



"BİRLİKTE ÖĞRENELİM"
WEBINAR SERİSİ

13
EKİM
2021

ÇARŞAMBA
12:30- 13:30

AKADEMİSYEN GÖZÜYLE TEKNOLOJİ TRANSFER FAALİYETLERİ

Konuşmacılar:

Dr. Öğretim Üyesi Şahin COŞKUN

Eskişehir Osmangazi Üniversitesi, ETTOM Müdürü

Moderatör:

Öğr. Gör. M. Cem SAKARYA

Akdeniz Üniversitesi, Akdeniz TTO Müdür Yardımcısı

www.usimp.org.tr



Prof.Dr. Mustafa Verşan Kök
Prof.Dr. Ahmet Yozgatlıgil
İdil Buse Kök Hazer
Ceren Öztürk
Aytülü Sert
Yusuf Dudu



 **Elginkan Vakfı**




ODTÜ-TTO
ODTÜ-TEKNOKENT

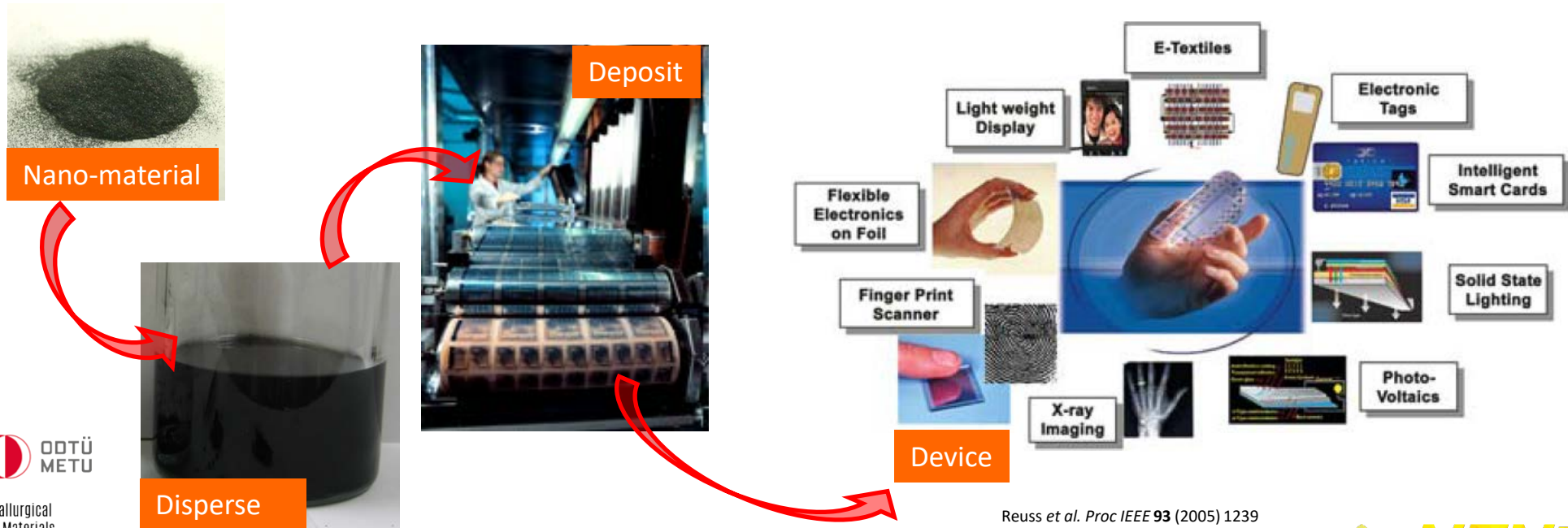


TÜBİTAK



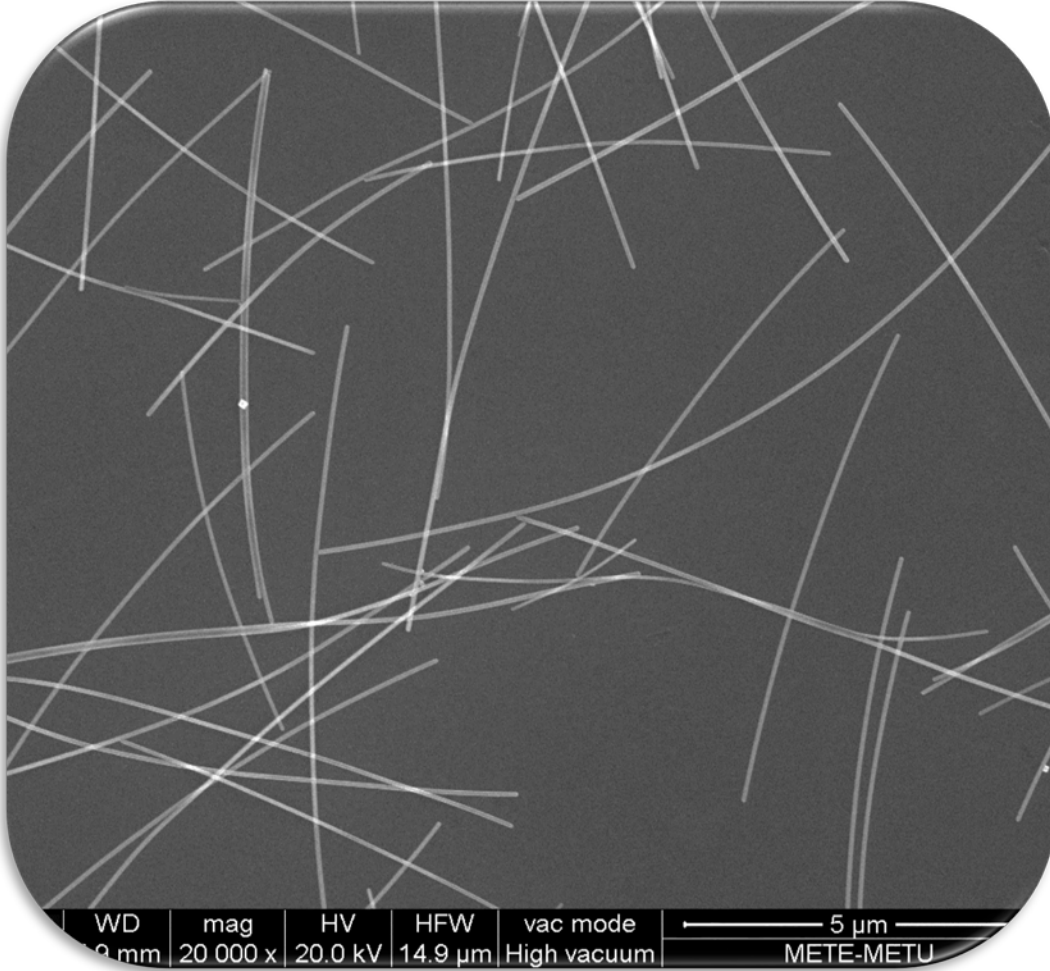
Araştırma Tecrübesi

- Nano malzeme sentezi (Metalik, Karbon türevi, Metal-Oksit),
- Süspansiyon yarı mamül üretimi,
- Çözelti esaslı kaplama yöntemleri,
- Cihaz entegrasyonu + uygulama ve ikame geliştirilmesi.

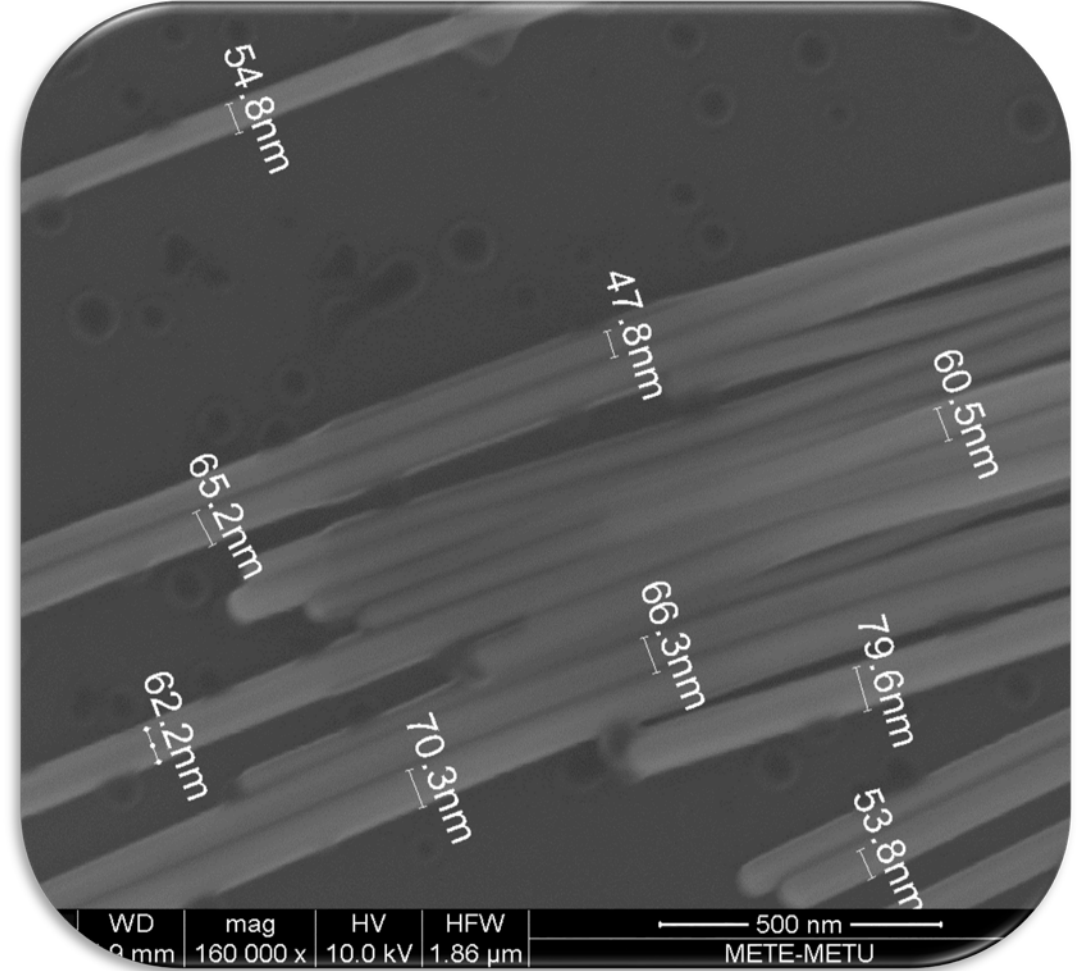


Reuss et al. Proc IEEE 93 (2005) 1239

Gümüş Nanoteller



Average Length : 10 µm



Average Diameter : 50 nm

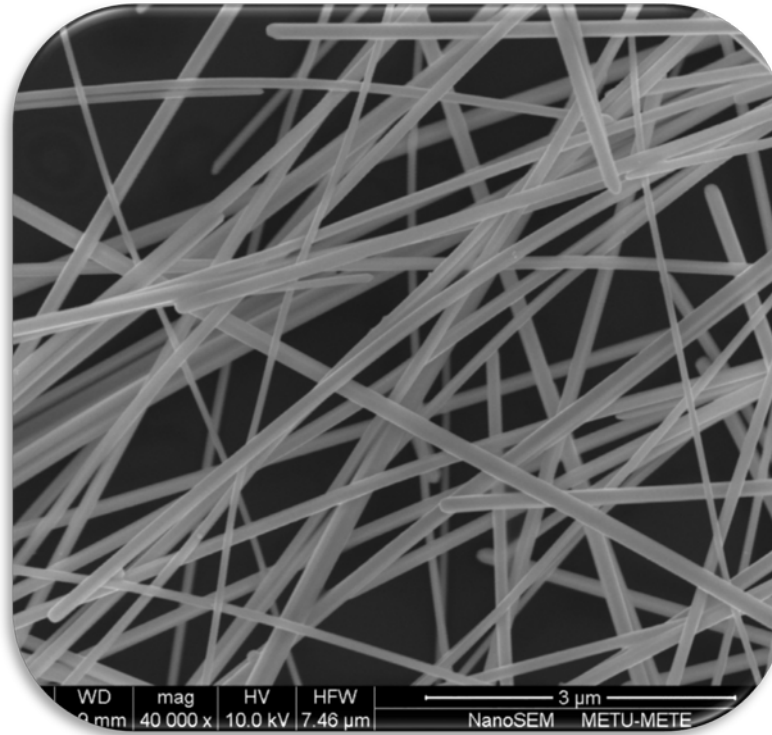
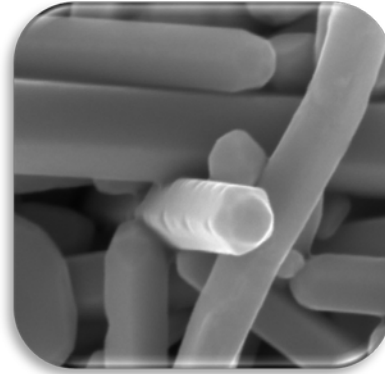
Uygulamalar

Optical Applications

- Solar Cells
- Medical imaging
- Surface Enhanced Raman Spectroscopy
- Optical limiters
- Surface plasmonic devices

Conductive Applications

- High-intensity LEDs
- Touch screens
- LCDs
- Conductive adhesives
- Computer boards
- Sensors
- Smart Textiles
- Wearable Technologies



Chemical & Thermal Applications

- Catalysts
- Chemical vapor sensors
- Pastes

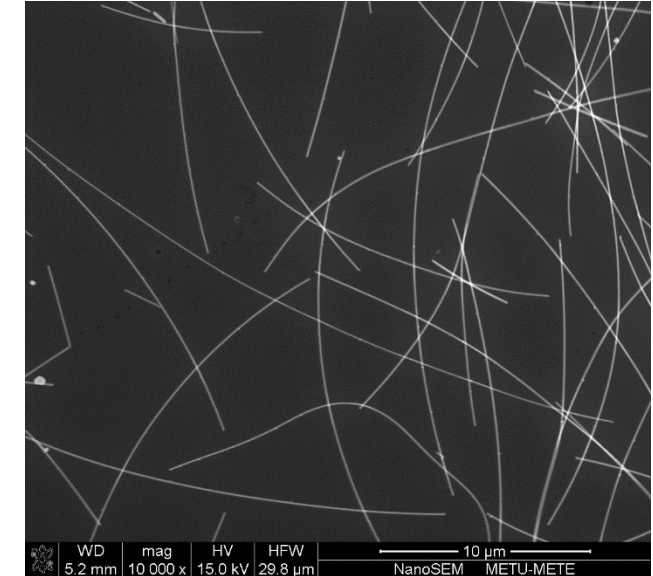
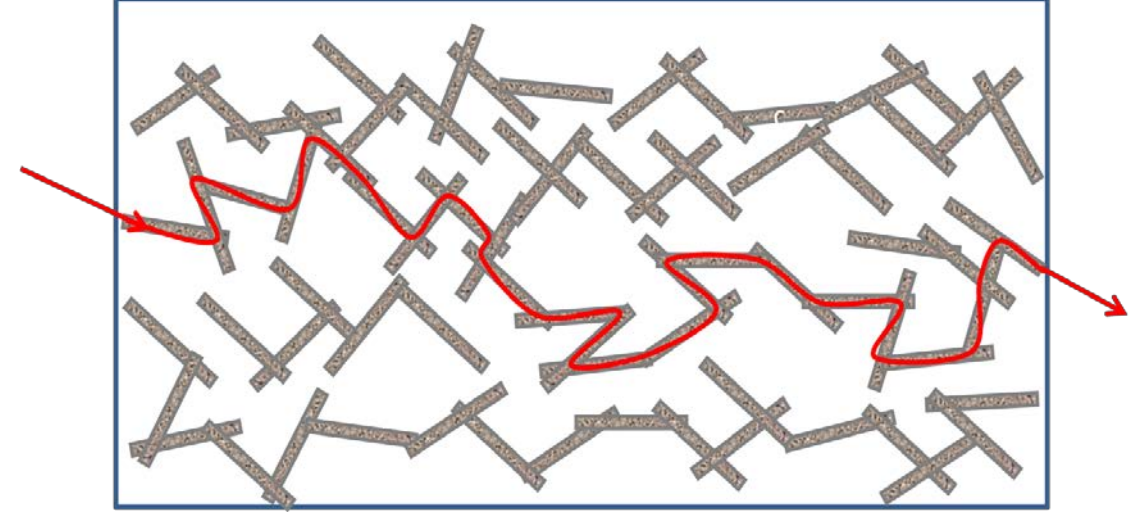
Anti-microbial Applications

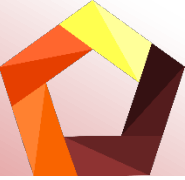
- Air & water purification
- Bandages
- Films
- Sterile equipment
- Food preservation
- Clothing

Heating Applications

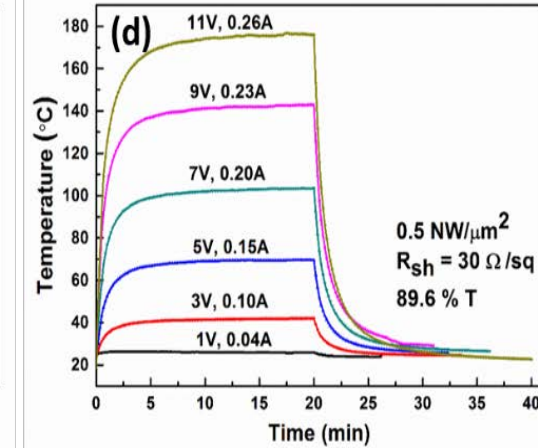
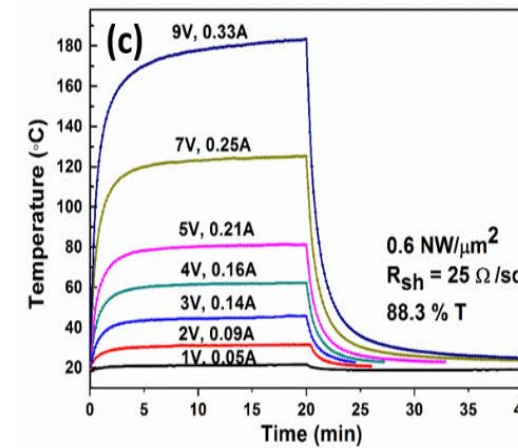
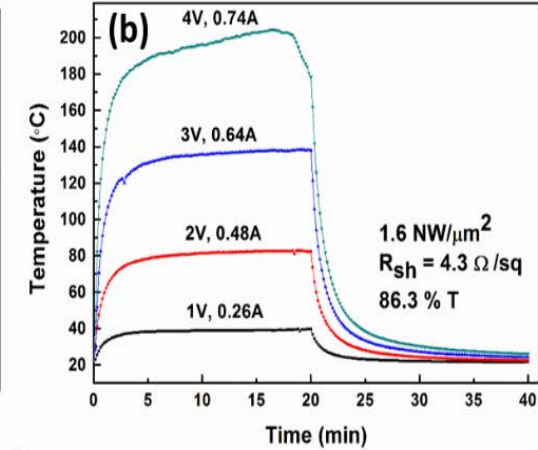
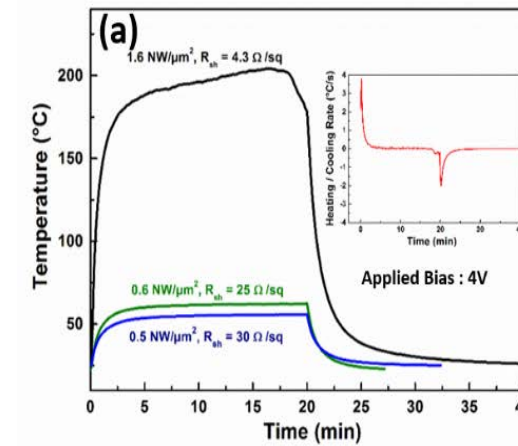
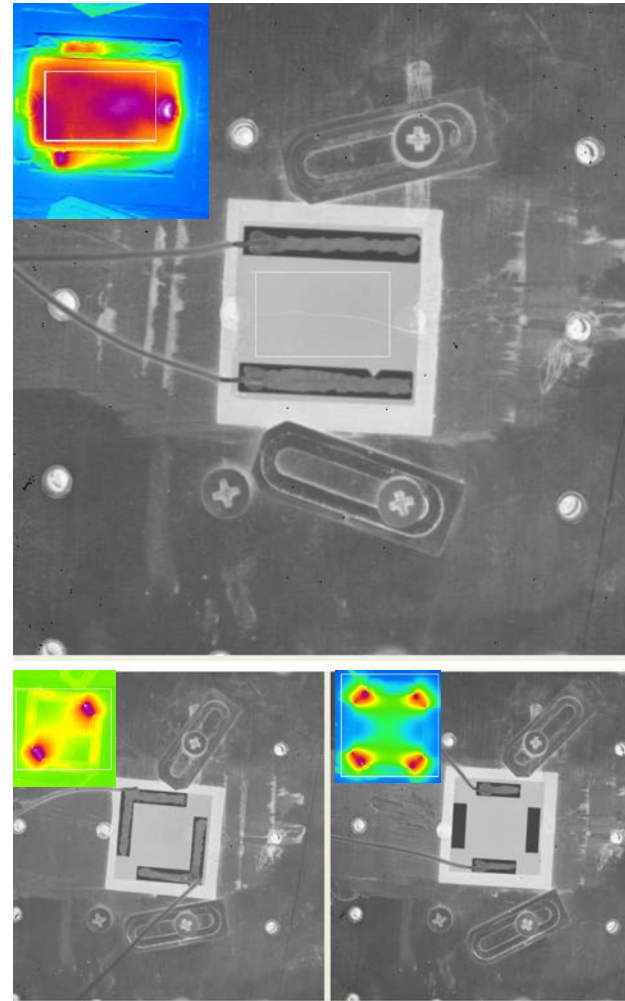
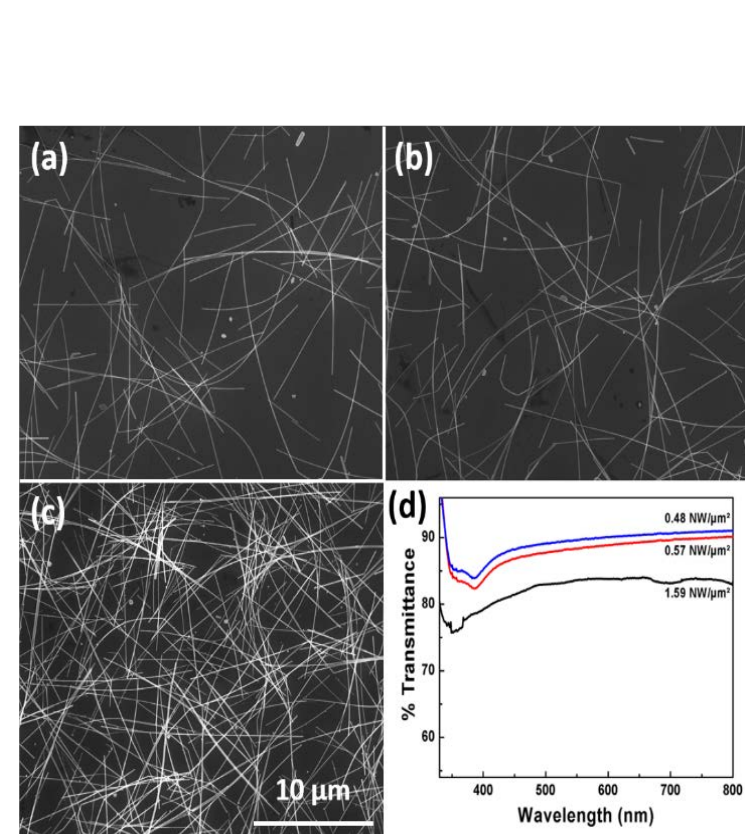
- Transparent Heaters
- Heatable Fabrics

Gümüş Nanoteller ve Nanotel İnce Filmler

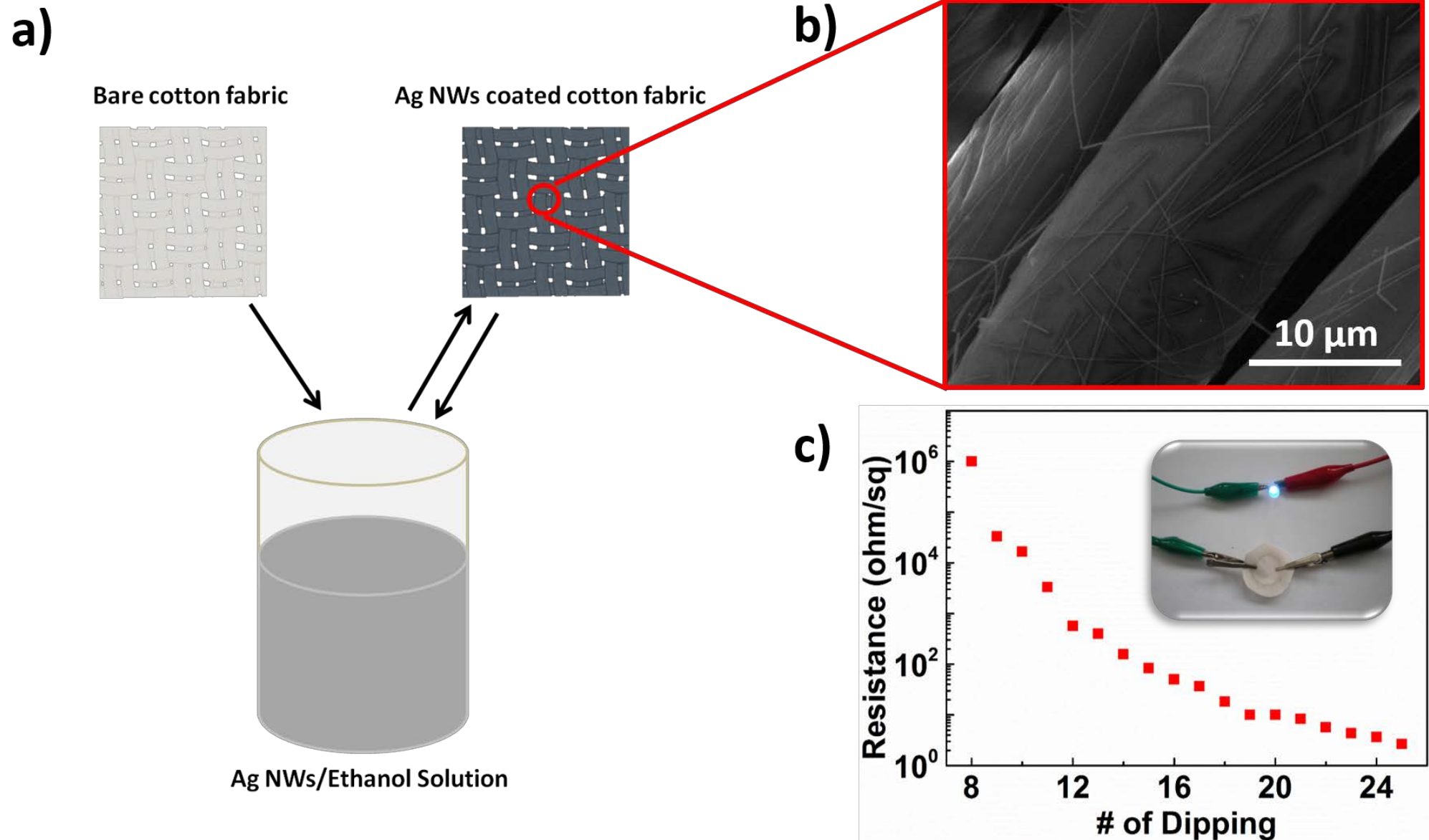




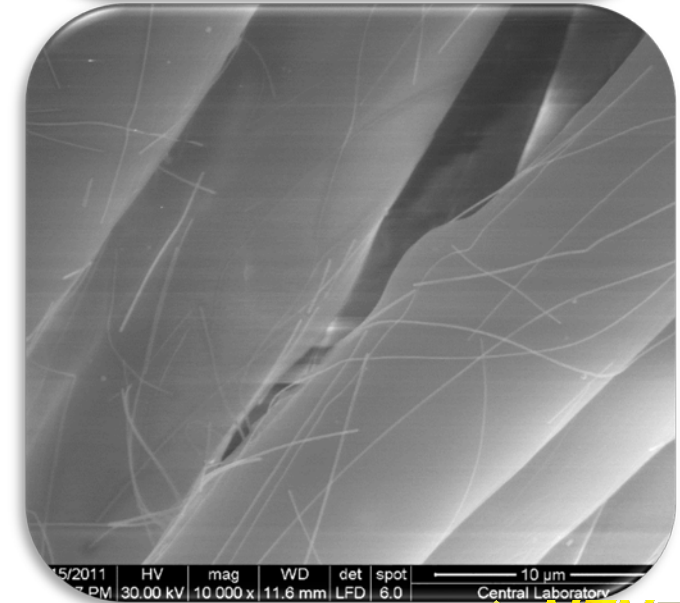
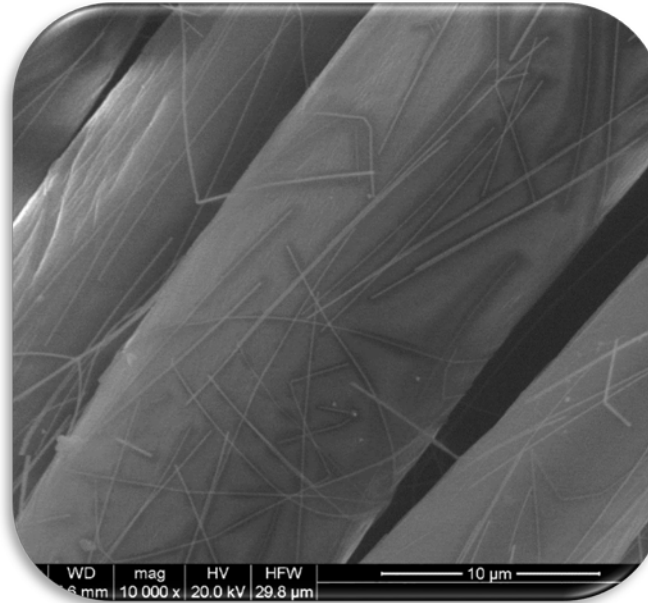
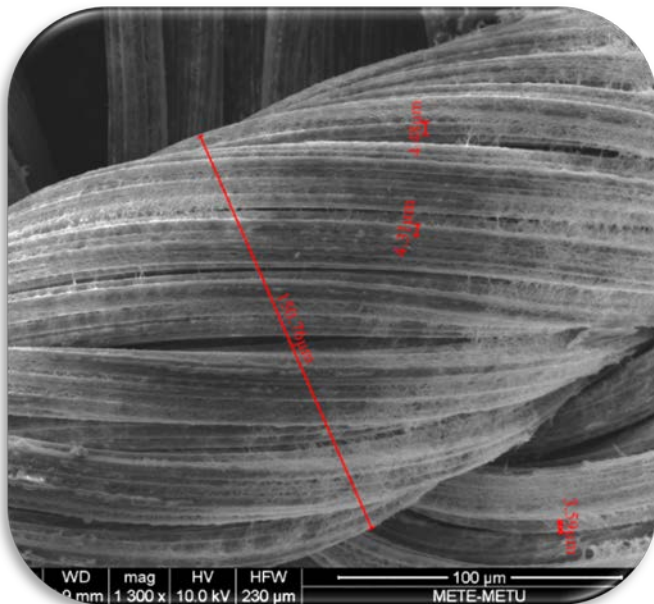
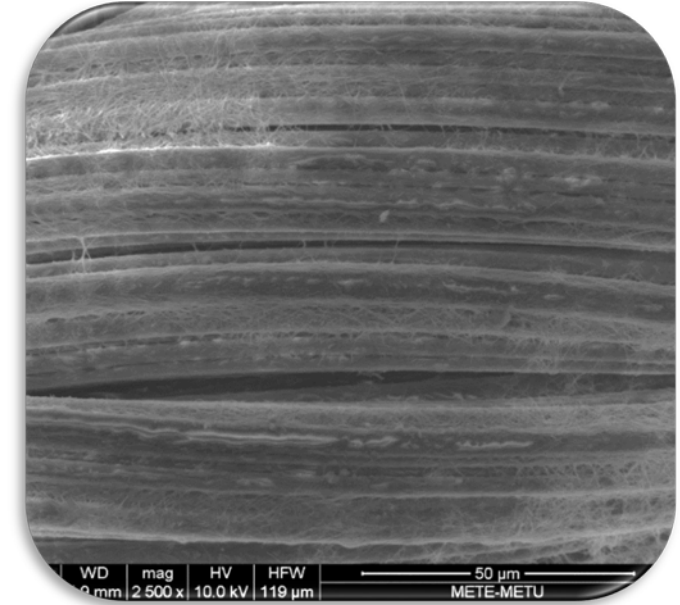
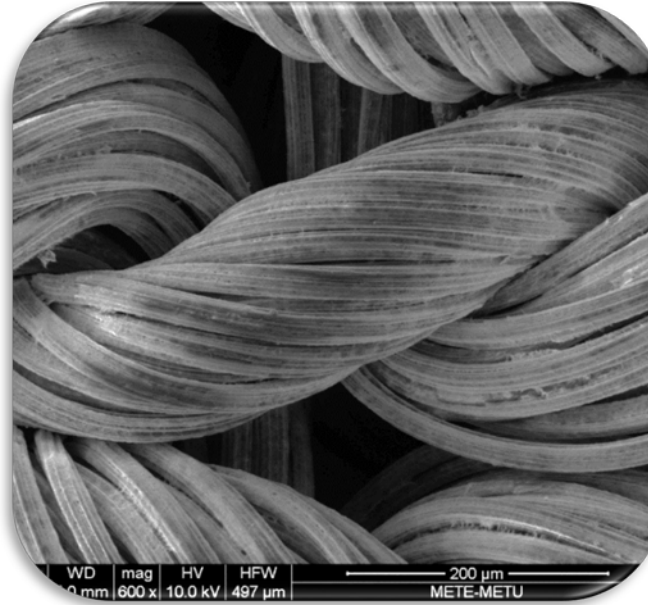
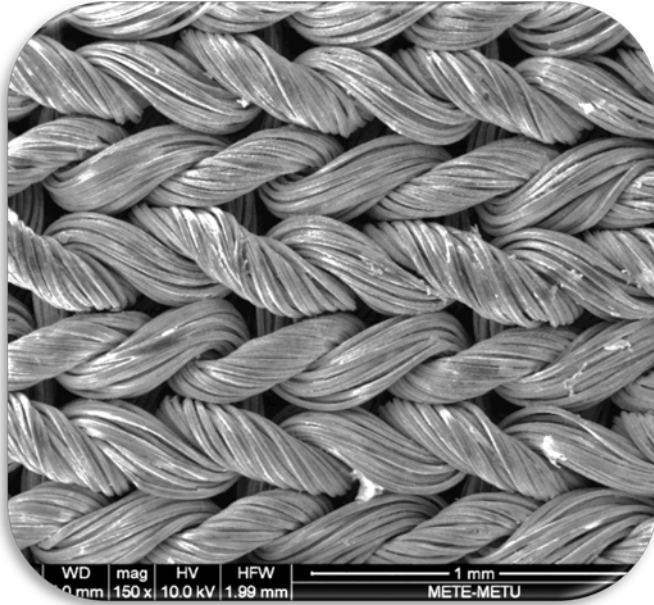
Nanovatif – Gümüş Nanotelli Isıtıcılar



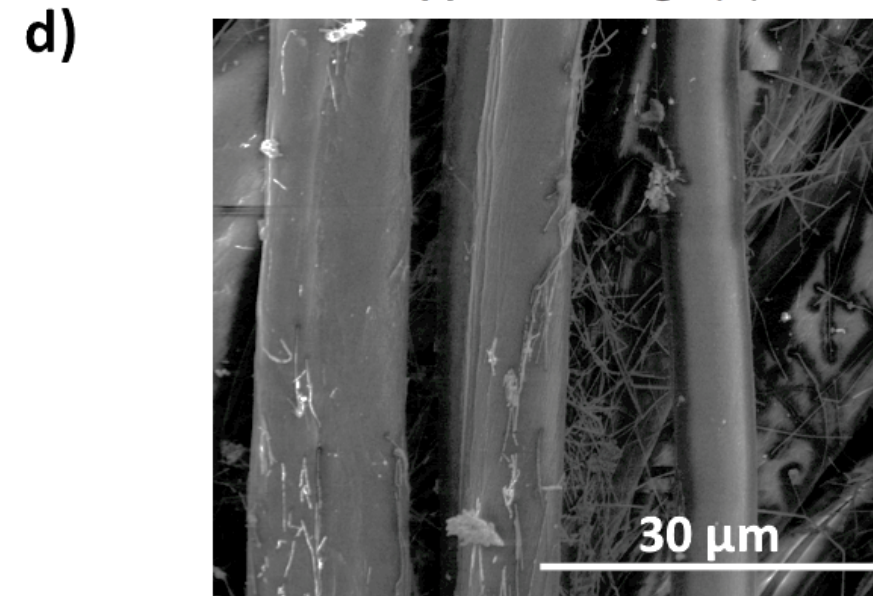
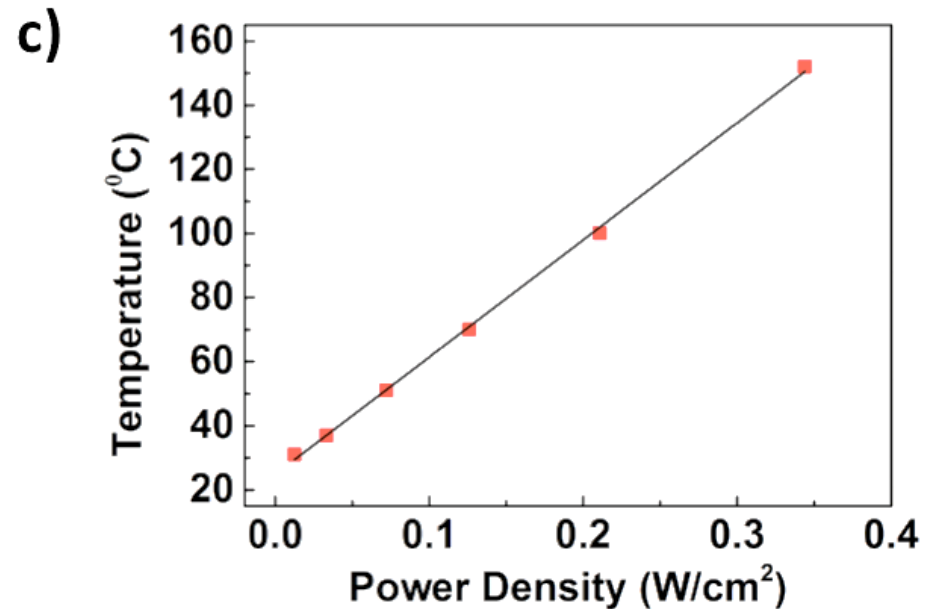
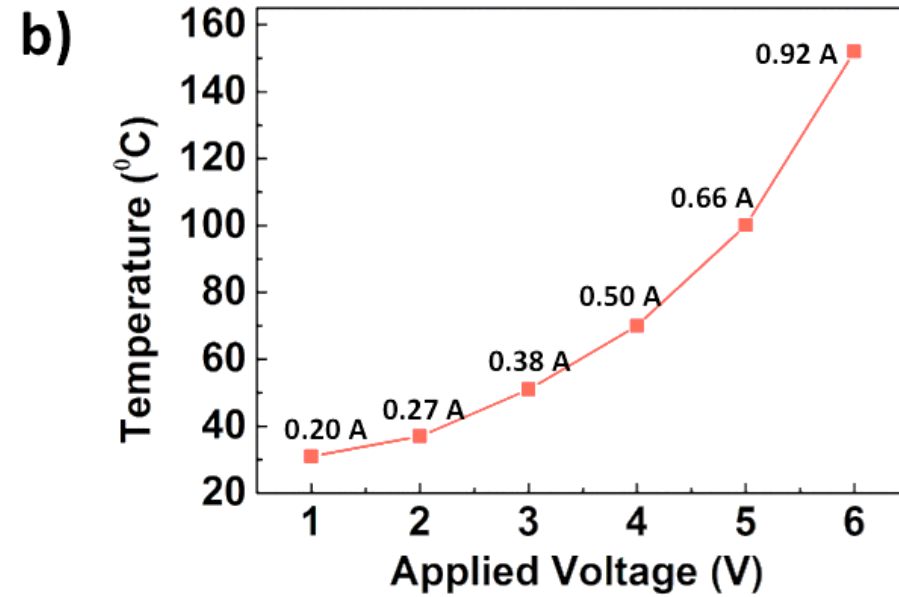
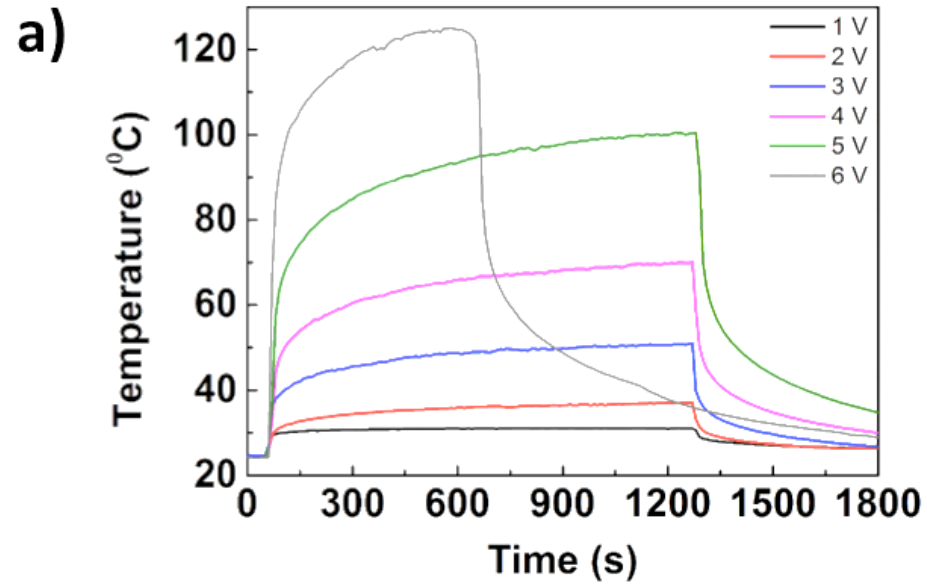
Dip&Dry Method



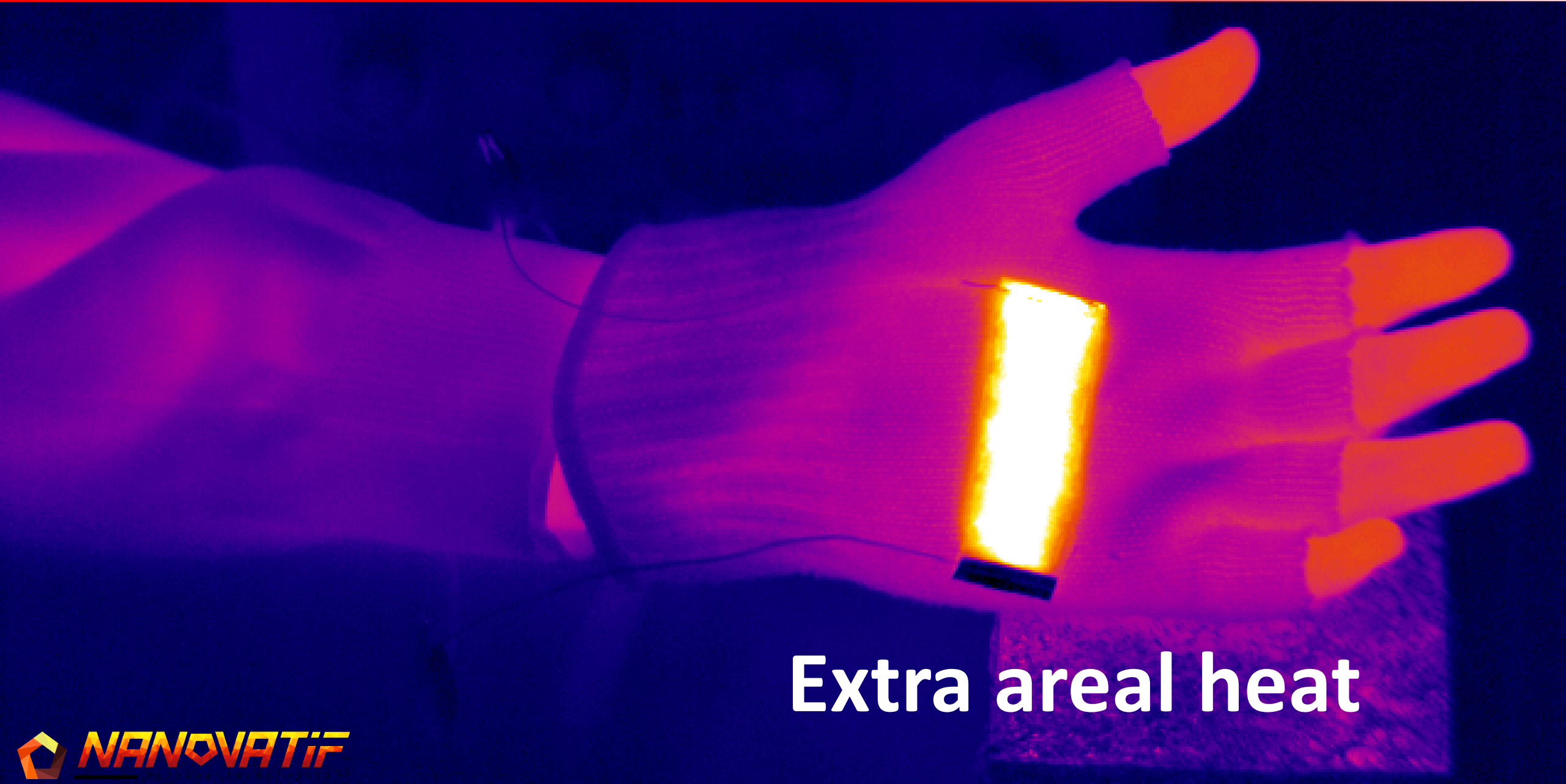
Silver Nws/Cotton Fabric Composites



Ag NWs/Cotton Fabrics Based Heaters

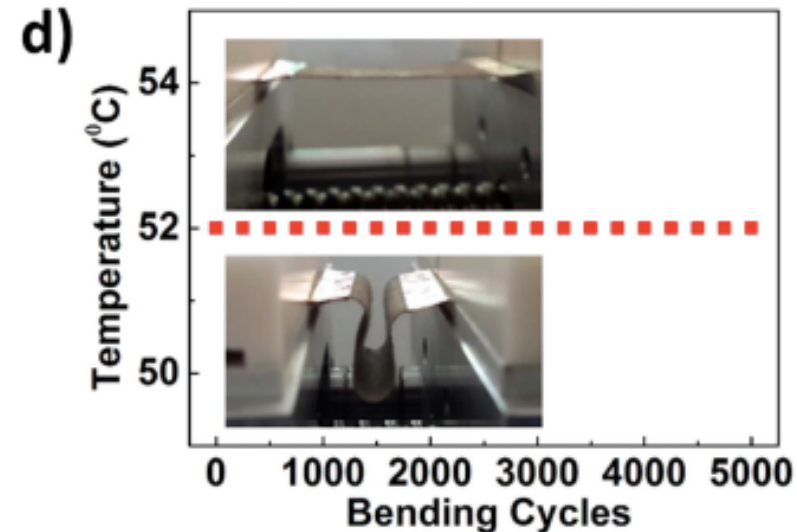
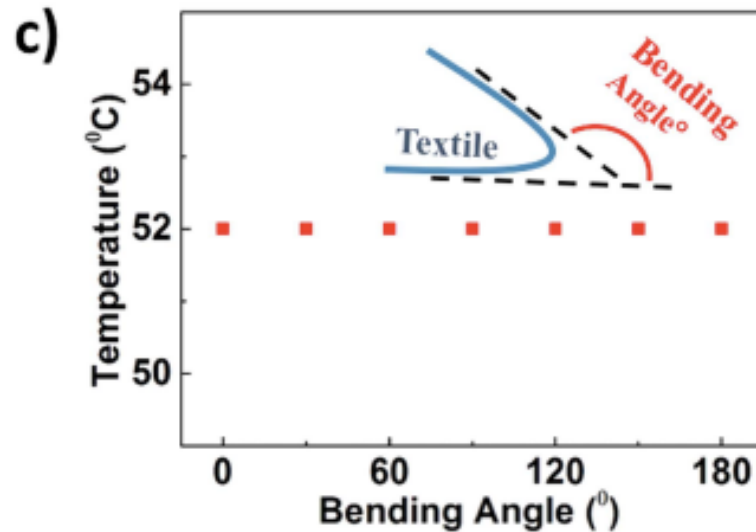
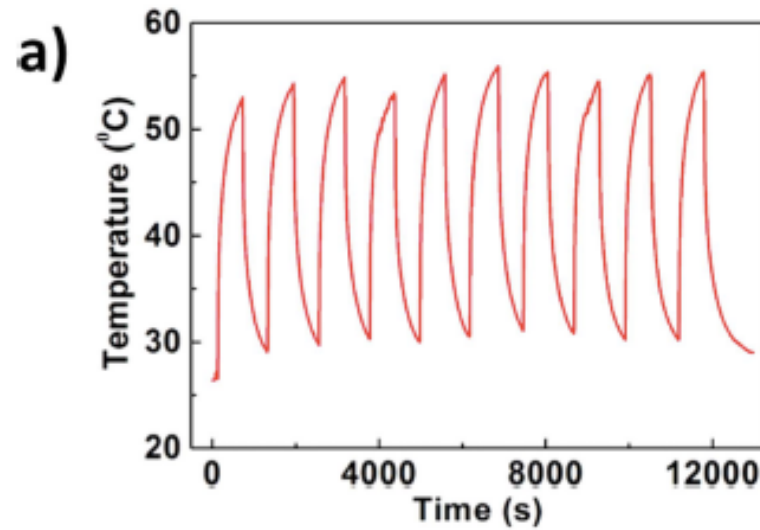


Thermal Camera Image of Ag NWs Coated Fabrics

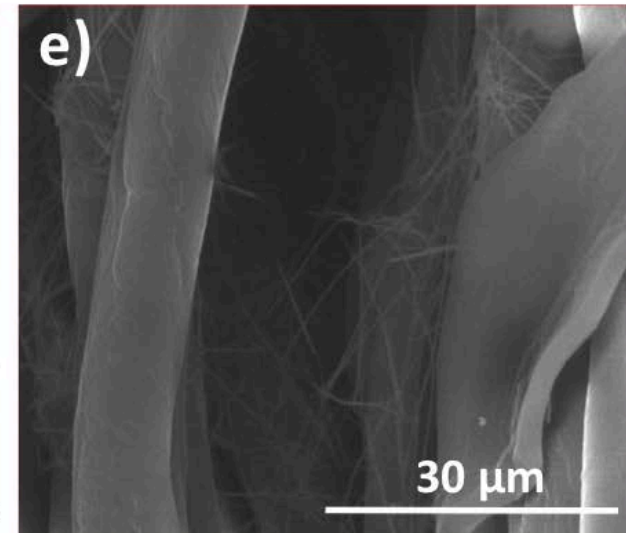
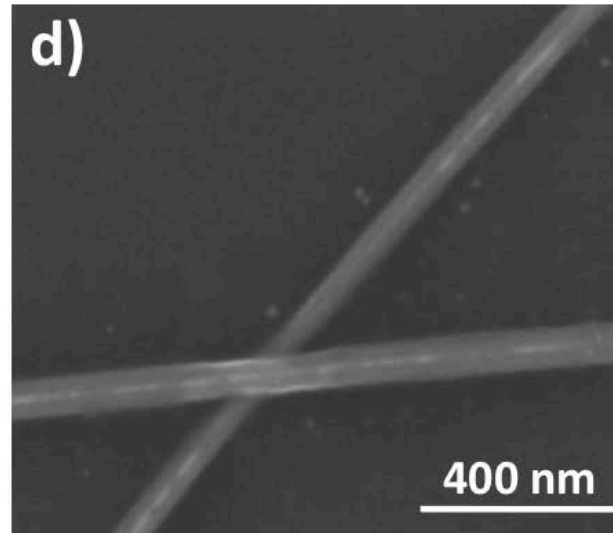
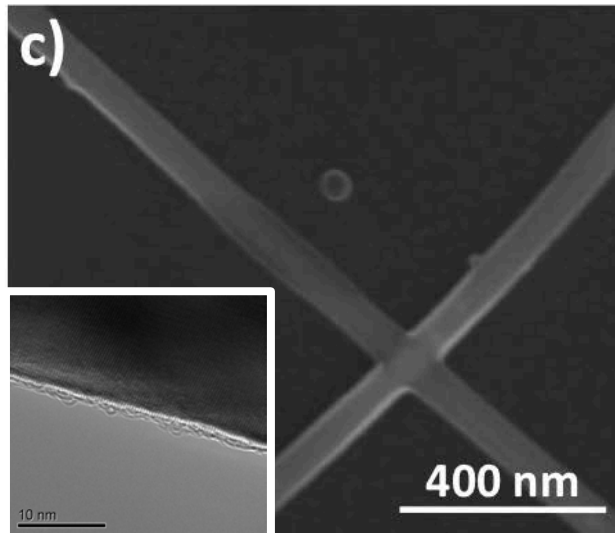
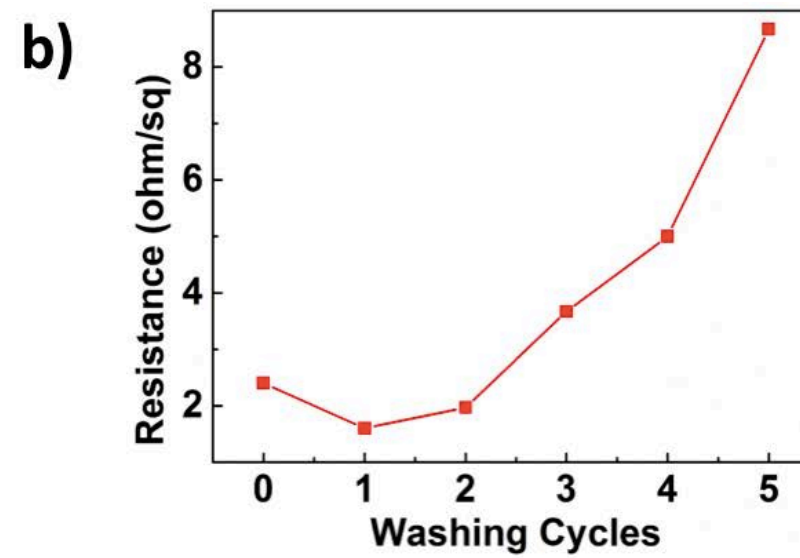
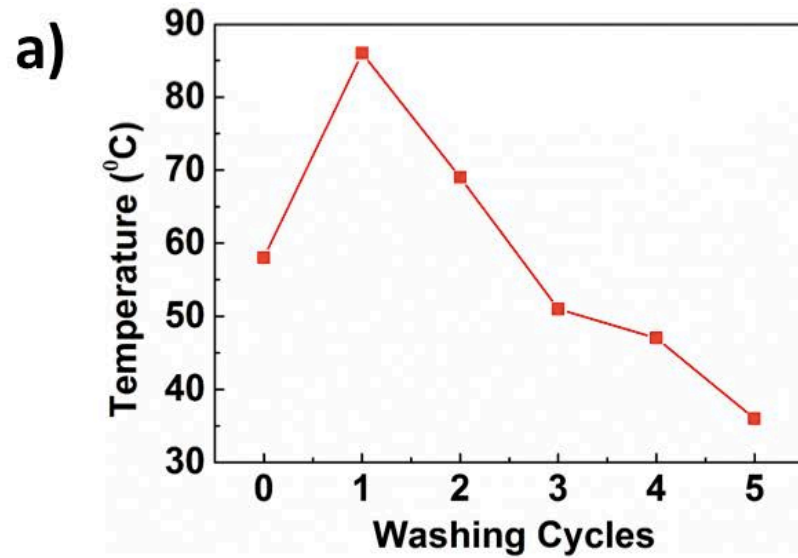


Extra areal heat

Ag NWs/Cotton Fabrics Based Heaters



Ag NWs/Cotton Fabrics Based Heaters



Patent Başvurusu



Yusuf Dudu



Doç.Dr. Senem Kayahan

Üniversite-Sanayi İşbirliği



Ceren Öztürk
Aytülü Sert

Giriřimcilik



Başak Özcan



ODTÜ'de son 5 yılda geliştirilen teknolojiler



Metal Nanotel Kaplamalı
Isıtılabilir Kumaşlar

Hüsnü Emrah Ünal, Şahin Coşkun, Doğa Doğanay



NANOVATİF

Malzeme Teknolojileri

MAKRO SORUNLARA, NANO ÇÖZÜMLER



nanovatif.com

Yalıtım temelli

+

Pasif Isıtma

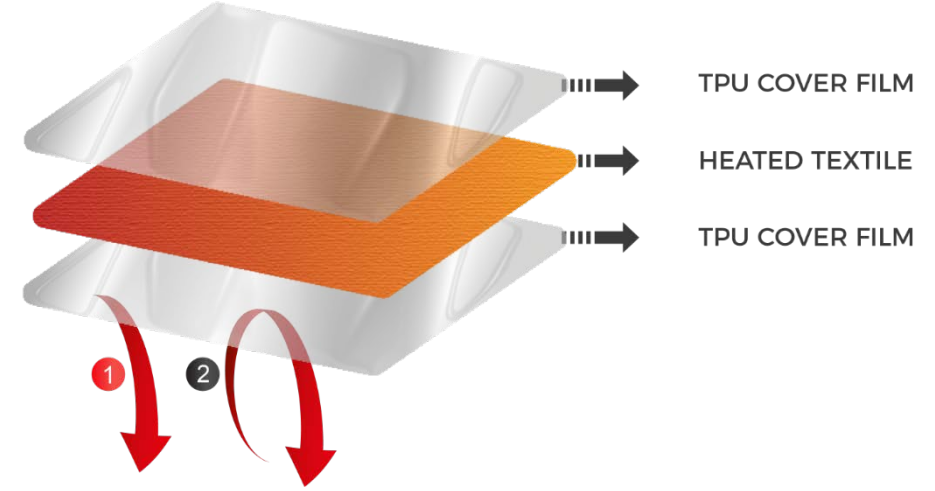
+

Aktif Isıtma

 Columbia



OMNI-HEAT® REFLECTIVE
Make Your Own Heat.



The Problems of Winter Wear

Multi-layer



Uncomfortable
Sweating (While Moving)
Not enough protection

Heat Pack



Not wearable
Mostly single use
No temperature control

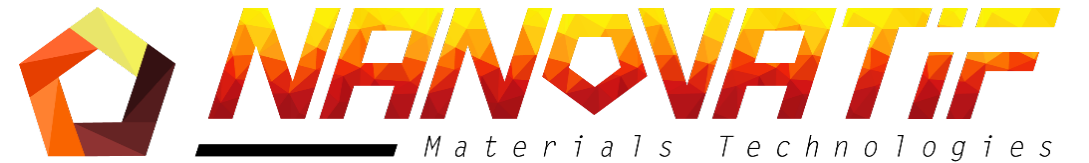
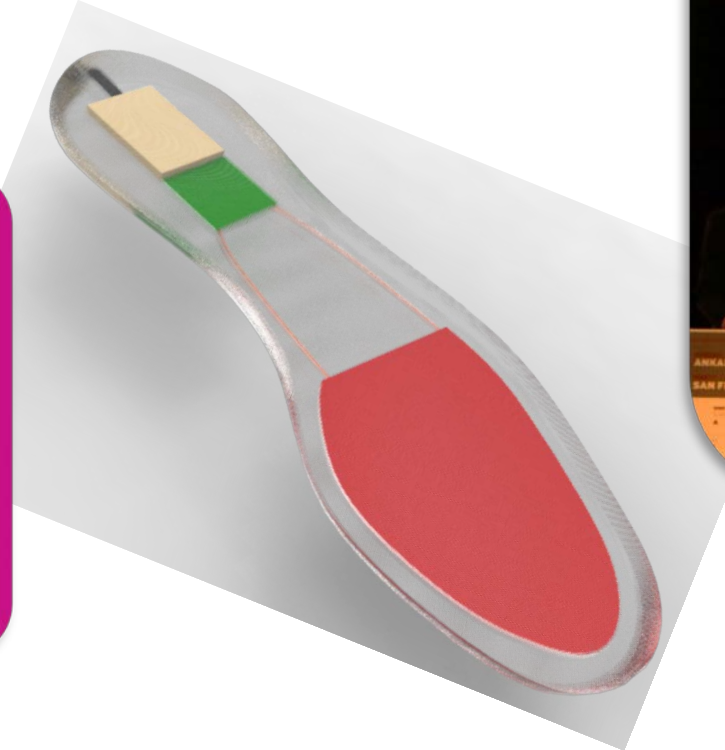
Carbon Fiber Heaters



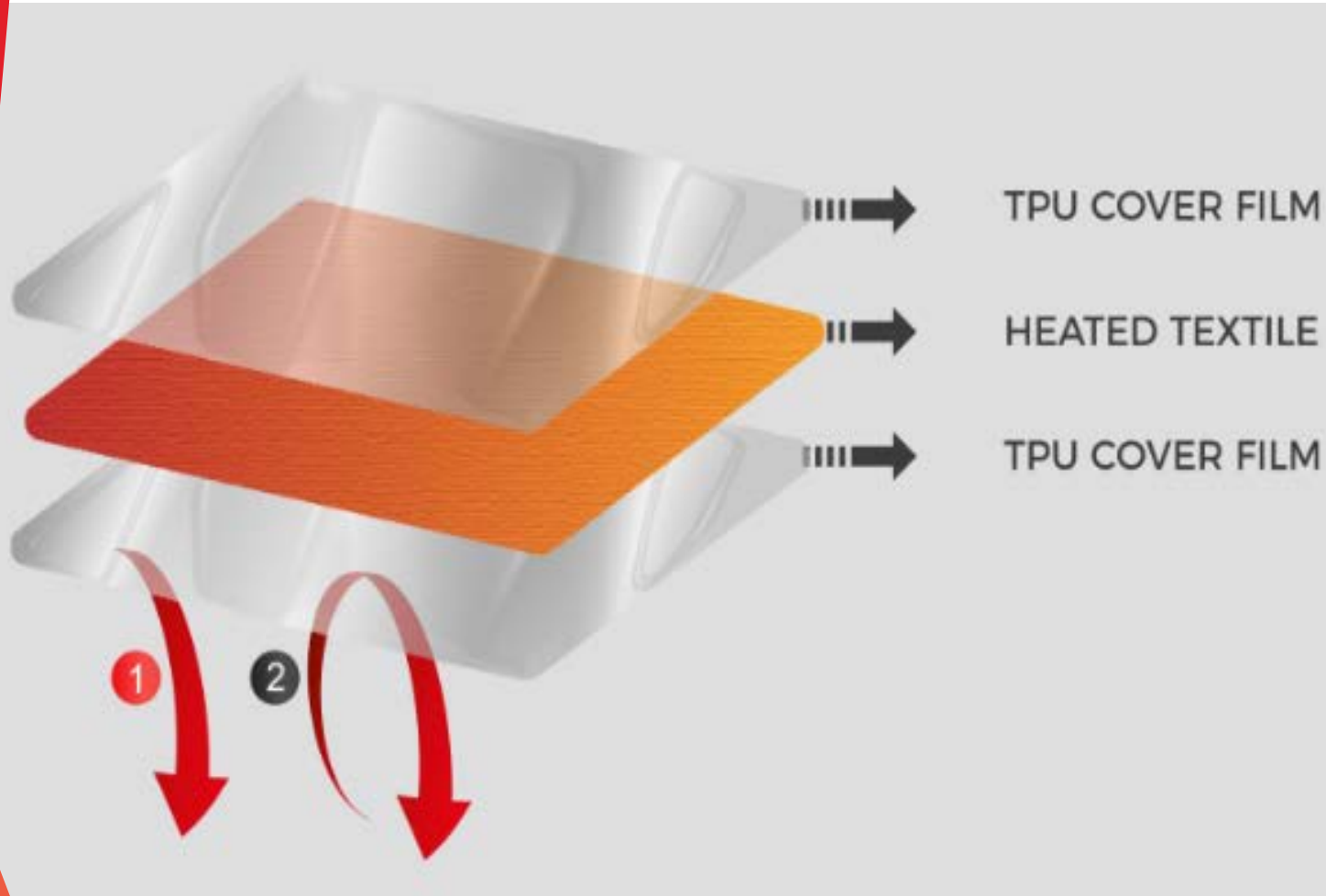
Inefficient
Not enough heating time
Stationary design



**YENİ FİKİRLER
YENİ İŞLER**



Our Technology



1. Heat Generation

Thermal-Era generates heat when powered with a battery. Thanks to its special heating technology, it has the best heating performance over any wearable heated product.

2. Heat Reflection

Thermal-Era reflects most of the heat emitted from your body and keeps you warm even without powering.



THERMALera

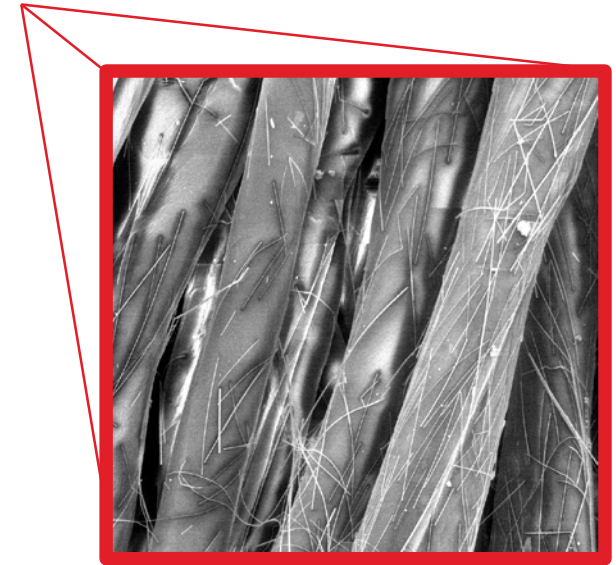


High Technology With Scalable Production

Bare fabric



Ag nanowire decorated fabric



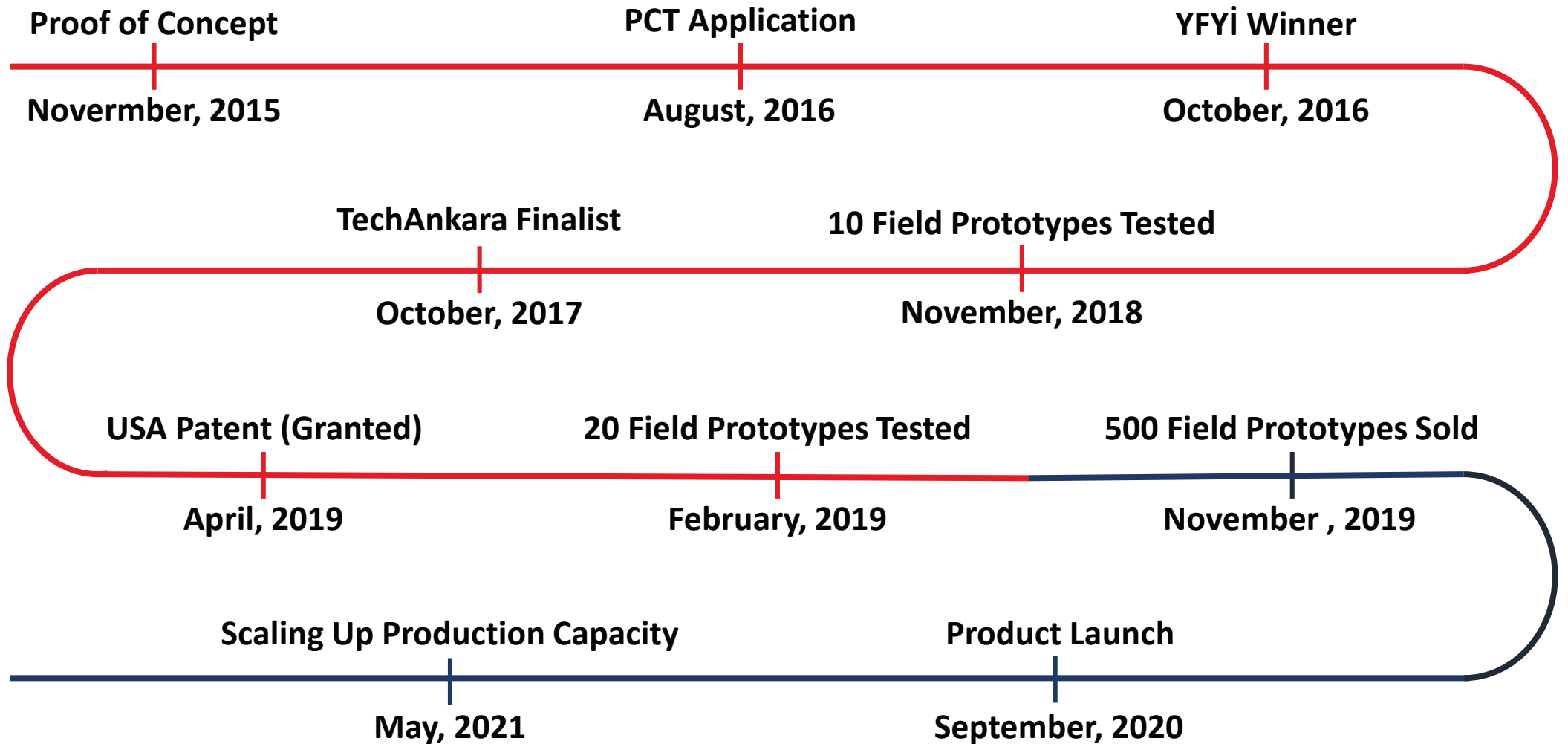
Ag nanowire/ethanol solution



THERMALera

NANOVATIF

Our Journey



THERMALera

NANOVATIF

Kimler için?

 THERMALera



Rakipler

	Ororo	Nora Twips	Ravean	GOBI	KELVIN Coat	TORCH	THERMALera
En düşük, verimli çalışma sıcaklığı	0 °C	0 °C	0 °C	0 °C	0 °C	0 °C	-30 °C
38 Wh' lik bir batarya ile 0 °C' de çalışma süresi	3 s	2,5 s	2,5 s	2,5 s	3 s	2 s	8 s
Sıcaklık dağılımı	Fiber	Fiber	Fiber	Fiber	Fiber	Fiber	Alansal
Fiyat	€180	€100	€225	€215	€250	€80	€90
Pazarlama yöntemi	e-ticaret	e-ticaret	e-ticaret	e-ticaret	e-ticaret	e-ticaret	Doğrudan

Ürünümüz



Nanovatif Malzeme Teknolojileri Araştırma Geliştirme
Danışmanlık İthalat İhracat Sanayi ve Ticaret Limited Şirketi

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Merkezi, No: 13 ODTÜ-TEKNOKENT, Ankara

E-mail: info@nanovatif.com

Web: <http://thermalera.com/>