**Meltem YANILMAZ, Ph.D.**

Research Assistant

Istanbul Technical University

Department of Textile Engineering

**E-mail:**yanilmaz@itu.edu.tr

**EDUCATION**

**Ph.D. in Fiber and Polymer Science 2012-2015**

North Carolina State University Raleigh, NC

* **Dissertation Title:** Novel Nanofiber-based Membrane Separators for Lithium-ion Batteries

**M.Sci. in Textile Engineering 2008-2010**

Istanbul Technical University Istanbul

* **Thesis Title:**Preparation and Characterization of Polyurethane/ Polypyrrole Composite Nanofiber, Thin Film

**Bachelor of Science in Textile Engineering 2003-2007**

Istanbul Technical University Istanbul

**RESEARCH INTERESTS**

* Fiber Science
* Nanotechnology and Nanofibers
* Lithium-Ion Batteries
* Supercapacitors
* Conductive Polymers
* Nanocomposite Materials and Membranes

**RESEARCH EXPERIENCE**

**Research Assistant**  2010-Present

Istanbul Technical University

**Research Assistant**  2012-2015

North Carolina State University

**PUBLICATIONS**

1. MeltemYanilmaz, Yao Lu, Jiadeng Zhu, and Xiangwu Zhang “Silica/polyacrylonitrile hybrid nanofiber membrane separators via sol-gel and electrospinning techniques for lithium-ion batteries”*Journal of Power Sources*, accepted 2016.
2. Meltem Yanilmaz, Xiangwu Zhang, “Polymethylmethacrylate/polyacrylonitrile membranes via centrifugal spinning as separator in Li-ion batteries’’ *Polymers,*7, 629-643, 2015.
3. Meltem Yanilmaz, Yao Lu, Ying Li, Xiangwu Zhang“SiO2/polyacrylonitrile membranes via centrifugal spinning as a separator for Li-ion batteries”*Journal of Power Sources,* 273, 1114-1119, 2015.
4. MeltemYanilmaz, MahmutDirican, and Xiangwu Zhang“Evaluation of electrospun SiO2/nylon 6,6 nanofiber membranes as a thermally-stable separator for lithium-ion batteries”*ElectrochimicaActa*, 133, 501-508, 2014.
5. Meltem Yanilmaz, Yao Lu, Mahmut Dirican, Kun Fu and Xiangwu Zhang“Nanoparticle-on-Nanofiber Hybrid Membrane Separators for Lithium-ion Batteries via Combining Electrospraying and Electrospinning Techniques” *Journal of Membrane Science* 456, 57-65, 2014.
6. MeltemYanilmaz, Chen Chen, and Xiangwu Zhang “Fabrication and characterization of SiO2/PVDF composite nanofiber-coated PP nonwoven separators for lithium-ion batteries”*Journal of Polymer Science: Polymer Physics*, 51, 23, 1719-1726, 2013.
7. Hun Lee, Meltem Yanilmaz, Ozan Toprakci, Kun Fu, and Xiangwu Zhang “A Review and Recent Developments in Membrane Separators for Rechargeable Lithium-ion Batteries”*Energy & Environmental Science,* 7, 3857-3886, 2014.
8. Jiadeng Zhu, Meltem Yanilmaz, Kun Fu, Chen Chen, Yao Lu, Yeqian Ge, David Kim, Xiangwu Zhang,“Understanding glass fiber membrane used as a novel separator for lithium-sulfur batteries”, *Journal of Membrane Science* 2016.
9. Yao Lu, Kun Fu, Jiadeng Zhu, Chen Chen, Meltem Yanilmaz, Mahmut Dirican, Yeqian Ge, Han Jiang, Xiangwu Zhang, “Comparing the Structures and Sodium Storage Properties of Centrifugally-Spun SnO2 Microfiber Anodes With/Without Chemical Vapor Deposition” *Journal of Materials Science,* 51, 4549-4558, 2016.
10. Yao Lu, Kun Fu, Shu Zhang, Ying Li, Chen Chen, Jiadeng Zhu, Meltem Yanilmaz, Mahmut Dirican, Xiangwu Zhang “Centrifugal spinning: A novel approach to fabricate porous carbon fibers as binder-free electrodes for electric double-layer capacitors” *Journal of Power Sources*, 273, 502-510, 2015 .
11. Yao Lu, Meltem Yanilmaz, Chen Chen, Yeqian Ge, Mahmut Dirican, Jiadeng Zhu, Yongqiang Li, Xiangwu Zhang “Lithium-substituted sodium layered transition metal oxide fibers as cathodes for sodium-ion batteries”*Energy Storage Materials* 1 (2015) 74-81.
12. Yao Lu, Meltem Yanilmaz, Chen Chen, Mahmut Dirican, Yeqian Ge, Jiadeng Zhu, Xiangwu Zhang “Centrifugally Spun SnO2 Microfibers Composed of Interconnected Nanoparticles as the Anode in Sodium‐Ion Batteries” *ChemElectroChem* 1 (2015).
13. Mahmut Dirican,Meltem Yanilmaz,Xiangwu Zhang “Free-standing polyaniline-porous carbon nanofiber electrodes for symmetric and asymmetric supercapacitors”*RSC Advances*, 4, 59427-59435, 2014.
14. Mahmut Dirican, Meltem Yanilmaz, Kun Fu, Ozkan Yildiz, Huseyin Kizil, Yi Hu, Xiangwu Zhang“Carbon-Confined PVA-Derived Silicon/Silica/Carbon Nanofiber Composites as Anode for Lithium-Ion Batteries”*Journal of The Electrochemical Society*, 161, A2197-A2203, 2014.
15. Mahmut Dirican, Meltem Yanilmaz, Kun Fu, Yao Lu, Huseyin Kizil, Xiangwu Zhang “Carbon-enhanced electrodeposited SnO2/carbon nanofiber composites as anode for lithium-ion batteries”*Journal of Power Sources,* 264, 240-247, 2014.
16. Kun Fu, Yao Lu, Mahmut Dirican, Chen Chen, Meltem Yanilmaz, Quan Shi, Philip D. Bradford and X. Zhang “Chamber-Confined Silicon-Carbon Nanofiber Composites for Prolonged Cycling Life of Li-Ion Battery” *Nanoscale*, 6, 7489-7495, 2014.
17. Ying Li, Guanjie Xu, Yingfang Yao, Leigang Xue, Meltem Yanilmaz, Hun Lee, Xiangwu Zhang “Coaxial electrospun Si/C–C core–shell composite nanofibers as binder-free anodes for lithium-ion batteries”*Solid State Ionics*, 258, 67-73, 2014.
18. Meltem Yanilmaz and A.Sezai Saraç, “Effect of Conductive Polymers on the Properties of Electrospun Mats” *Textile Research Journal*, 84, 1325-1342, 2014.
19. Meltem Yanilmaz, Betül Türel Erbay, I. Ersin Serhatlı, A. Sezai Saraç “Synthesis of Urethane Acrylate based Electromagnetic Interference Shielding Materials”*Journal of Applied Polymer Science*, 127, 4957–4966, 2013.
20. Meltem Yanilmaz, Fatma Kalaoğlu “Investigation of Wicking, Wetting and Drying Properties of Acrylic Knitted Fabrics”*Textile Research Journal*, 82, 820-831, 2012.
21. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac, “Preparation and Characterization of Electrospun Polyurethane-Polypyrrole Nanofibers and Films”, *Journal of Applied Polymer Science,*125, 4100–4108, 2012.
22. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac “Effects of Polypyrrole on the Characteristics of Polyurethane based Composites”*Journal of Textile and Apparel*, 3-9, 2011.
23. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas “Study on Optimising the Morphology of Electrospun Polyurethane Nanofibers”*Journal of Textile and Apparel* 2012 212- 217.
24. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, “An Investigation into the Effect of Process Variables on Polyurethane Nanofiber Diameter using a Factorial Design” *Fibers and Textiles in Eastern Europe*, 98, 19–21, 2013.

**CONFERENCE PROCEEDINGS**

1. Meltem Yanılmaz; F. Alev Bılge; Fatma Kalaoglu, A Study on the Influence of Knit Structure on Comfort Properties of Acrylic Knitted Fabrics, 1st SMARTEX-Egypt 2011(World Textiles Conference), Nov, 22nd–24th 2011, Kafrelsheikh University, Cairo, Egypt
2. Meltem Yanılmaz; Fatma Kalaoglu; Hale Karakas and A.Sezai Saraç, Thermal Properties of Polyurethane based Composites, 1st SMARTEX-Egypt 2011(World Textiles Conference), Nov, 22nd–24th 2011, Kafrelsheikh University, Cairo, Egypt
3. Selin Hanife Eryuruk, Fatma Kalaoglu, Tuba Bodur, Figen Koksal, Meltem Yanilmaz, “Investigation of Transfer Wicking Properties of Denim Fabrics”, 1st SMARTEX-Egypt 2011(World Textiles Conference), Nov, 22nd–24th 2011, Kafrelsheikh University, Cairo, Egypt
4. Meltem Yanılmaz, Hale Karakas, A. Sezai Sarac, Fatma Kalaoglu, “Studies on Increasing Conductivity of Polyurethane Films and Nanofibers” World Congress on Engineering 2011, WCE 2011, London, UK, 6-8 July, 2011.
5. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac, “Electrospun Composite Nanofibers Based on Polyurethane”, CIRAT-4,2010, Monastir, Tunus
6. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac, “Enhanced Properties of Semiconductive Composites, Spectrophotometric and Mechanical Characterization”, COMAT-2010, Brasov, Romanya
7. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac “Effects of Pyrrole Derivatives on Polyurethane Polypyrrole Composites”, , III. International Technical Textiles Congress-2010, Istanbul.
8. Meltem Yanilmaz, Fatma Kalaoglu, Hale Karakas, A. Sezai Sarac “Polyurethane Polypyrrole Composite Nanofibers”, , Fiber Society-2010, Bursa.
9. Hale Canbaz Karakaş, Meltem Yanilmaz, Özlem Kasapoğlu “Organic Cotton Production and Testing”, In-Tech 2010,International Conference on Innovative Technologies, Prague.