NALBANT ESENTÜRK E., KAYRAN İŞÇİ C., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, Değişik destek maddeleri kullanılarak yeni katalizörlerin hazırlanması, 2017 - 2017

PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, AZASİYANIN 3 BİLEŞİĞİNİN NÜKLEİK ASİTLER İLE ETKİLEŞİMLERİNİN İNCELENMESİ, 2017 - 2017

PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, AZA3 TÜREVİ İLAÇ ADAYI BİLEŞİĞİNİN İNSAN TELEMORİK DNA'SI İLE ETKİLEŞİMLERİNİN İNCELENMESİ, 2017 - 2017

PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, Üç Yeni İlaç Adayı Bileşiğin Sentezi, Karakterizasyonu ve İnsan Telemorik DNA'sı İle Etkileşimlerinin İncelenmesi, 2016 - 2017

ESENTÜRK O., ÖNAL A. M., DOĞAN Ö., DANIŞMAN M. F., ASİL ALPTEKİN D., AYTEKİN Y. S., HACALOĞLU J., PERSİL ÇETİNKOL Ö., Project Supported by Higher Education Institutions, ŞARAP KALİTE TAYİNİ İÇİN YÖNTEM GELİŞTİRME ÇALIŞMALARI, 2016 - 2016

## **Citations**

Total Citations (WOS):571

h-index (WOS):11

## **Awards**

Persil Çetinkol Ö., Bilim Kadınları İçin, L'oréal Ve Unesco, May 2016