



Seda Demirel Topel

PERSONAL INFORMATIONS

E-mail : seda.demireltopel@antalya.edu.tr
Address : Antalya Bilim Universitesi, ıplakli Mah. Akdeniz Bulvarı No:290
Döşemealtı/Antalya
Telephone : +90 242 245 03 48

EDUCATION

- 2015-2017** : **POST-DOC researcher (Fabrication of Multifunctional Nanoparticles, drug delivery)**
Akdeniz University, Department of Material Science and Engineering, Turkey
- 2013-2014** : **POST-DOC (Hybrit Biomaterials) (15 months)**
Sveriges Lantbruksuniversitet, Department of Chemistry and Biotechnology, Uppsala
Sweden
- 2009-2013** : **PhD (Organic Chemistry)**
- Akdeniz University, Department of Chemistry
 - Bilkent University, UNAM (National Nanotechnology and Research Center)
- Erasmus Training (Organic Chemistry, 6 months):** Lund University, Kemicentrum
Lund Sweden
- 2006-2009** : **Master (Organic Chemistry)**
Akdeniz University, Department of Chemistry
- 2002-2006** : **Bachelour (Chemistry)**
Akdeniz University, Department of Chemistry

EXPERIENCE OF RESEARCH

- 2016-2018** : **a-1002 TUBITAK- Turkish Research Fund (Project No: 116-Z-164) (Researcher, Akdeniz University, Turkey)**
Title: Design and synthesis of new generation nanoparticles for biomedical imaging systems
Responsible for: Design, synthesis and characterization of $\text{Fe}_3\text{O}_4\text{-NaGdF}_4$ upconversion

nanoparticles

Supervisor: Prof. Meltem Asilturk

b- Scientific Investigation Funding unit of Akdeniz University (Project: FBA-2016-1808)

Title: Synthesis and characterizations of luminescence cellulose micro/nanocapsules for drug delivery systems

Responsible for: Design, synthesis, characterization and drug delivery studies of those biomaterials

2013-2014 (15 months) : European Project (EU-FP 7) (Researcher, SLU, Uppsala, Sweden)(Project No:309373)

Title: EuRARE

Responsible for: Synthesis and characterizations of bidentate ligands conjugated to $\text{Fe}_3\text{O}_4@SiO_2$ and $\text{Fe}_3\text{O}_4@SiO_2@TiO_2$ nanoparticles for sequestration of trivalent ions from solutions

Supervisors: Doc. Dr. Gulaim Seisenbaeva and Prof. Vadim Kessler

2010-2013 :TUBITAK Turkish Research Fund (Researcher, Bilkent University, UNAM, Ankara, Turkey) (Project No: 110T076)

Title: Development of BODIPY conjugated NaYF_4 upconversion nanoparticles (UCNPs) for photodynamic therapy

Responsible for: Synthesis and characterizations of Near Infrared (NIR) responsive photosensitizers and UCNPs

Supervisor: Prof. Engin U. Akkaya

2009-2012 :Scientific Investigation Project of Akdeniz University (Researcher, Antalya, Turkey) (Project No: 2011.01.0115.002)

PhD Thesis: Synthesis of some Bodipy photosensitizers and their characterizations by spectroscopic techniques ($^1\text{H-NMR}$, $^{13}\text{C-NMR}$, FTIR and fluorescence spectrometer)

Supervisor: Doc. Dr. Günseli Turgut Cin, (**Co-supervisor:** Prof. Dr. Engin U. Akkaya)

2009 (6 months) :Erasmus Exchange Program, (Researcher-Lund University, Dept. Of Organic Chem. Kemicentrum) (Project No: VR-621.2005.6274)

Title: Bioactive secondary metabolites

Responsible for: Synthesis of triazoloquinazoline derivatives as ligands for the benzodiazepine binding site of the GABA_A receptor

Supervisor: Prof. Olov Sterner, (**Co-supervisor:** Dr. Carlos Solano)

2006-2009 : Scientific Investigation Project of Akdeniz University (Researcher, Antalya, Turkey) (Project No: 2007.01.0105.001)

Master Thesis: Synthesis of novel ferrocenyl containing heterocyclic compounds for potential biological applications

Supervisor: Doc. Dr. Günseli Turgut Cin

FIELDS OF RESEARCH

- **Synthesis and applications of micro/nano capsules for drug delivery**
- **Synthesis of luminescence upconversion nanoparticles for bio-imaging applications**
- **Synthesis of NIR responsive organic molecules for photodynamic therapy**
- **Synthesis of SiO_2 , iron oxide, titaniumdioxide, and upconversion nanoparticles and their hybrid nanocomposites for novel theranostic nanoplatfoms**

AWARDS

March 2013-

May 2014 (15 months): **Post-Doc Scholarship (EU-FP 7)**

Swedish University of Agricultural Sciences (SLU University), Uppsala, İsveç
Supervisors: Prof. Vadim Kessler, Doc. Dr. Gulaim Seisenbaeva

2009 (Feb-August)

: **Erasmus Exchange Program (6 months)**

Kemicentrum, Department of Organic Chemistry, Lund, Sweden

FOREIGN LANGUAGE

English : Advanced (reading, writing& understanding)

German : Intermediate

Swedish : Beginning

SEMINARS

2014 June : **Synthesis of BODIPY conjugated upconverting nanoparticles for photodynamic therapy**
National Chem. Congress, Bilkent University, Ankara.

2013 Jan. : **PhD Thesis: Synthesis of Bodipy conjugated Upconverting nanoparticles for Photodynamic Therapy**
Akdeniz University, Department of Chem. , Turkey

2009 Agus. : **Synthesis of novel heterocyclic compounds for GABA_A**
Kemicentrum, Lund University, Lund, Sweden

2009 Jan : **Master Thesis: Synthesis of some ferrocenyl substituted N-acetyl-2-pyrazoline and diferrocenyl substituted pyrazolo[4,3-c]quinoline derivatives for potential antitumor activities,** Akdeniz University, Department of Chem. , Turkey

2008 Ocak : **Synthesis of biological active ferrocenyl substituted heterocyclic compounds**
Akdeniz University, Department of Chem. , Turkey

2006 June : **Stem Cells (Bachelour)**
Akdeniz University, Department of Chem. , Turkey

PUBLICATIONS

1. N. Nohut Maslakçı, E. Eren, **S. Demirel Topel**, G. Turgut Cin, A. Uygun Oksuz, *Electrospun Fibers of Plasma Modified Chitosan/PET/Ferrocenyl Substituted N-Acetyl-2-Pyrazoline Derivatives. J. Applied Polymer Science.* **2016**, DOI:10.1002/APP.43344
2. S. Erbas Cakmak, F. Pir Cakmak, **S. Demirel Topel**, T. B. Uyar, E. U. Akkaya, *Selective photosensitization through an AND logic response: optimization of the pH and glutathione response of activatable photosensitizers. Chem Commun.* **2015**, 51, 12258.
3. **S. Demirel Topel**, Ö. Topel, R.B. Botancıoğlu, A. T. Koparal, **Synthesis and characterization of Bodipy**

functionalized magnetic iron oxide nanoparticles for potential biological applications. *Colloids and Surfaces B: Biointerfaces*, **2015**, 128, 245-53.

4. E. Polido Legaria, **S. Demirel Topel**, V. Kessler, G. A. Seisenbaeva, **Molecular insights into the selective action of magnetically removable complexone-grafted adsorbent.** *Dalton Trans.* **2015**, 44 (3), 1273-82.
5. **S. Demirel Topel**, E. Polido Legaria, C. Tiseanu, J. Rocha, V. Kessler, G. A. Seisenbaeva, **Hybrid silica nanoparticles for sequestration and luminescence detection of rare earth elements.** *J. Nanoparticle Research*, **2014**, 16, 2783-2800.
6. G. A. Seisenbaeva, **S. Demirel Topel**, V. Kessler, **Molecular single approach to single source precursors of perovskite stanne material.**, *Polyhedron*, **2014**, 81, 21-26.
7. **S. Demirel Topel**, G. Turgut Cin, E. U. Akkaya, **Near IR excitation of heavy atom free Bodipy photosensitizers through the intermediacy of upconverting nanoparticles.** *Chem. Commun*, **2014**, 50, 8896-8899.
8. G. Turgut Cin, G. Verep, **S. Demirel Topel**, V. Ciger, **An efficient synthesis of ferrocenyl containing 1,3,4-oxadiazole derivatives via oxidative cyclization reaction.** *Chemistry of Heterocyclic Comp.*, **2013**, 49 (7), 1061-1067.
9. B. R. Bostancıoğlu, **S. Demirel Topel**, G. Turgut Cin, T. Koparal, **Novel ferrocenyl-containing N-acetyl-2-pyrazolines inhibit in vitro angiogenesis and human lung cancer growth by interfering with F-actin stress fiber polymerization.** *Drug and Chem. Toxicol.*, **2013**, 36(4), 484-495.
10. G. Turgut Cin, **S. Demirel Topel**, A. Çakıcı, A. Ozek Yıldırım, A. Karadağ, **Synthesis, crystal structure and thermal properties of N-acetyl-3-(2-furyl)-5-ferrocenyl-2- pyrazoline and N-acetyl-3-(2-thienyl)-5-ferrocenyl-2-pyrazoline.** *J. Chem. Crystallogr.* **2012**, 42, 372-380.
11. G. Turgut Cin, **S. Demirel**, A. Çakıcı, **Synthesis of Novel Ferrocenyl-Containing Pyrazolo[4,3-c]quinolines via Modified Pictet-Spengler Reaction.** *J. Organomet. Chem*, **2011**, 696, 613-621.
12. G. Turgut Cin, **S. Demirel**, N. Karadayı, and O. Büyükgüngör, **1-Acetyl-5-ferrocenyl-3-phenyl)-2-pyrazoline.** *Acta Crystallographica Section E* **2009**; E64,m127.
13. G. Turgut Cin, **S. Demirel**, N. Karadayı, and O. Büyükgüngör, **1-Acetyl-3-ferrocenyl-5-(2-nitrophenyl)-2-pyrazoline.** *Acta Cryst. Sec.E* **2008**; E64, m514.

SCIENTIFIC MEETINGS AND CONGRESS

1. **S. Demirel Topel**, M. Asiltürk, Ö. Topel “Development of multifunctional cellulose acetate Micro/Nanocapsules as pH-responsive drug carriers” NanoTR-13, p:37, 22-25 Ekim 2017, Belek, Antalya
2. **S. Demirel Topel**, N. Doğan Bingölbali, B. Ates, M. Asiltürk, Magnetic-Upconversion NaGdF₄, Yb, Er luminescence nanocomposites: synthesis, magnetization, optical properties and cytotoxicity. NanoTR-13, p:167, 22-25 Ekim 2017, Belek, Antalya.
3. Ö. Topel, **S. Demirel Topel** and M. Asiltürk, Nd-sensitized upconversion nanoparticles for bioimaging applications, NanoTR-13, p: 346, 22-25 Ekim 2017, Belek, Antalya.
4. G.Turgut Cin, S.Demirel Topel, N.Nohut, E.Eren, A.Uygun Oksuz, “**Plasma Modified Chitosan/N-Acetyl-2-Pyrazoline Derivative Nanofibers**”, Conference Paper, 2015 *IEEE International Conference on Plasma*

Sciences (ICOPS), DOI: 10.1109/PLASMA.2015.7179648, , Belek-Antalya, 567 pp, 24-28 May 2015.

5. E. Polido Legaria, S. Demirel Topel, V. Kessler, G. A. Seisenbaeva “**Organic-ligand grafted magnetic nanoadsorbents for extraction and seperation of REE**. *ERES (1t conference on european rare earth resources)*, Milos Island, Greek. 2014.

6. Seda Demirel Topel. “**Synthesis of BODIPY conjugated upconverting nanoparticles for photodynamic therapy**” *National Chem Congress*, Bilkent University, Ankara. 2014.

7. R. Beklem Bostancıoğlu, A. Tansu Koparal, Seda Demirel Topel, Günseli Turgut Cin. “**A new hope for treatment of lung cancer: Ferrocenyl containing N-acetyl-2-pyrazolines**” *Congress of 2nd production of drug chemicals, technology and standartization* March 2014.

8. Seda Demirel Topel, Önder Topel. **Synthesis of covalently bonded Upconversion-TiO₂ Core-Shell nanoparticles and their characterization by HR-TEM, XRD, XPS and confocal raman microscopy**. *2nd Nordic Conference on Vibrational Spectroscopy*, Uppsala, Sweden. October, 2013.

9. Seda Demirel Topel, Önder Topel, Engin U. Akkaya. **BODIPY-Conjugated Magnetic Nanoparticles for Bioimaging Applications**. *E-MRS 2012, Autum Meeting*, Warsaw, Poland. September 2012.

10. Gulcan Vercep, Seda Demirel Topel, Velican Ciger, Gunseli Turgut Cin. **Efficient synthesis and characterization of novel ferrocene-containing 1,3,4- oxadiazole derivative**. *13th Tetrahedron Symposium*, Amsterdam, Hollanda. Haziran 2012.

11. Seda Demirel Topel, Marta Vico Solano, Carlos Solano Arribas, Olov Sterner. **Design, synthesis and characterization of 9-bromo-2-p-tolyl-[1,2,4]triazolo[4,3 c] quinazoline- 3,5(2h-6h)-dione**. *7th Euroasian Meeting On Heterocyclic Chemistry*, Boğaziçi University, İstanbul. June 2012.

12. Seda Demirel Topel, Marta Vico Solano, Carlos Solano Arribas, Olov Sterner **Synthesis of novel triazoloquinazolinedione derivatives using Pd-catalyzed Negishi cross- coupling reaction**. *7th Euroasian Meeting On Heterocyclic Chemistry*, Boğaziçi University, İstanbul. June 2012.

13. Seda Demirel, Abban Cakıcı, Gunseli Turgut Cin. **Synthesis of biological active ferrocenyl substituted pirazolo[4,3-c]quinolines** *IMMPC-ISPC Meeting*, Hacettepe University, Ankara. September 2010.

14. Abban Cakıcı, Seda Demirel, Gunseli Turgut Cin. **Synthesis of Potential Biological Active 2-Pyrazolines**. *XI. National Spectroscopy Congress*, Ankara, Turkey. June 2009.

As an participant,

1. 24th National Chemistry Congress Zonguldak, Turkey. 2009.
2. NEME Days , Pharmaceutical Sciences, Copenhagen University, Denmark. 2009.
3. Trends in Organic Chemistry Lund, Sweden 2009.
4. 6th AFMC International Medicinal Chemistry Symposium Istanbul. 2007