



Assoc. Prof. Emine Tekin

Photonic Technologies Group
Marmara Research Center (MAM)
The Scientific and Technological Research Council of
Turkey (TUBITAK)
P.O. Box 54, 41470, Gebze, Kocaeli, TURKEY
Phone: +90 262 679 5000 Ext 3707
e-mail: emine.tekin@tubitak.gov.tr

Personal Information

Marital Status : Married
Nationality : Turkish
Birth Place & Date : Kilis, 14.04.1977
Former Surname : Kazancioglu

Education

PhD 2003-2007

Laboratory of Macromolecular Chemistry and Nanoscience, Eindhoven University of Technology (TU/e) and Dutch Polymer Institute, The Netherlands

Thesis Title: Thin Film Libraries of Functional Polymers and Materials Prepared by Inkjet Printing

Advisor: Prof. Dr. Ulrich S. Schubert

Master 1999-2001

Istanbul Technical University, Chemistry (Physical Chemistry Department), Turkey

Thesis Title: NIPAAm Gels Initiated by Ce(IV)-Tegomer H-Si₂111 (Polydimethyl siloxane) and PNIPAAm / PV-Si 2250(Polydimethyl siloxane) Semi Interpenetrating Networks.

Advisor: Prof. Dr. Candan Erbil

Bachelor 1994-1998

Istanbul Technical University, Chemistry, Turkey

Thesis Title: Reactions of β -Ionon with Diazonium Compounds

Advisor: Prof. Dr. Olcay Anac

Working Experience

Senior Scientist and Chief Senior Scientist

TUBITAK, Marmara Research Center (MRC), 2013-present

Senior Scientist

TUBITAK, National Metrology Institute (UME), 2010-2013

Scientist

Cambridge Display Technology, Technology Development Centre, Nov 2007-Feb 2009

Research Assistant

Istanbul Technical University, Physical Chemistry Department, Feb 2001-June 2003

Languages

Native language is Turkish, written and spoken English, basic level Dutch and German.

Scientific Interests

OLED, Thin film devices, Conjugated Polymers, Optical Properties of Fluorescent Thin Films, Functional Materials, Inkjet Printing, Nano-materials.

Scientific Papers

(28) R. Kaçar, S. P. Mucur, F. Yıldız, S. Dabak and **E. Tekin***

Highly efficient inverted organic light emitting diodes by inserting a zinc oxide/polyethyleneimine (ZnO:PEI) nano-composite interfacial layer

Nanotechnology **2017**, 28, 245204

(27) O. Sahin, M. E. Cinar, **E. Tekin**, S. P. Mucur, S. Topal, G. Suna, M. S. Eroglu, T. Ozturk

White Light Emitting Polymers Possessing Thienothiophene and Boron Units

ChemistrySelect **2017**, 2, 2889

(26) A. Saaidia, M.A. Saidani, S. Romdhane, A. Ben Fredj, D.A.M. Egbe, H. Bouchriha **E. Tekin**

Morphology-dependent exciton diffusion length in PPE-PPVs thin films as revealed by a Forster mechanism based-study

Synthetic Metals **2017**, 226,177.

(25) S. Odabas, E. Tekin, F. Turksoy, C. Tanyeli

Synthesis of new N-heteroaromatic attached tetraphenylethenebased luminogens having aggregation induced emission and their applications in organic light emitting diodes

Journal of Luminescence, **2016**, 176, 240.

(24) Novel organoboron compounds derived from thieno[3,2-b]-thiophene and triphenylamine units for OLED devices

T. Ozturk, G. Türkoglu, M. E. Cinar, A. Buyruk, E. Tekin, S. P. Mucur, K. Kaya

Journal of Materials Chemistry C **2016**, 4, 645.

(23) S.P. Mucur, T. A. Tumay, S. Birdogan, S. E. San, E. Tekin,

Triangular-shaped zinc oxide nanoparticles enhance the device performances of inverted OLEDs

Nano-Structures & Nano-Objects, **2015**, 1, 7.

- (22) S. P. Mucur, E. Tekin, S. E. San, G. Utkan, A. A. Denizci, Ö. Duygulu, H. Ü. Öztürk, A novel PLED architecture containing biologically synthesized gold nanoparticles and ultra thin silver layer,
Optical Materials, **2015**, 47, 297.
- (21) S. P. Mucur, D. Lenkeit, I. Kanelidis, S. E. San, E. Holder, E. Tekin, Enhancing the device performance of a blue light-emitting copolymer using CdSe/ZnS quantum dots,
Journal of Polymer Science Part B: Polymer Physics, **2014**, 52, 147
- (20) A. Kimyonok, E. Tekin, G. Haykir, F. Turksoy
Synthesis, photophysical and electroluminescence properties of anthracene-based green-emitting conjugated polymers.
Journal of Luminescence, **2014**, 146,186.
- (19) I. Osken, A.S.Gundogan, E. Tekin, M. S. Eroglu, T. Ozturk
Fluorene–Dithienothiophene-S,S-dioxide Copolymers. Fine-Tuning for OLED Applications
Macromolecules **2013**, 46, 9202.
- (18) S. Odabas, E. Tekin, F. Turksoy, C. Tanyeli
Inexpensive and valuable: a series of new luminogenic molecules with the tetraphenylethene core having excellent aggregation induced emission properties.
Journal of Materials Chemistry C, **2013**,1, 7081.
- (17) G. Haykir, E. Tekin, T. Atalar, F. Turksoy
Highly efficient non-doped blue organic light emitting devices based on anthracene-pyridine derivatives.
Thin Solid Films, **2013**, 548, 171
- (16) Emine Tekin,
Influences on the white emission and stability of single layer electroluminescent devices
Journal of Luminescence, **2013**, 144, 69
- (15) S. P. Mucur, T. A. Tumay, S. E. San, E. Tekin
Enhancing effects of nanoparticles on polymer-OLED performances
J.Nanopart.Res. **2012**, 14, 1214
- (14) D. G. Colak, D. A. M. Egbe , E. Birckner, S. Yurteri, I. Cianga, E. Tekin, U. S. Schubert, Y. Yagci
Photophysical properties of PPP and PPV derivatives bearing polystyrene or polycaprolactone as side groups
Eur. Polym. J. **2009**, 45, 940
- (13) E. Tekin, D. A.M. Egbe, J. M. Kranenburg, C. Ulbricht, S. Rathgeber, E. Birckner, N. Rehmman, K. Meerholz, U. S. Schubert
Effect of Side Chain Length Variation on the Optical Properties of PPE-PPV Hybrid Polymers
Chem. Mater. **2008**, 20, 2727

- (12) E. Tekin, P. J. Smith and U. S. Schubert
Inkjet Printing of Functional Materials: From Polymers to Nanoparticles and Molecules
Soft Mater., **2008**, *4*, 703
- (11) D. A. M. Egbe, E. Tekin, E. Birckner, A. Pivrikas, N. S. Sariciftci, U. S. Schubert
Effect of styryl side groups on the photophysical properties and hole mobility of PPE-PPV systems
Macromolecules **2007**, *40*, 7786
- (10) E. Tekin, P. J. Smith, S. Hoepfener, A. M. J. van den Berg, A. S. Susha, A. L. Rogach, J. Feldmann, U. S. Schubert
Inkjet printing of luminescent CdTe nanocrystal/polymer composites
Adv. Funct. Mater. **2007**, *17*, 23
- (9) E. Tekin, E. Holder, D. Kozodaev, U.S. Schubert
Controlled pattern formation of MEH-PPV by inkjet printing
Adv. Func. Mater. **2007**, *17*, 277
- (8) E. Tekin, H. Wijlaars, E. Holder, D. A. M. Egbe, U. S. Schubert.
Film thickness dependency of the emission colors of novel PPE-PPVs in the inkjet printed libraries
J. Mater. Chem. **2006**, *16*, 4294
- (7) V. Marin, E. Holder, R. Hoogenboom, E. Tekin, U. S. Schubert
Light-emitting Iridium(III) and Ruthenium(II) polypyridyl complexes containing quadruple hydrogen-bonding moieties
Dalton Trans. **2006**, *13*, 1636
- (6) V. Marin, E. Holder, M. M. Wienk, E. Tekin, D. Kozodaev and U. S. Schubert
Inkjet printing of electron donor/acceptor blends: towards bulk heterojunction solar cells
Macromol. Rapid Commun. **2005**, *26*, 319
- (5) E. Tekin, E. Holder, V. Marin, B.-J. de Gans and U. S. Schubert
Ink-Jet printing of luminescent Ruthenium- and Iridium-containing polymers for applications in light-emitting devices
Macromol. Rapid Commun. **2005**, *26*, 293
- (4) E. Tekin, B.-J. de Gans, U. S. Schubert
Ink-jet printing of polymers - from single dots to thin film libraries
J. Mater. Chem. **2004**, *14*, 2627
- (3) B.-J. de Gans, E. Kazancioglu, W. Meyer, U. S. Schubert
Inkjet printing polymers and polymer libraries using micropipettes
Macromol. Rapid Commun. **2004**, *25*, 292
- (2) C. Erbil, E. Kazancioglu, N. Uyanik
Synthesis, characterization and thermoreversible behaviours of poly(dimethyl siloxane)/poly(N-isopropyl acrylamide) semi-interpenetrating networks

Eur. Polym. J. **2004**, *40*, 1145.

(1) E. Kazancioglu, C. Erbil

Synthesis and characterization of poly(N-isopropyl acrylamide) gels prepared by using $(\text{NH}_4)_2\text{Ce}(\text{NO}_3)_6$ Tegomer H-Si 2111 redox pair

Polym. Bull. **2003**, *50*, 175.

Patents

(1) INTERLAYER FORMULATION FOR FLAT FILMS,
WO 2010079330 A1

Patent Holder: Cambridge Display Technology Limited

Inventors: Simon Goddard, Paul Wallace, Emine Tekin

(2) INTERLAYER FORMULATION FOR FLAT FILMS,
WO 2010079331 A1

Patent Holder: Cambridge Display Technology Limited

Inventors: Simon Goddard, Paul Wallace, Emine Tekin

(3) POLY(THIENOTHIOPHENYLBORANE)S AND
POLY(DITHIENOTHIOPHENYLBORANE)S FOR WHITE LIGHT EMITTING
DIODES,

WO 2015033187-A1

Patent Holder: TUBITAK

Inventors: T. Ozturk, E. Tekin, O. Sahin, E. B. Sevinis, C. Sahin, M. S. Eroglu, A. C. Goren, M. E. Cinar, G. Turkoglu.

(4) THIENOTHIOPHENE/DITHIENOTHIOPHENE-TRIPHENYLAMINE
/TETRAPHENYLETHYLENE DERIVATIVES FOR ORGANIC LIGHT EMITTING
DIODES,

WO 2016 132179 A1,

Patent Holder: TUBITAK

Inventors: T. Ozturk, A. Buyruk, E. Tekin, S. P. Mucur, A. C. Goren.

(5) THIENOTHIOPHENE AND DITHIENOTHIOPHENE – BORON (DONOR-
ACCEPTOR) BASED MATERIALS FOR ORGANIC LIGHT EMITTING DIODES,
WO 2016132180 A1

Patent Holder: TUBITAK

Inventors: T. Ozturk, A. Buyruk, G. Turkoglu, E. Tekin, S. Piravadili, M. E. Cinar, A. C. Goren.

Proceedings

- (4) O. Ozdemir, S. P. Mucur, E. Tekin, K. Kutlu
Admittance analysis in (PPE-PPV) polymer (AnE-PVstat) light emitting diodes,
Proceedings of SPIE - The International Society for Optical Engineering 8829:88292B ·
September 2013
- (3) S. P. Mucur, O. Ozdemir, E. Tekin, K. Kutlu
Electroluminescence Property of Organic Light Emitting Diode (OLED)
3RD INTERNATIONAL ADVANCES IN APPLIED PHYSICS AND MATERIALS
SCIENCE CONGRESS, Volume: 1569
April 2013
- (2) E. Holder, V. Marin, E. Tekin, D. Kozodaev, M. A. R. Meier, B. G. G. Lohmeijer and
U. S. Schubert
Novel iridium complexes with polymeric side-chains
Mater. Soc. Symp. Proc. **2004**, 846, DD4.4. (MRS Ribbon Award)
- (1) U. S. Schubert, B.-J. de Gans, E. Kazancioglu
Combinatorial and high-throughput polymer research: composition of complete workflows.
PMSE Preprints **2004**, 90, 643

Selected Posters and Oral Presentations

- (11) Rifat Kaçar, Selin P. Mucur, Fikret Yildiz, Salih Dabak, Emine Tekin
Enhanced Electron Injection Layer for Highly Efficient Inverted OLEDs
12th International Nanoscience and Nanotechnology Conference, 03-05 June 2016,
Darıca-Kocaeli / TURKEY (Poster)
- (10) E. Tekin, S. P. Mucur, T. A. Tumay
İletken Nano Parçacıkların OLED Performansına Etkileri.
26. Ulusal Kimya Kongresi 2012, Muğla/ TURKEY (Poster)
- (9) S. P. Mucur, N. Babayiğit, E. Tekin, S. E. San
Organik Işık Yayan Diyotlarda Yarı Ömür ve Kararlılık.
Fotonik 2012: 14. Ulusal Optik, Elektro-Optik ve Fotonik Çalıştayı, 2012, İstanbul
(Poster)
- (8) E. Tekin, H. Wijlaars, E. Holder, D. A. M. Egbe and U. S. Schubert
Inkjet Printing of Luminescent Polymer Thin Films
Plastic Electronics 23-24 October 2006 Frankfurt, Germany (Poster)

(7) E. Tekin, E. Holder, H. Wijlaars, D. A. M. Egbe, U. S. Schubert *Inkjet printing luminescent polymers based on PPV's for LED applications (lecture)*

The International Conference on Organic Electronics 20 – 22 June 2006 Philips High Tech Campus, Eindhoven, the Netherlands (Oral presentation)

(6) E. Tekin, E. Holder, V. Marin and U. S. Schubert

Inkjet printing of functional polymer and nanoparticle libraries

Mater. Res. Soc. Symp, 28 November -2 December, 2005, Boston, MA, USA, (Poster)

(5) E. Tekin, E. Holder, V. Marin, U. S. Schubert

Inkjet printing of functional polymer libraries for combinatorial studies

Gordon Research Conference on Combinatorial Material Research, 14-19 August 2005 Oxford, UK (Poster)

(4) E. Tekin, E. Holder, M. Koetse, F. Dennard, H. Schoo, A. L. Rogach,

A. Susha, B.-J. de Gans, U. S. Schubert

Inkjet printing of luminescent polymers and nanoparticles

2nd International workshop on inkjet printing of polymers and functional materials, 29-30 June 2005, Eindhoven, the Netherlands (Oral presentation)

(3) E. Tekin, E. Holder, M. Koetse, F. Dennard, H. Schoo, B.-J. de Gans, U. S. Schubert

Inkjet printing of functional materials for applications in polymer light-emitting and solar cell devices

International Conference on Organic Electronics, 21-23 June 2005, Eindhoven, the Netherlands (Oral presentation)

(2) E. Tekin, E. Holder, B.-J. de Gans, V. Marin, U. S. Schubert

inkjet printing and investigation of thin film libraries

Dutch Polymer Days, 7-8 February 2005, Lunteren, the Netherlands (Oral presentation)

(1) E. Tekin, E. Holder, V. Marin, U. S. Schubert, M. Koetse, P. Rensing, H. Schoo

Ink-jet Printing of Luminescent Ruthenium- and Iridium- Containing Polymers for LED and Solar Cell Applications

Plastic Electronics, 9 September 2004, Eindhoven, the Netherlands (Poster)