



**Seha Tirkeş, Ph.D.**

Atılım University  
Department of Chemical Engineering and Applied Chemistry  
06830 İncek, Gölbaşı, Ankara/TURKEY  
Seha.tirkes@atilim.edu.tr  
Tel: +90 312 586 8390

**PERSONAL**

|                       |            |
|-----------------------|------------|
| <b>Date of Birth</b>  | 26/06/1977 |
| <b>Place of Birth</b> | -          |

**EDUCATION**

|      |   |
|------|---|
| 2008 | Middle East Technical University, Polymer Science and Technology, Ph.D. |
| 2001 | Middle East Technical University, Chemistry, M.S.                       |
| 1999 | Middle East Technical University, Chemistry, B.S.                       |

**ACADEMIC POSITIONS**

|                  |   |
|------------------|---|
| <b>2016-</b>     | Assoc. Prof., Department of Chemical Engineering and Applied Chemistry, Atılım University, Ankara, TURKEY |
| <b>2010-2016</b> | Asst. Prof., Department of Chemical Engineering and Applied Chemistry, Atılım University, Ankara, TURKEY  |
| <b>2003-2010</b> | Instructor, Department of Chemical Engineering and Applied Chemistry, Atılım University, Ankara, TURKEY   |
| <b>2001-2003</b> | Res. Ass., Department of Chemical Engineering and Applied Chemistry, Atılım University, Ankara, TURKEY    |

**RESEARCH INTERESTS**

|           |                    |
|-----------|--------------------|
| <b>1.</b> | Polymer composites |
| <b>2.</b> | Thermoplastics     |
| <b>3.</b> | Polymer processing |
| <b>4.</b> | Nanocomposites     |

**PUBLICATIONS**

|           |   |
|-----------|---|
| <b>1.</b> | Oktay Acar, Serhat Varis, Tugba Işık, Seha Tirkeş, Mustafa M. Demir, "Synthesis and characterization of novel high temperature structural adhesives based on nadic end capped MDA-BTDA-ODA copolyimide" Materials Research Express, 5, 10, 2018,        |
| <b>2.</b> | Melek Pamuk Algi, Zahide Oztas, Seha Tirkeş, Atilla Cihaner, Fatih Algi, Atomistic Engineering of Chemiluminogens: Synthesis, Properties and Polymerization of 2,3-Dihydro-Pyrrolo[3,4-d] Pyridazine-1,4-Dione Scaffolds, Journal of Fluorescence, 2016 |
| <b>3.</b> | Esra Oğuztürk, Seha Tirkeş, Ahmet M. Önal, Electrochemical synthesis of new conjugated polymers based on carbazole and furan units, Journal of Electroanalytical Chemistry, Volume 750, 1 August 2015, Pages 1-8  |
| <b>4.</b> | Melek Pamuk Algi, Seha Tirkes, Salih Ertan, Emine Gul Cansu Ergun, Atilla Cihaner, Fatih Algi T., "Design and synthesis of new 4,4'-difluoro-4-bora-3a,4a-diaza-s-indacene  |

|     |  |
|-----|--|
|     | based electrochromic polymers ", Electrochimica Acta, Volume 109, 30 October 2013,Pages 766-774  |
| 5.  | Melek Pamuk Algi, Zahide Öztaş, Seha Tirkes, Atilla Cihaner, Fatih Algi, "A new electrochromic copolymer based on dithienylpyrrole and EDOT ", Organic Electronics, Volume 14, Issue 4, April 2013, Pages 1094-1102                                      |
| 6.  | Seha Tirkeş, Jetmire Mersini, Zahide Öztaş, Melek Pamuk Algi, Fatih Algi, Atilla Cihaner, "A new processable and fluorescent polydithienylpyrrole electrochrome with pyrene appendages", Electrochimica Acta, Volume 90, 15 February 2013, Pages 295-301 |
| 7.  | Melek Pamuk, Seha Tirkeş, Atilla Cihaner, Fatih Algi, "A new low-voltage-driven polymeric electrochromic ", Polymer, Volume 51, Issue 1, 6 January 2010, Pages 62-68.  |
| 8.  | Seha Tirkeş, M. Ahmet Önal, "Electrochemical copolymerization and characterization of dianilines linked by polyether bridge with aniline", Journal of Applied Electrochemistry, April 2010, Volume 40, Issue 4, pp 865-873.                              |
| 9.  | Seha Tirkeş, M. Ahmet Önal, " Electrosynthesis of polyfuran in acetonitrile–boron trifluoride–ethyl ether mixture and its device application, ", Journal of Applied Polymer Science, Volume 103, Issue 2, 15 January 2007, Pages: 871–876                |
| 10. | Seha Tirkeş, Atilla Cihaner, Ahmet M Önal, "Electrochemical polymerization and characterization of polyether-substituted aniline derivatives", Polymer International Volume 56, Issue 8, pages 1040–1044, August 2007                                    |
| 11. | Seha Tirkeş, Atilla Cihaner, Ahmet M Önal, "Synthesis and polymerization of 2- and 3-substituted thiophene derivatives linked by polyether bridges, Journal of Electroanalytical Chemistry, Volume 573, Issue 1, 15 November 2004, Pages 189–196         |
| 12. | Atilla Cihaner, Seha Tirkeş, Ahmet M. Önal, "Electrochemical polymerization of 9-fluorenone", Journal of Electroanalytical Chemistry, Volume 568, 1 July 2004, Pages 151–156.  |
| 13. | S Tirkeş, L Toppare, S Alkan, U Bakir, A Önen, Y Yağcı, "Immobilization of glucose oxidase in polypyrrole/polytetrahydrofuran graft copolymers, International Journal of Biological Macromolecules", Volume 30, Issue 2, 8 April 2002, Pages 81–87       |

## PROJECTS

|    |  |
|----|--|
| 1. | Synthesis of Conducting Polymers Functionalized by Crown Ethers and Polyethers Groups and Investigation of Their Ion Selectivity Properties, TÜBİTAK 1001, 104T423 |
| 2. | Synthesis and Polymerization of Monomers possessing Chemiluminescence Properties and Their Application Areas, TÜBİTAK 1001, 106T355                                |
| 3. | Design and Synthesis of Novel Compounds Based on Donor-Acceptor Systems and the Applications of Their Conducting Polymers, TÜBİTAK COST Uluslararası, 108T959      |
| 4. | Terpiridin Ünitesi İçeren Yeni Bir Polimer Elektrokromun Sentezi ve Özelliklerini Tanımlanması, TÜBİTAK 1002, 110T488  |
| 5. | Metal İyonlarına Duyarlı Fonksiyonel Birim İçeren Yeni Bir Elektroaktif Konjüge Polimer Sentezi ve Karakterizasyonu, ATÜ-BAP-1011-06                               |
| 6. | Atılım Optoelectronic Materials and Solar Energy Laboratory (ATOMSEL), ATÜ-ALP-1011-0  |
| 7. | Luminesans Ve Elektroaktif Yeni Bir Molekülün Sentezi, Karakterizasyonu ve Uygulamaları, ATÜ-BAP-A-1314-03   |

## CONFERENCE PRESENTATIONS

|    |  |
|----|--|
| 1. | Tirkeş S., Önal. A.M, "Furan'ın asetonitril-borontriflorür-etil eter çözücü karışımında elektrokimyasal yöntemle polimerleştirilmesi",. "6. Elektrokimya Günleri, Eskişehir", (2005) |
| 2. | S. Tirkeş, A. Cihaner, A. M. Önal, Eter Köprülü Anilinlerin Elektrokimyasal Metodla Polimerleştirilmesi ve Karakterizasyonu. "7. Elektrokimya Günleri", (2006)                       |

|     |   |
|-----|---|
| 3.  | Tirkes S., Cihaner A., Pamuk M. ve Algi F., "Ambipolar Donor-Acceptor Materials Based on EDOT and Naphthalene Fused Thienopyrazine and Benzopyrazine Units", 8 th International Electrochemistry Meeting, Antalya/Turkey, 31, 2009.                                 |
| 4.  | Pamuk M., Algi F., Tirkes S. ve Cihaner A., "A Novel Donor-Acceptor Type Ambipolar Material Based On Acenaphtho[1,2-b] quinoxaline" 8 th International Electrochemistry Meeting, Antalya/Turkey, 152, 2009  |
| 5.  | Pamuk, M., Tirkeş, S., Cihaner, A., Algi, F., "Düşük Voltaj Sürümlü Yeni Bir Polimerik Elektrokrom", 24. Ulusal Kimya Kongresi, Zonguldak, 2010   |
| 6.  | Seha Tirkeş; Atilla Cihaner; Jetmire Mersini; Zahide Öztaş; Melek Pamuk Algi; Fatih Algi, İşlenebilir Yeni Bir Elektrokromik ve Floresan Poliditiyeniipiröl Türevinin Sentezi ve Karakterizasyonu, IV. Ulusal Polimer Bilim ve Teknoloji Kongresi, 2012, Çanakkale. |
| 7.  | Salih Ertan; Emine Gül Cansu Ergün; Seha Tirkeş; Atilla Cihaner; Melek Pamuk Algi; Fatih Algi, BODIPY Çekirdekli Yeni Elektrokromik Polimerler, IV. Ulusal Polimer Bilim ve Teknoloji Kongresi, 2012, Çanakkale.  |
| 8.  | H. Esra Oğuztürk, Seha Tirkeş, Ahmet M. Önal, Karbazol ve Furan Bazlı Konjuge Monomer Sentezleri ve Elektrokimyasal Polimerleşmeleri. "V. Ulusal Polimer Bilim ve Teknoloji Kongresi, 1-4 Eylül 2014, Tokat", (2014), s.23.   |
| 9.  | Melek Pamuk Algi, Zahide Öztaş, Seha Tirkeş, Atilla Cihaner, Fatih Algi, Bazı Reaktif Oksijen Türlerini Tespit Edebilen Kemilüminojenik Belirteç, V. Fiziksel Kimya Kongresi, 2015, Konya   |
| 10. | Melek Pamuk Algi, Zahide Öztaş, Seha Tirkeş, Atilla Cihaner, Fatih Algi, Yeni Kemilüminojenik Malzemelerin Tasarımı Sentezi ve Polimerizasyonu, V. Fiziksel Kimya Kongresi, 2015, Konya   |
| 11. | Ümit Tayfun, Alinda Öykü Akar, Seha Tirkeş Nanokil ve POSS İçeren Termoplastik Poliüretan Hibrit Nano-kompozitlerin Mekanik, Termomekanik ve Morfolojik Özellikleri, VI. Ulusal Polimer Bilim ve Teknolojisi Kongresi, 2016.  |
| 12. | Ümit Tayfun, Tirkeş Seha Polikarbonat/Cam Elyaf-Mika Hibrit Kompozitlerin Mekanik, Isısal ve Morfolojik Özellikleri, VI. Ulusal Polimer Bilim ve Teknolojisi Kongresi, 2016.  |
| 13. | Gözde Şahin, Seha Tirkeş, Erhan Bat Kontrollü İlaç Salımı için Poli(trimetilen karbonat) Esaslı Nano-Taşıyıcıların Geliştirilmesi, VI. Ulusal Polimer Bilim ve Teknolojisi Kongresi, 2016.  |

#### THESES SUPERVISED

|    |  |
|----|--|
| 1. | PhD Thesis, Synthesis and Characterization of Polyimide Derivative Adhesives   |
| 2. | MS Thesis, Synthesis of Heterocyclic Unit Substituted Carbazole Derivatives and Their Electrochemical Polymerization       |
| 3. | MS Thesis, Preparation and Characterization of Thermoplastic Polyurethane Nanocomposites and Their Hybrid Composites. 2017 |
| 4. | MS Thesis, Mechanical, Thermal and Flammability Properties of Carbonaceous Filler Reinforced ABS Composites. 2017          |
| 5. | MS Thesis, Preparation and Characterization of Polycarbonate/Glass Fiber-Mica Hybrid Composites. 2017                      |
| 6. | MS Thesis, Investigations of flax fiber and basalt fiber containing poly(lactic acid) hybrid eco-composites 2017           |
| 7. | MS Thesis, , Improvement of mechanical and physical properties of polyurethane elastomer/jute fiber eco-composites, 2017   |
| 8. | MS Thesis, Mechanical and Thermal Properties of Acrylonitrile-Butadiene-Styrene/Barite Composites. 2017                    |
| 9. | MS Thesis, The Mechanical and Thermal Properties of Bentonite Filled Acrylonitrile-Butadiene-Styrene Composites. 2017      |

|            |   |
|------------|---|
| <b>10.</b> | MS Thesis, The Effect of Addition of Perlite on Mechanical and Thermal Properties of Acrylonitrile-Butadiene-Styrene Composites, 2017 |
| <b>11.</b> | MS Thesis, Investigation of Mechanical and Thermal Properties of Acrylonitrile-Butadiene-Styrene/Zeolite Composites, 2017             |
| <b>12.</b> | MS Thesis, Preparation and Characterization of Pumice Powder Reinforced Acrylonitrile-Butadiene-Styrene Composites. 2017              |
| <b>13.</b> | MS Thesis, Development of Poly(trimethylene carbonate) Based Biodegradable Microparticles. 2018                                       |
| <b>14.</b> | MS Thesis, Mechanical and Physical Characterization of Bentonite and Barite Filled Low Density Polyethylene Composites. 2018          |