

## CURRICULUM VITAE

### ASSOC. PROF. DÖNÜŞ TUNCEL

#### PERSONAL DATA

Address : Department of Chemistry and UNAM-National Nanotechnology Research Center, Institute of Materials Science and Nanotechnology, Bilkent University, 06800 Bilkent, Ankara, Turkey

Phone : +90 312 290 2420

Fax : +90 312 266 4687

E-mail: dtuncel@fen.bilkent.edu.tr

Web page: <http://www.fen.bilkent.edu.tr/~dtuncel/>

#### ACADEMIC DEGREES

2011- Assoc. Prof. Chemistry- Bilkent University

2003-2011 Assist. Prof. Chemistry- Bilkent University

1997-2000 Ph.D. Chemistry-Imperial College, London (completed)

1996-1997 Ph.D. Chemistry- University of Cambridge (started)

1996 BSc (Hons) Chemistry- University of North London

#### EMPLOYMENT HISTORY

01/2017-Present Associate Director, UNAM-National Nanotechnology Research Center, Institute of Materials Science and Nanotechnology

5/2011–Present Associate Professor, Bilkent University, Chemistry Department

9/2015–6/2016 Visiting Professor (sabbatical stay), Cambridge University, Chemistry Department

1/2003–5/2011 Assistant Professor, Bilkent University, Chemistry Department

7/2008–9/2008 Visiting Scholar, J W T Jones Travelling Fellow, Cambridge University, Chemistry Department

1/2000–12/2002 Postdoctoral Research Fellow, Oxford University, Chemistry Department

#### PROFESSIONAL AWARDS

- Fellow of Royal Society of Chemistry, as of May 2017
- Royal Society of Chemistry, J W T Jones Travelling Fellowship Award, visit to Cambridge University, July-September 2008.
- Gerrard Prize, for the best final year project, University of North London 1996.

**SCHOLARLY AND PROFESSIONAL DUTIES AND ACHIEVEMENTS**

- 1) Grant peer review TÜBİTAK –COST and 1002,
- 2) Panel member in TÜBİTAK 1001, SANTEZ, TEYDEB research programs
- 3) Expert Evaluator, EC FP7 Marie Curie Individual Fellowship, 2008-2014
- 4) Expert Evaluator, EC FP7 Marie Curie Reintegration Grants, 2009-2014
- 5) Expert Evaluator, EC H2020-MSCA-IF-2014
- 6) Vice Chair in the Chemistry Panel, EC H2020-MSCA-IF-2015, 2016, 2017, 2018, 2019, 2020
- 7) Expert Evaluator, EC H2020-FET OPEN-RIA, 2014, 2015 and Vice Chair 2018, 2020,
- 8) Grant Peer Review for European Science Foundation (ESF) a couple of times per year.
- 9) Fulbright Commission, evaluation panel member for graduate fellowships
- 10) Member of Management Committee, COST Action CM1307 (2015-2017); COST Action TD1004 (2013-2015); COST Action CM1005 (2012-2015).
- 11) Editorial Board Member, Springer Nature SN Applied Sciences since 2018.
- 12) Review Editor for Supramolecular Chemistry, Frontiers in Chemistry

**Reviewer for Scientific Journals:**

Chemical Society Reviews, Chemical Communications, Journal of Materials Chemistry, Soft Matter, Advanced Materials, New Journal of Chemistry, Macromolecular Rapid Communications, Tetrahedron Letters, Polymer, Nanotechnology, Macromolecular Chemistry and Physics, Organic and Biomolecular Chemistry, Journal of Physics D: Applied Physics, Chemical Review, Biomacromolecules, Macromolecules, European Journal of Organic Chemistry, Nanoscale, RSC Advances, Journal of American Chemical Society, Organic Letters.

**MEMBERSHIP**

American Chemical Society (ACS)	2003-
Polymer Chemistry Division (ACS)	1999-
Royal Society of Chemistry (MRSC)	1996-2017
Royal Society of Chemistry (FRSC)	2017-present
MACRO Group (RSC)	2010-
Nanotechnology Section (RSC)	2005-

**Other activities:**

- 1) SCAN 2010 Workshop and School ‘Synthesis, Characterization and Applications of Nanomaterials,’ Ankara, Turkey (Organizer and Co-Chair): 15 Plenary/invited speakers from UK, Germany, Norway, Netherlands, Russia, South Korea and Turkey and over 100 participants, 3 days workshop and 2 days school. (<http://www.fen.bilkent.edu.tr/~regpot/scan2010/>).
- 2) COST TD1004 Action Theranostics Imaging and Therapy: An Action to Develop Novel Nanosized Systems for Imaging-Guided Drug Delivery, Annual Meeting (Organizing committee): October 3rd- October 4th, 2014, İstanbul.

**INVITED LECTURES AND INVITED TALKS**

- 1) Advanced Functional Materials, Webinar on, 11/12/2020, organized by Yıldız Teknik University.
- 2) International Conference on Porphyrins and Phthalocyanines (ICPP-11)- June 28 to July 3, Buffalo NY, 2020 (Invited Talk -but could not take place due to Covid-19).
- 3) ‘Supramolecular photosensitizers for a dual chemo and photodynamic therapy’ 30/12/2019, Kings College London
- 4) Israel-Turkey Meeting on Nanoscale Science and Nanotechnology, Weizmann Institute of Science on December 19-21, 2017.
- 5) Melville Laboratory for Polymer Synthesis, Department of Chemistry, University of Cambridge, 02 December 2015.
- 6) Nanobiotechnology International Workshop JRC, Ispra, Italy, 23-25 November 2015.
- 7) ‘Conjugated polymer nanoparticles for cellular imaging and controlled-release drug delivery’, Koç University, 03 April 2014.
- 8) Joachim Steinke Memorial Symposium, Department of Chemistry, Imperial College, London, 25 November 2013.
- 9) Nanobiotechnology International Workshop JRC, Ispra, Italy from the 3rd to 5th December 2013.
- 10) Conjugated Polymer Nanoparticles for Cell Labelling, Imaging and Drug Delivery, Chemistry Department, Middle East Technical University, 12 April, 2013.
- 11) “Cucurbituril-based functional materials”, ICCB 2011, 2nd International Conference on Cucurbiturils, 29 June-July 2, Cambridge, United Kingdom.
- 12) Conjugated polymers for optoelectronics and biomedical applications, Summer School on “An Introduction to Organic Electronics & Applications” OREA 2012 Department of Electronics TEI of Crete, Chania, Crete, Greece, 26 July 2012.
- 13) 2 h lectures for the course of KIM 784 “Polimer Kimyasında Güncel Konular”, Course Convenor: Prof. Dr. Olgun Güven, Chemistry Department, Hacettepe University; Topic: Conjugated Polymers for Optoelectronics and Biological Applications,
- 14) “Çok işlevli organik nano-yapılı malzemeler” Gazi University, Chemistry Department, 25/02/2011.
- 15) “Multi-functional nanostructured organic materials” Boğaziçi University, Chemistry Department, 24/06/2011
- 16) “Nanoyapılı organik malzemeler”, Ankara Üniversitesi, Nanoteknoloji Günleri, 17-18 Nisan, 2010.)
- 17) “Cucurbit[8]uril-driven Dissolution and Photo Luminescent Enhancement of Non-ionic Conjugated Polymers in Water,” ICCB 2009, 1<sup>st</sup> International Conference on Cucurbiturils, July 10-11, Pohang, Korea.
- 18) "Fonksiyonel Moleküler Aygıtlar" Nanoscience Nanotechnology Nanobiotechnology Nanomedicine Conference (NANOTR III), Bilkent University, Ankara, 11-14 Haziran 2007.

- 19) "Molecular switches and functional materials based on mechanically interlocked molecules" Nanoscience Nanotechnology Nanobiotechnology Nanomedicine Conference (NANOTR III), Bilkent University, Ankara, 11-14 Haziran 2007.
- 20) "Molecular switches and functional materials based on cucurbituril containing molecules" CALIX 2007 International Conference and The NSF Workshop on Cucurbit[n]uril Molecular Container, University of Maryland, 4-9 August 2007.
- 21) "Stimuli-responsive supramolecular polymers" Polymers: Materials of Advanced Technologies and in Biology A German-Turkish workshop within the frame of the Max Planck Society's program "International Partnership for Research Excellence" in Mainz, Germany, 29-31 August 2006.
- 22) 'Organik Elektronik ve Nanoteknoloji için Supramoleküler Yaklaşımla Malzeme Hazırlanması' Malzeme ve süreçler teknoloji paneli, MSB ARGE ve Teknoloji ve Daire Başkanlığı, 14 Haziran 2006
- 23) "Porphyrin anchored [5]pseudorotaxane, [5]rotaxanes and polyrotaxanes"
- 24) Turkish-Greek-German Symposium on "Polymers in Materials Science and Biology", Koc University, Istanbul, 4-5 October, 2004.
- 25) "Supramolecularly-engineered Organic Materials" Chemistry Department, Middle East Technical University, 12 November 2004.

**TEACHING****Graduate Courses:**

Chem 571	Special Topics in Organic Chemistry
Chem 470, Chem 573	Polymer Chemistry
Chem 531	Advanced Organic Chemistry I
Chem 532	Advanced Organic Chemistry II
MSN 598	Seminar I
MSN 698	Seminar II

**Undergraduate Courses:**

Chem 100	General Chemistry
Chem 101	Principles of Chemistry
Chem 231	Organic Chemistry 1
Chem 232	Organic Chemistry 2
Chem 431	Organic Chemistry 3
Chem 233	Principles of Organic Chemistry

**Independent Study Supervised: Senior project supervision**

- 1) Yaşar Akdoğan, 2003-2004
- 2) Hasan Burak Tiftik, 2004-2005
- 3) Ünsal Koldemir, 2004-2005
- 4) Kadir Aydemir, 2005-2006
- 5) Mehmet Yaramış, 2005-2006
- 6) Abidin Balan, 2006-2007
- 7) İbrahim Hoccoğlu, 2006-2007
- 8) İlkem Özge Hoyal, 2007-2008

- 9) Saltuk Buğra Hanay, 2008-2009
- 10) Samet Özbek, 2008-2009
- 11) Burcu Altın Çapa, 2008-2009
- 12) Müge Artar, 2009-2010
- 13) Gizem Çeltek, 2009-2010
- 14) Gizem Er, 2009-2010
- 15) Zeynep Özserp, 2009-2010
- 16) Özlem Ünal, 2010-2011
- 17) Meltem Aygüler, 2011-2012
- 18) Mehtap Safi, 2012-2013
- 19) Sinem Gürbüz, 2012-2013
- 20) Esra Soner, 2012-2013
- 21) Meryem Hatip, 2012-2013
- 22) Ahmet Koç, 2013-2014
- 23) 2014-2015, Selin Sağır
- 24) Menekşe Liman, 2017-2018
- 25) Melis Özkan, 2018-2019
- 26) Elif Akar, 2019-2020
- 27) İlkay Çelikay, 2020-2021.

**Graduate Student Supervision**

- 1) Nesibe Cındır, MSc, 2003-2005;
- 2) Ünsal Koldemir, M.Sc., 2005-2007;
- 3) H. Burak Tiftik, M. Sc., 2005-2007;
- 4) Vüsala İbrahimova, M.Sc., 2009-2011;
- 5) Müge Artar, MSc., 2010-2012;
- 6) Özlem Gezici, MSc., 2010- 2012;
- 7) Özlem Ünal, MSc., 2011- 2013;
- 8) Hamidou Keita, MSc., 2012- 2014;
- 9) Alp Özgün, MSc., 2012- 2014;
- 10) Muazzam İdris, MSc., 2012- 2014;
- 11) Sinem Gürbüz, MSc., 2013- 2015;
- 12) Esra Deniz Soner, MSc., 2013- 2015;
- 13) Emre Köken, MSc., 2014-2016;
- 14) Obadah Albahra, MSc., 2014- 2016;
- 15) Ahmet Koç, PhD., 2014-2019;
- 16) Ehsan Hadi, MSc, 2017-2019;
- 17) Melis Özkan, MSc, 2018-2020;
- 18) Bouthaine Auodi, MSc, 2018-2020;
- 19) Yasaman Sheidaei, MSc, 2019-2021.
- 20) Ismael Duah, MSc, 2019- 2021 (expected);
- 21) Elif Begüm Yılmaz, MSc, 2019- 2021 (expected);
- 22) Tutku Özmen, MSc, 2021- 2023 (expected);
- 23) Ezgi Oduncu, MSc, 2021- 2023 (expected);

- 24) Arma Musa Yau, MSc, 2021- 2023 (expected);
- 25) Zelal Yavuz, PhD, 2019-2023 (expected);
- 26) Duygu Deniz Akolpolu, PhD, 2019- 2023 (expected);
- 27) Nur Artikah, PhD, 2021- 2025 (expected);
- 28) Yasaman Sheidaei, PhD, 2021- 2025 (expected).

### **Supervision of postdoctoral fellows**

- 1) E.J.Park, 2009-2010; Rehan Khan, 2012-2014;
- 2) Jousheed Pennakalathil, 2012-2014
- 3) Mitra Jalilzadeh, 2013-2014;
- 4) Maasoomah Bazzar, 2014-2016;
- 5) Timuçin Balkan, 2016-2017;
- 6) Gökçen Aydın 2016-2017;
- 7) Rehan Khan, 2017-2019;
- 8) Yogesh Kumar, 2018-2019;
- 9) Aisan Khaligh, 2017-

### **Students' Accomplishments**

Can Berk Uzundal, 3<sup>rd</sup> year undergraduate research program funded by TÜBİTAK, (2209/A Üniversite Öğrencileri Yurt İçi Araştırma Projeleri Destek), “Teranostik alanda ve OLED'lerde kullanılmak üzere, Cucurbituril ile birbirlerine bağlanmış, oligomer-metal nanopartikül kompozitleri”;

Üstünışık Prize given by the Chemistry Department for the best senior project, Fatma Meltem Aygüler, “pH-Responsive fluorescent nanoparticles”, May 2012; Ahmet Koç, “Nanoparticle Preparation Using Cucurbit[6]uril as Cross-Linker”, June, 2014.

### **SCHOLARLY PUBLICATIONS**

#### **Ph.D. Dissertation**

Synthesis of cucurbituril containing polyrotaxanes, 2000, Dr Joachim Steinke, Imperial College London.

#### **Chapters in books**

- 1) Krasia, T. C.; Khodabakhsh, S.; **Tuncel, D.**; Steinke, J. H. G., “Cucurbituril: A Versatile “Bead” for Polyrotaxane Synthesis”, in *Macromolecular Nanostructured Materials*, Ueyama, N.; Harada, A., Eds.; Springer-Verlag: Berlin – Heidelberg **2004**, Vol. 78, 41 – 64, 3-540-22327-4.
- 2) D. Tuncel, "Introduction: Cucurbituril-containing Functional Materials in the Context of Smart Materials", Cucurbituril-based functional materials, D. Tuncel (Eds.), Royal Society of Chemistry (2019)
- 3) A. Khaligh, D. Tuncel, "Cucurbituril-assisted Supramolecular Polymeric Hydrogels" in Cucurbituril-based functional materials", Cucurbituril-based functional materials, D. Tuncel (Eds.), Royal Society of Chemistry (2019)

- 4) A. Koc, D. Tuncel, "Cucurbituril Homologues and Derivatives: Syntheses and Functionalization", Cucurbituril-based functional materials, D. Tuncel (Eds.), Royal Society of Chemistry (2019)
- 5) R. Khan, D. Tuncel, "Cucurbituril Containing Supramolecular Nanomaterials", Cucurbituril-based functional materials, D. Tuncel (Eds.), Royal Society of Chemistry (2019)

**Books edited:**

D. Tuncel, Cucurbituril-based functional materials, 289 pp., Royal Society of Chemistry, (2019)

**Articles in refereed journals (SCI journals)**

- 49) A. Khaligh, Y. Sheidaei, **D. Tuncel**, Covalent Organic Framework Constructed by Clicking Azido Porphyrin with Perpropargyloxy-Cucurbit[6]uril for Electrocatalytic Hydrogen Generation from Water Splitting, *ACS Applied Energy Materials*, **2021**, <https://doi.org/10.1021/acsaem.0c03265>.
- 48) A. Khaligh, R. Khan, D. D. Akolpolu Başaran, M. Özkan, **D. Tuncel**, Photoactive Catalytically Self-Threaded 2D-Polyrotaxane Network for Visible Light Activated Antimicrobial Phototherapy, *ACS Applied Polymer Materials*, **2020**, 2, 5726–5734.
- 47) M. Özkan, S. E. Hadi, İ. Tunç, Y. Midilli, B. Ortaç, **D. Tuncel**, "Cucurbit[7]uril-Capped Hybrid Conjugated Oligomer-Gold Nanoparticles for Combined Photodynamic-Photothermal Therapy and Cellular Imaging, *ACS Applied Polymer Materials*, **2020**, 2, 3840-3849 (*Featured as a front cover*).
- 46) J. T.-W. Wang, U. Martino, R. Khan, M. Bazzar, P. Southern, **D. Tuncel**, K. T. Al-Jamal, "Engineering red-emitting multi-functional nanocapsules for magnetic tumour targeting and imaging, *Biomaterials Science*, **2020**, 8, 2590-2599.
- 45) M. Serhatlioglu, Z. Isiksacan, M. Özkan, **D. Tuncel**, C. Elbuken, "Electro-Viscoelastic Migration under Simultaneously Applied Microfluidic Pressure-Driven Flow and Electric Field, *Analytical Chemistry*, **2020**, 92, 6932-6940.
- 44) M. Özkan, Y. Kumar, Y. Keser, S. E. Hadi, **D. Tuncel**, Cucurbit[7]uril-Anchored Porphyrin-Based Multi-Functional Molecular Platform for Photodynamic Antimicrobial and Cancer Therapy, *ACS Applied Bio Materials*, **2019**, 2, 4693–4697.
- 43) M. Özkan, Y. Keser, A. Koc, **D. Tuncel**, Glycosylated porphyrin-cucurbituril conjugate for photodynamic inactivation of bacteria and doxorubicin carriage for anticancer drug delivery, *Journal of Porphyrins and Phthalocyanines*, **2019**; 23: 1406–1413. (*Invited article, Special Issue: Women in Porphyrin Science*)
- 42) M. Özkan, Y. Keser, S. E. Hadi, **D. Tuncel**, A [5]Rotaxane-Based Photosensitizer for Photodynamic Therapy, *Eur. J. Org. Chem.* **2019**, 3534–3541 (*Invited by Prof. Sauvage to contribute the Special Issue:50 Years of Rotaxanes*)

- 41) Y. Kumar, B. Patil, A. Khaligh, S. E. Hadi, T. Uyar, **D. Tuncel**, Novel Supramolecular Photocatalyst Based on Conjugation of Cucurbit[7]uril to Non-Metallated Porphyrin for Electrophotocatalytic Hydrogen Generation from Water Splitting, *Chem.Cat.Chem*, **2019**, 11, 2994–2999. (*Featured as a front cover and cover profile*)
- 40) R. Khan, M. Ozkan, A. Khaligh, **D. Tuncel**, Water-dispersible glycosylated poly(2,5'-thienylene)porphyrin-based nanoparticles for antibacterial photodynamic therapy, *Photochem. Photobiol. Sci.*, **2019**, 18, 1147–1155.
- 39) **D. Tuncel**,  $\pi$ -Conjugated nanostructured materials: preparation, properties and photonic applications, *Nanoscale Adv.*, **2019**, 1, 19-33.
- 38) A. Koc, R. Khan, **D. Tuncel**, "Clicked" Porphyrin-Cucurbituril Conjugate: A Novel Multifunctional Supramolecular Assembly Based on tri-Glycosylated Porphyrin and Monopropargyloxycucurbit[7]uril, *Chem. Eur. J.*, **2018**, 24, 15550-15555. (*Featured as a cover*)
- 37) A. Koc, **D. Tuncel**, Supramolecular Assemblies of Cucurbiturils with Photoactive,  $p$ -conjugated Chromophores, *Isr. J. Chem.* **2018**, 58, 334–342. (*Invited review*).
- 36) T. Balkan, S. Kizir, **D. Tuncel**, One Pot Synthesis of Hybrid Conjugated Oligomer-Ag Nanoparticles, *ACS Omega*, **2017**, 5470–5477.
- 35) T. Erdem, M. Idris, H. V. Demir, **D. Tuncel**, Highly Luminescent CB[7]-based Conjugated Polyrotaxanes Embedded into Crystalline Matrices, *Macromolecular Materials and Engineering*, **2017**, 302, 1700290 (*Featured as a cover*).
- 34) M. Idris, M. Bazzar, B. Guzelturk, H. V. Demir and **D. Tuncel**, Cucurbit[7]uril-threaded fluorene–thiophenebased conjugated polyrotaxanes, *RSC Adv.*, **2016**, 6, 98109-98116.
- 33) Z. Soran-Erdem, T. Erdem, K. Gungor, J. Pennakalathil, **D. Tuncel**, H. V. Demir, High-Stability, High-Efficiency Organic Monoliths Made of Oligomer Nanoparticles Wrapped in Organic Matrix, *ACS Nano*, **2016**, 10 (5), 5333–5339.
- 32) H. Keita, B. Guzelturk, J. Pennakalathil, T. Erdem, H. V. Demir, **D. Tuncel**, Construction of multi-layered white emitting organic nanoparticles by clicking polymers, *Journal of Materials Chemistry*, **2015**, 3, 10277-10284.
- 31) R. Khan, M. Idris, **D. Tuncel**, Synthesis and investigation of singlet oxygen production efficiency of photosensitizers based on meso-phenyl-2,5-thienylene linked porphyrin oligomer and polymers, *Organic and Biomolecular Chemistry*, **2015**, 13, 330-347.
- 30) E. Akhan, **D. Tuncel**, C. Akcali, Nanoparticle labeling of bone marrow-derived rat



Mesenchymal stem cells: their use in differentiation and tracking, *BioMed Research International*, **2015**, Article ID 298430, 9 pages.

29) J. Pennakalathil, A. Özgün, I. Durmaz, R. Cetin-Atalay, **D. Tuncel**, pH-Responsive Near-Infrared Emitting Conjugated Polymer Nanoparticles for Cellular Imaging and Controlled-Drug Delivery, *J. Polym. Sci. A Polym. Chem.*, **2015**, 53, 114-122.

28) S. Gürbüz, M. Idris, **D. Tuncel**, Cucurbituril-based supramolecularly engineered nanostructured materials, *Organic and Biomolecular Chemistry*, **2015**, 13, 330-347.

27) J. Pennakalathil, E. Jahja, E. S. Ozdemir, O. Konu, **D. Tuncel**, Red Emitting, Cucurbituril-Capped, pH-Responsive Conjugated Oligomer-Based Nanoparticles for Drug Delivery and Cellular Imaging, *Biomacromolecules*, **2014**, 15, 3366-3374.

26) B. Guzelturk, P. L. Hernandez-Martinez, V. K. Sharma, Y. Coskun, V. Ibrahimova, **D. Tuncel**, A. O. Govorov, X. W. Sun, Q. Xiong, H. V. Demir, Study of exciton transfer in dense quantum dot nanocomposites, *Nanoscale*, **2014**, 2014, 6, 11387-11394.

25) O. Gezici, I. Durmaz, E. B. Guven, O. Unal, A. Ozgun, R. Cetin-Atalay, **D. Tuncel**, Dual functionality of conjugated polymer nanoparticles as an anticancer drug carrier and a fluorescent probe for cell imaging, *RSC Advances*, **2014**, 4, 1302-1309.

24) T. Erdem, I. Ibrahimova, D. W. Jeon, I. H. Lee, **D. Tuncel**, H. V. Demir, Morphology-Dependent Energy Transfer of Polyfluorene Nanoparticles Decorating InGaN/GaN Quantum-Well Nanopillars, *J. of Phys. Chem. C*, **2013**, 117, 18613-18619.

23) V. Ibrahimova, M.E. Kocak, A.M. Onal, **D. Tuncel**, Optical and electronic properties of fluorene-based copolymers and their sensory applications, *J. Polym. Sci. A Polym. Chem.*, **2013**, 51, 815-823.

22) V. Ibrahimova, S. Ekiz, O. Gezici, **D. Tuncel**, Facile synthesis of cross-linked patchy fluorescent conjugated polymer nanoparticles by click reaction, *Polym. Chem.*, **2011**, 2818-2824.

21) **D. Tuncel**, Non-covalent interactions between the conjugated polymers and carbon nanotubes, *Nanoscale*, Feature Article, **2011**, 3, 3545-3554.

20) **D. Tuncel**, O. Unal, M. Artar, Supramolecular Assemblies Constructed by Cucurbituril-Catalyzed Click Reaction, *Israel J. of Chem.*, 2011, 51, 525-532.

19) E.J. Park, T. Erdem, V. Ibrahimova, S. Nizamoglu, H.V. Demir, **D. Tuncel**, White-Emitting Conjugated Polymer Nanoparticles with Cross-Linked Shell for Mechanical Stability and Controllable Photometric Properties in Color-Conversion LED Applications, *ACS Nano*, **2011**, 5, 2483-2492.

- 18) B. Baykal, V. Ibrahimova, G. Er, E. Bengü and **D. Tuncel**, Dispersion of multi-walled carbon nanotubes in an aqueous medium by water dispersible- conjugated polymer nanoparticles, *Chem. Comm.*, **2010**, 46, 6762-6764.
- 17) **D. Tuncel**, M. Artar, S.B. Hanay, The effect of cucurbit[n]uril on the solubility, morphology and the photophysical properties of nonionic conjugated polymers in an aqueous medium, *J. Polym. Sci. A Polym. Chem.*, **2010**, 48, 4894-4899 (featured as a cover).
- 16) **D. Tuncel**, H.V. Demir, Conjugated polymer nanoparticles, *Nanoscale*, **2010**, 2, 484-494 (*Invited feature article: selected as May, June, July, Top Ten articles*).
- 15) I. O. Ozel, T. Ozel, H. V. Demir, **D. Tuncel** Non-radiative resonance energy transfer in bipolymer nanoparticles of fluorescent conjugated polymers, *Optics Express*, **2010**, 18, 670-684.
- 14) G. Celtek, M. Artar, O. A. Scherman, **D. Tuncel**, Sequence-Specific Self-Sorting of the Binding Sites of a Ditopic Guest by Cucurbituril Homologues and Subsequent Formation of a Hetero[4]pseudorotaxane, *Chem. Eur. J.*, **2009**, 15, 10360-10363.
- 13) I. O. Huyal, T. Ozel, **D. Tuncel**, H. V. Demir, Quantum efficiency enhancement in film by making nanoparticles of polyfluorene, *Optics Express*, **2008**, 16, 13391-13397.
- 12) I. O. Huyal, U. Koldemir, T. Ozel, H. V. Demir, **D. Tuncel**, On the origin of high quality white light emission from hybrid inorganic/organic light emitting materials, *J. Mater. Chem.*, **2008**, 18, 3568-3574.
- 11) **D. Tuncel**, M. Katterle, pH-Triggered threading/dethreading and switching of cucurbit[6]uril on bistable [3]pseudorotaxanes and [3]rotaxanes, *Chem. Eur. J.*, **2008**, 14, 4110-4116.
- 10) I. O. Huyal, T. Ozel, U. Koldemir, S. Nizamoglu, **D. Tuncel**, H. V. Demir, White emitting polyfluorene functionalized with azide hybridized on near-UV light emitting diode for high color rendering index, *Optics Express*, **2008**, 16, 1115-1124.
- 9) **D. Tuncel**, Ö. Özsar, H.B. Tiftik, B. Salih, Molecular switch based on a cucurbit[6]uril containing bistable [3]rotaxane, *Chem. Commun.*, **2007**, 1369-1371.
- 8) **D. Tuncel**, N. Cindir, Ü. Koldemir, [5]rotaxane and [5]pseudorotaxane based on cucurbit[6]uril and anchored to a meso-tetraphenyl porphyrin, *J. Inclusion Phenom. Macrocyclic Chem.*, **2006**, 55, 373-380.

- 7) **D. Tuncel**, H.B. Tiftik, B. Salih, pH-Responsive polypseudorotaxane synthesized through cucurbit[6]uril catalyzed 1,3-dipolar cycloaddition, *J. Mater. Chem.*, **2006**, *16*, 3291-3296.
- 6) **D. Tuncel**, J. R. Mathews, H. L. Anderson, Synthesis of nanowalled polymer microtubes using glass fiber templates, *Adv. Func. Mater.* **2004**, *14*, 851-855.
- 5) **D. Tuncel**, J. H. G. Steinke, Catalytic self-threading: A new route for the synthesis of polyrotaxanes, *Macromolecules*, **2004**, *37*, 288-302.
- 4) J. R. Mathews, **D. Tuncel**, R.M.J. Jakobs, C. D. Bain, H. L. Anderson, Surfaces designed for charge reversal, *J. Am. Chem. Soc.*, **2003**, *125*, 6428-6433.
- 3) **D. Tuncel**, J. H. G. Steinke, The synthesis of [2], [3] and [4]rotaxanes and semirotaxanes, *Chem. Commun.*, **2002**, 496-497.
- 2) **D. Tuncel**, J. H. G. Steinke, Mainchain pseudopolyrotaxanes via post-threading with cucurbituril, *Chem. Commun.*, **2001**, 253-254.
- 1) **D. Tuncel**, J. H. G. Steinke, Catalytically self-threading polyrotaxanes, *Chem. Commun.*, **1999**, 1509-1510.

### Refereed proceedings

- 1) D. Tuncel, Hybrid conjugated oligomer/polymer-metal nanoparticles, 256th ACS National Meeting in Boston, MA, August 19-23, 2018. *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY*. Vol. 256. 1155, AMER CHEMICAL SOC, 2018.
- 2) D. Tuncel, Redox-responsive, crosslinked red emitting conjugated oligomer-based nanoparticles prepared through copper-free azide-alkyne click, 7th EuCheMS Chemistry Congress 26/08/2018 to 30/08/2018 ACC Liverpool, UK
- 3) Tuncel, Donus. "Synthesis and characterization of cucurbit [7] uril-based conjugated polyrotaxanes and further enhancement of their fluorescent quantum yields by embedding them into crystalline matrices." *ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY*. Vol. 254. 1155, AMER CHEMICAL SOC, 2017.
- 4) Y. Onur, O. Oguzhan, E. Akhan, D. Tuncel, R. C. Atalay, Cetin, AE. Cetin, "Multi-resolution super-pixels and their applications on fluorescent mesenchymal stem cells images using 1-D sift merging", 2015 IEEE International Conference On Image Processing (ICIP), Book Series: IEEE International Conference on Image Processing ICIP.
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**CURRENT RESEARCH INTEREST(S)**

- Design and synthesis of novel polymeric/supramolecular/hybrid (organic-inorganic) functional materials for diverse applications.
- Supramolecular photosensitizers for antibacterial and cancer phototherapies.
- Nanostructured materials as electrophotocatalysis for water splitting and other energy related areas.
- Conjugated oligomer and polymer nanoparticles for image guided drug delivery and for the optoelectronic applications.
- Photoactive 2D-polymeric networks for smart wound dressing and healing

**GRANTS**

- 1) “Far-red Sugar-Functionalised Graphene Oxide For Image-Guided Delivery Of Vaccines in vitro and in vivo”, Katip Çelebi-Newton Bilateral Cooperation, UK-Turkey, 100.000 Euros, 2017-2019.
- 2) “The design, synthesis and characterization of supramolecular drug delivery systems and the investigation of their drug loading capacity and release profile”, TUBITAK, COST, Principle Investigator, 120 000 Euros, 2016-2018.
- 3) “The design and synthesis of surface-functionalized cucurbituril-based functional and smart materials” TUBITAK 1001, Principle Investigator, 100.000 Euros, 2014-2017.
- 4) “The design and synthesis of cucurbituril-based supramolecular structures for photonics and biomedical applications” TUBITAK, COST, Principle Investigator, 100.000 Euros, 2012-2014.
- 5) “The development of novel nanoparticles for theranostic applications” TUBITAK, COST, Principle Investigator, 150.000 Euros, 2013-2015.
- 6) ‘Multi functional light emitting’, TUBITAK, Principle Investigator, 20.000 Euros, 2011-2012.
- 7) “The design, synthesis and characterization of smart materials”, TUBITAK, Principle Investigator, September 2005-2008, 100.000 Euros.
- 8) Design, Synthesis and Characterisation of Functional Materials via Supramolecular Assembly”, TUBITAK, Principal Investigator, September 2003, 80.000 Euros.
- 9) ‘The synthesis of cucurbituril encapsulated polypyrrols and polythiophenes’, TUBITAK, Principle Investigator, May 2008-2009, 24 000 YTL.
- 10) Royal Society of Chemistry, J W T Jones Travelling Grant, 2008, 4000 Sterlin.
- 11) Faculty Development Grant, 2004, 1500 Euros.