

CURRICULUM VITAE

Name and Surname: Sinem TUNCEL KOSTAKOĞLU

Date of Birth: 09/11/1981

Academic Title: Associate Professor (06/03/2017)

E-mail: sinem.kostakoglu@istinye.edu.tr

Language: Turkish (Native), English (Fluent), German (Starter)

Research Areas: Inorganic chemistry, Macrocyclic compounds, PDT, Liquid crystals, Organic solar cells, Supramolecular systems

Education:

Degree	Department	University	Year
BSc	Chemical Engineering	Ankara University	2004
MSc	Chemistry	Gebze Technical University	2006
PhD	Chemistry	Gebze Technical University	2012

MSc Thesis: Synthesis of Peripheral Octa-Amino Phthalocyanine
(Supervisor: Prof. Dr. Vefa AHSEN)

PhD Thesis: Mesomorphic Alkoxy and Alkylthio Substituted Lead Phthalocyanines
(Supervisor: Prof. Dr. Vefa AHSEN)

Academic experience:

Title	University	Year
Assos. Prof.	Istinye University / Faculty of Engineering and Natural Sciences / Department of Chemistry	2021-current
Dr. Res. Assis.	Gebze Technical University / Faculty of Science / Department of Chemistry	2012-2021
Res. Assis.	Gebze Technical University / Faculty of Science / Department of Chemistry	2006-2012

Student Supervision:

Büşra Akyol, Syhthesis of Barbituric Acid-Functionalized BODIPY Derivatives and Investigations of Their Self-Assembled Structures, Master Thesis, Second Supervisor (2021-)

Projects:

2019-current Principal investigator, TÜBİTAK Project (1002), Self-assembled supramolecular systems for organic electronic applications: Phthalocyanine Rosettes.

2013-2016 Researcher, TÜBİTAK Project (1001), Phthalocyanine nanowire production and the investigation of photophysical and photovoltaic properties.

Jun-Sep2012 Researcher, TÜBİTAK Bileteral (Russia-Turkey) Project: Single-walled carbon nanotube/phthalocyanine hybrid materials: synthesis, characterization and sensor properties

2009-2011 Researcher, TÜBİTAK Bilateral (Russia-Turkey) Project: Mesomorphic molecular materials for electronics: structural organization on the substrate surface

2009-2010 Researcher, GYTE, BAP, Carbohydrate Substituted Phthalocyanine Synthesis via Click Chemistry

2006-2008 Researcher, GYTE, BAP, New Type of Liquid Crystalline Oxotitanium Phthalocyanine Synthesis and Investigation of Photoconductive Properties

2006-2008 Researcher, TÜBİTAK Project (1001): Carbohydrate Substituted Phthalocyanine Synthesis, Investigation of Photosensitive and Self-assembly Properties

Memberships:

Turkish Chemical Society

Awards:

TÜBİTAK Horizon2020 Above-Threshold-Awards

Multifunctional mesoporous organosilica nanoparticles for theranostics of breast and prostate cancers, Researcher

- H2020- Marie Skłodowska-Curie actions-ITN-2017, Total score: 89.20
- H2020- Marie Skłodowska-Curie actions-ITN-2016, Total score: 85.40

Reviewer:

IJP-D-16-00927

A pyropheophorbide a-based photosensitizer tested for in vivo targeted photodynamic therapy

International Journal of Pharmaceutics

KIM-2008-13

Silicon phthalocyanine photosensitizers with pyridine anchor for dye-sensitized solar cells: preparation, photophysical, electrochemical and photovoltaic properties

Turkish Journal of Chemistry

Fellowships:

TÜBİTAK-BİDEB 2219, 2219-International Postdoctoral Research Fellowship Program for Turkish Citizens

Liquid Crystalline Phthalocyanine-Perylene Dyads for Charge Transfer Studies and Solar Cell Applications, 2013-2014 (University of Bayreuth, Applied Functional Polymers, Department of Macromolecular Chemistry I, Bayreuth, GERMANY, Prof. Dr. Mukundan THELAKKAT)

International Experiences

- 10/2012-01/2013 Visiting researcher, Institute of Chemistry of Clermont-Ferrand, CESMA – Design and Synthesis of Analgesic Molecules, Clermont-Ferrand, France, Prof. Dr. Sylvie DUCKI
- 09-10/2010 Visiting researcher, Nikolaev Institute of Inorganic Chemistry, Laboratory for chemistry of volatile coordination and metallorganic compounds, Novosibirsk, Russia, Dr. Tamara BASOVA
- 05-06/2010 Visiting researcher, Nikolaev Institute of Inorganic Chemistry, Laboratory for chemistry of volatile coordination and metallorganic compounds, Novosibirsk, Russia, Dr. Tamara BASOVA
- 12/2009 Visiting researcher, Sheffield Hallam University, The Materials and Engineering Research Institute (MERI), Sheffield, UK, Dr. Aseel HASSAN
- 08-09/2009 Visiting researcher, Nikolaev Institute of Inorganic Chemistry, Laboratory for chemistry of volatile coordination and metallorganic compounds, Novosibirsk, Russia, Dr. Tamara BASOVA

PUBLICATIONS

H-Index: 12

Toplam atif: 414 (web of science)

A. PEER-REVIEWED JOURNAL ARTICLES

- A1.** Yuksel F., Tuncel S., Gürek A. G., Jeanneau E., Luneau D., Ahsen V. (2007). Bis[μ -4,5-dicyano-N,N'-bis(p-tolylsulfonyl)-o-phenylenediaminato]bis[diamminecopper(II)]dihydrate. Acta Crystallographica Section E Structure Reports Online, 63(5), 1380-1382.
- A2.** Yuksel F., Tuncel S., Ahsen V. (2008). Synthesis and characterizations of peripheral octa-amino and octa-amidophthalocyanines. Journal of Porphyrins and Phthalocyanines, 12(2), 123-130.
- A3.** Tuncel S., Dumoulin F., Gailer J., Sooriyaarachchi M., Atilla D., Durmuş M., Bouchu D., Savoie H., Boyle R. W., Ahsen V. (2011). A set of highly water-soluble tetraethyleneglycol-substituted Zn(II) phthalocyanines: synthesis, photochemical and photophysical properties, interaction with plasma proteins and in vitro phototoxicity. Dalton Transactions, 40(16), 4067-4079.
- A4.** Tuncel S., Basova T. V., Kiselev V. G., Gromilov S. A., Jushina I. V., Durmuş M., Gürek A. G., Ahsen V. (2011). Tetraoctylthio- and tetraoctyloxy-substituted lead phthalocyanines: Synthesis, characterization, liquid-crystalline properties, and thin film studies. Journal of Materials Research, 26(23), 2962-2973.

A5. Hassan A., Basova T., Tuncel S., Yuksel F., Gürek A. G., Ahsen V. (2011). Phthalocyanine films as active layers of optical sensors for pentachlorophenol and simazine detection. *Procedia Engineering*, 25, 272-275 (Tam metinli bildiri).

A6. Tuncel S., Fournier-dit-Chabert J., Albrieux F., Ahsen V., Ducki S., Dumoulin F. (2012). Towards dual photodynamic and antiangiogenic agents: design and synthesis of a phthalocyanine-chalcone conjugate. *Organic & Biomolecular Chemistry*, 10(6), 1154-1157.

A7. Basova T. V., Çamur M., Esenpınar A. A., Tuncel S., Hassan A., Alexeyev A., Banimuslem H., Durmuş M., Gürek A. G., Ahsen V. (2012). Effect of substituents on the orientation of octasubstituted copper(II) phthalocyanine thin films. *Synthetic Metals*, 162(7-8), 735-742.

A8. Tuncel S., Banimuslem H. A. J., Durmuş M., Gürek A. G., Ahsen V., Basova T. V., Hassan A. K. (2012). Liquid crystalline octasubstituted lead(II) phthalocyanines: effects of alkoxy and alkylthio substituents on film alignment and electrical properties. *New Journal of Chemistry*, 36(8), 1665-1672.

A9. Mthethwa T. P., Tuncel S., Durmuş M., Nyokong T. (2013). Photophysical and photochemical properties of a novel thiol terminated low symmetry zinc phthalocyanine complex and its gold nanoparticles conjugate. *Dalton Transactions*, 42(1), 4922-4930.

A10. Tuncel S., Trivella A., Atilla D., Bennis K., Savoie H., Albrieux F., Delort L., Billard H., Dubois V., Ahsen V., Caldefie-Chézet F., Richard C., Boyle R. W., Ducki S., Dumoulin F. (2013). Assessing the dual activity of a chalcone-phthalocyanine conjugate: design, synthesis, and antivasular and photodynamic properties. *Molecular Pharmaceutics*, 10(10), 3706-3716.

A11. Basova T., Esenpınar A. A., Tuncel S., Durmuş M., Gürek A. G., Ahsen V. (2013). Thin films of liquid crystalline phthalocyanines and their composites with single-walled carbon nanotubes: properties and alignment. *Key Engineering Materials*, 531(1), 337-341 (Tam metinli bildiri).

A12. Banimuslem H., Hassan A., Basova T., Gülmez A. D., Tuncel S., Durmuş M., Gürek A. G., Ahsen V. (2014). Copper phthalocyanine/single walled carbon nanotubes hybrid thin films for pentachlorophenol detection. *Sensors and Actuators B: Chemical*, 190 (1), 990-998.

A13. Tuncel S., Kaya E. N., Durmuş M., Basova T., Gürek A. G., Ahsen V., Banimuslem H., Hassan A. (2014). Distribution of single walled carbon nanotubes in pyrene containing liquid crystalline asymmetric zinc phthalocyanine matrix. *Dalton Transactions*, 43, 4689-4699.

A14. Banimuslem H., Hassan A., Basova T., Yushina I., Durmuş M., Tuncel S., Esenpınar A. A., Gürek A. G., Ahsen V. (2014). Copper phthalocyanine functionalized single-walled carbon nanotubes: thin film deposition and sensing properties. *Key Engineering Materials*, 605, 461-464 (Tam metinli bildiri).

A15. Kaya E. N., Tuncel S., Basova T. V., Banimuslem H., Hassan A., Gürek A. G., Ahsen V., Durmuş M. (2014). Effect of pyrene substitution on the formation and sensor properties of phthalocyanine-single walled carbon nanotube hybrids. *Sensors and Actuators B-Chemical*, 199, 277-283.

A16. Banimuslem H., Hassan A., Basova T., Durmuş M., Tuncel S., Esenpınar A. A., Gürek A. G., Ahsen V. (2015). Copper phthalocyanine functionalized single-walled carbon

nanotubes: thin films for optical detection. *Journal of Nanoscience and Nanotechnology*, 15, 2157-2167.

A17. Banimuslem H., Hassan A., Basova T., Esenpinar A. A., Tuncel S., Durmuş M., Gürek A. G., Ahsen V. (2015). Dye-modified carbon nanotubes for the optical detection of amines vapours. *Sensors and Actuators B-Chemical*, 207, 224-234.

A18. Aribia F., Vey C., Topkaya D., Tuncel Kostakoğlu S., Fournier-dit-Chabert J., Işık Büyükeksi S., Canan Taşkın G., Alpugan S., Albrieux F., Gürek A. G., Cucca M., Bennis K., Atilla D., Ahsen V., Ducki S., Dumoulin F. (2016). Phthalocyanine-chalcone conjugates. *Journal of Porphyrins and Phthalocyanines*, 20, 497-504.

A19. Topal S. Z., Un, S. S., Bretonniere Y., Tuncel Kostakoğlu S. (2017). New designed naphthalimide-phthalocyanine pentads: Synthesis, photophysical and photochemical properties in DMSO and room temperature ionic liquids. *Journal of Photochemistry and Photobiology A-Chemistry*, 332, 562-570.

A20. Gulmez A. D., Polyakov M. S., Volchek V. V., Tuncel Kostakoğlu S., Esenpinar A. A., Basova T. V., Durmus M, Gurek A. G., Ahsen, V, Banimuslem H. A., Hassan A. K. (2017). Tetrasubstituted copper phthalocyanines: Correlation between liquid crystalline properties, films alignment and sensing properties. *Sensors and Actuators B-Chemical*, 241, 364-375.

A21. Ozdemir R., Choi D., Ozdemir M., Kim H., Tuncel Kostakoğlu S., Erkartal M., Kim H., Kim C., Usta H. (2017). A solution-processable liquid-crystalline semiconductor for low temperature-annealed air-stable n-channel field-effect transistors, *ChemPhysChem*, 18, 7, 850-861.

A22. Heinrich C. D., Tuncel Kostakoğlu S., Thelakkat M. (2017). Densely grafted liquid crystalline copper phthalocyanine side chain polymer: synthesis and characterization. *Journal of Materials Chemistry C*, 5, 25, 6259-6268.

A23. Wilma K., Unger T., Tuncel Kostakoğlu S., Hollfelder M., Hunger C., Lang A., Gurek A. G., Thelakkat M., Kohler J., Kohler A., Gekle S., Hildner R. (2017). Excited state dynamics and conformations of a Cu(II)-phthalocyanine-perylenebisimide dyad. *Physical Chemistry Chemical Physics*, 19, 33, 22169-22176.

A24. Albakour M., Tunç G., Akyol B., Tuncel Kostakoğlu S., Berber S., Bekaroğlu Ö., Gürek A. G. (2018). Synthesis, characterization, photophysicochemical properties and theoretical study of novel zinc phthalocyanine containing four tetrathia macrocycles. *Journal of Porphyrins Phthalocyanines*, 22, 1-11.

A25. Mete E., Kabay N., Dumoulin F., Ahsen V., Tuncel Kostakoğlu S., Ergin Ç. (2020) Photodynamic inactivation of *Staphylococcus aureus* using tetraethylene glycol-substituted Zn(II) phthalocyanine. *Biotechnic & Histochemistry*. DOI: 10.1080/10520295.2020.1854855.

A26. Aykota M. R., Yilmaz S., Erbis H., Kabay N., Tuncel Kostakoğlu S., Ahsen V., Dumoulin F., Yenisey C., Kabay B. (2021) In vivo phototoxic effects of a tetraethyleneglycol-substituted Zn phthalocyanine in tumor bearing rats at an enzymatic level. *Journal of Porphyrins and Phthalocyanines*, 125, 120-127.

A27. Tuncel Kostakoğlu S., Chumakov Y., Zorlu Y., Sadak A. E., Denizaltı S., Gürek A. G., Ayhan M. M. (2021) Elucidating the role of non-covalent interactions in unexpectedly high and selective CO₂ uptake and catalytic conversion of porphyrin-based ionic organic polymers, *Mater. Adv.*, 2, 3685-3694.

B. INTERNATIONAL CONFERENCE PRESENTATIONS

B1. Dumoulin F., Tuncel S., Kumru U., Ahsen V. (2007). Carbohydrates-conjugated phthalonitriles. International Conference on Organic Chemistry (Sözlü).

B2. Yuksel F., Ahsen V., Tuncel S. (2008). Synthesis and characterizations of peripheral octa-amino and octa-amido phthalocyanines. 5th International Conference on Porphyrins and Phthalocyanines (ICPP-5) (Poster).

B3. Tuncel S., Ahsen V., Dumoulin F. (2008). Tetraethyleneglycol substituted Zn (II) phthalocyanines: A high water-solubility for potential PDT agents. 5th International Conference on Porphyrins and Phthalocyanines (ICPP-5) (Poster).

B4. Ahsen V., Tuncel S., Basova T., Kiselev V., Plyashkevich V., Gromilov S., Jushina I., Durmuş M., Gürek A. G. (2010). Synthesis and film characterization of liquid crystalline tetraalkylthio- and tetraalkyloxy- substituted lead phthalocyanines. 6th International Conference on Porphyrins and Phthalocyanines (ICPP-6) (Poster).

B5. Durmuş M., Tuncel S., Ahsen V. (2011). Near-IR absorbing phthalocyanines for photodynamic therapy. 13th JCF-Frühjahrssymposium (Poster).

B6. Atilla D., Yuksel F., Tuncel S., Durmuş M., Gürek A. G., Ahsen V. (2011). Mesomorphic alkylthiosubstituted lead phthalocyanines. 13th JCF-Frühjahrssymposium (Poster).

B7. Tuncel S., Durmuş M., Basova T., Gürek A. G., Ahsen V. (2012). Pyrene substituted asymmetric phthalocyanine-single wall carbon nanotube hybrid materials. 7th International Conference on Porphyrins and Phthalocyanines (ICPP-7) (Poster).

B8. Dumoulin F., Tuncel S., Fournier-dit-Chabert J., Ribiére L., Logan R., Bennis K., Trivella A., Atilla D., Delort L., Billard H., Savoie H., Caldefie-Chézet F., Ahsen V., Richard C., Boyle R. W., Ducki S. (2012). Phthalocyanine-chalcone conjugates: towards dual photodynamic and anti-angiogenic agents. 7th International Conference on Porphyrins and Phthalocyanines (Sözlü).

B9. Tuncel S., Zorlu Y., Chin Y., Savoie H., Fournier-dit-Chabert J., Logan R., Bennis K., Trivella A., Delort L., Billard H., Caldefie-Chézet F., Lim S. H., Richard C., Ducki S., Lee H. B., Boyle R. W., Ahsen V., Dumoulin F. (2012). PEG and glycerol substituted phthalocyanines. Playing with chalcone antivascular or heavy atom effect. The 9th International Symposium on Photodynamic Therapy and Photodiagnosis in Clinical Practice (Poster).

B10. Hassan A., Basova T., Banimuslem H., Esenpinar A. A., Tuncel S., Durmuş M., Gürek A. G., Ahsen V. (2013). Films of liquid crystalline phthalocyanines and their composites with single-walled carbon nanotubes: properties and alignment. 44th IUPAC World Chemistry Congress (Poster).

B11. Kulu İ., Kaya E. N., Tuncel S., Durmuş M., Basova T., Gürek A. G., Ahsen V. (2013). Asymmetrical phthalocyanine-single wall carbon nanotube hybrid materials: synthesis, characterizations and liquid crystalline properties. 44th IUPAC World Chemistry Congress (Poster).

B12. Tuncel S., Durmuş M., Basova T., Gürek A. G., Ahsen V. (2013). Alkyloxy and alkylthio substituted liquid crystalline lead(II) phthalocyanines. 44th IUPAC World Chemistry Congress (Poster).

B13. Topkaya Taşkıran D., Tuncel S., Önal E., Bennis K., Hirel C., Ahsen V., Ducki S., Dumoulin F. (2013). Synthetic strategies for chalcone-porphyrin conjugates. 15th Congress of the European Society for Photobiology (Poster).

B14. Tuncel S., Gürek A. G., Ahsen V., Thelakkat M. (2014). Phthalocyanine-perylene bisimide dyads: synthesis and characterization. Solar Technologies Go Hybrid 3rd International Conference (Poster).

B15. Mete E., Dumoulin F., Kabay N., Ahsen V., Tuncel S., Ergin Ç. (2014). Photodynamic inactivation of staphylococcus aureus strains by a phthalocyanine and 650 nm laser irradiation. 8th International Conference on Porphyrins and Phthalocyanines (Poster).

B16. Tuncel S., Gürek A. G., Ahsen V., Thelakkat M. (2014). Phthalocyanine-perylene bisimide dyads: synthesis and characterization. 8th International Conference on Porphyrins and Phthalocyanines (Poster).

B17. Kaya E. N., Kulu İ., Tuncel S., Basova T. V., Banimuslem H., Hassan A., Gürek A. G., Ahsen V., Durmuş M. (2014). Effect of pyrene substitution on the sensor properties of phthalocyanine-single wall carbon nanotube hybrids. 8th International Conference on Porphyrins and Phthalocyanines (Poster).

B18. Aykota M. R., Tuncel S., Kabay N., Yenisey Ç., Ahsen V., Dumoulin F., Kabay B. (2014). Phototoxic effects of a novel tetraethyleneglycolsubstituted Zn(II) phthalocyanine in tumor bearing rats. 8th International Conference on Porphyrins and Phthalocyanines (Poster).

B19. Ayhan M. M., Tuncel Kostakoğlu S., Zorlu Y., Gürek A. G. (2019). Porphyrin based materials for dye recovery from textile wastewater. 2th International Environmental Chemistry Congress (poster)

E. NATIONAL CONFERENCE PRESENTATIONS

E1. Tuncel S., Yuksel F., Ahsen V. (2006). Periferal okta-aminoftalosiyanin sentezi. 20. Ulusal Kimya Kongresi (Poster).

E2. Tuncel S., Ahsen V., Dumoulin F. (2008). Suda çözünen TEG süstitüe Zn (II) ftalosiyaninler. 22. Ulusal Kimya Kongresi (Poster).

E3. Dumoulin F., Tuncel S., Ermeydan M. A., Kumru U., Ahsen V. (2009). Karbonhidratlı amfililik ftalosiyaninler. II. Ulusal Anorganik Kimya Kongresi (Sözlü).

E4. Topkaya Taşkıran D., Önal E., Tuncel S., Hirel C., Ducki S., Bennis K., Kandepedu N., Ahsen V., Dumoulin F. (2013). Porfirinler üzerine şalkon yapılarının bağlanması. IV. Ulusal Anorganik Kimya Kongresi (Poster).

E5. Göl C., Kaya E. N., Tuncel S., Basova T., Gürek A. G., Durmuş M., Ahsen V. (2013). Asimetrik süstitüe ftalosiyanin-tek duvarlı karbon nanotüp hibrit malzemeler ve özellikleri. IV. Ulusal Anorganik Kimya Kongresi (Poster).

E6. Tuncel S., Trivella A., Bennis K., Atilla D., Savoie H., Delort L., Billard H., Ahsen V., Caldefie-Chézet F., Richard C., Boyle R. W., Ducki S., Dumoulin F. (2013). Şalkon konjüge ftalosiyaninler. IV. Ulusal Anorganik Kimya Kongresi (Sözlü).

E7. Göl C., Kaya E. N., Tuncel S., Gürek A. G., Durmuş M., Ahsen V. (2013). Değişik sayılarda piren ve polioksi etilen grupları içeren çinko ftalosiyanınların sentezi ve floresans özelliklerinin incelenmesi. IV. Ulusal Anorganik Kimya Kongresi (Poster).

E8. Topkaya Taşkıran D., Önal E., Tuncel S., Hirel C., Ducki S., Bennis K., Kandepedu N., Ahsen V., Dumoulin F. (2013). Şalkon konjuge porfirin türevleri. I. Ulusal Organik Kimya Kongresi (Poster).

E9. Topal S. Z., Ün Ş. Ş., Tuncel Kostakoğlu S. (2016). Naphthalimide Substituted Phthalocyanines: Synthesis, Photophysical and Photochemical Properties. 28. Ulusal Kimya Kongresi (Poster).

E10. Tuncel Kostakoğlu S., Zorlu Y., Sadak A. E., Denizaltı S., Gürek A. G., Ayhan M. M. (2020) Karbondioksit yakalama ve dönüşümü için porfirin temelli katyonik kovalent organik polimerler, 32. Ulusal Kimya Kongresi (Poster)