

## Expertise areas:



(in affiliation with RÜZGEM)

**Assoc. Prof. Melih Papila**

Materials Science and

Nanoengineering

Sabancı University

- Composite Materials
- Smart Materials
- Structural and Multidisciplinary Optimization
- Design of Experiments & Surrogate Modelling

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# Recent Projects:

“Integration of nanocomposite interlayers into structural composites for higher fracture toughness and strength,” Grant No: 213M542, Funding Agency: TUBITAK.

“THINKCOMPOSITE, THINK outside the box design practices for optimal, more competitive and durable structural COMPOSITES,” Grant No: 274737, Funding Agency: EC | FP7 | SP3 | PEOPLE.

“Micromechanics of Failure (MMF) Criterion For Fiber Reinforced Composites And Its Integration In Structural Design,” Grant No: 109M651 Funding Agency: TUBITAK.

“Out-of-autoclave Prepregs,” Research Contract with TEMSA R&D Inc.

“Lightweight composite materials characterization for structure of a city-bus prototype,” Research Contract with TEMSA R&D Inc.

“Smart composite materials and structures: development, characterization and engineering design application,” Grant No: 106M368, Funding Agency: TUBITAK.

# Recent Publications:

S. Ghobadi, S. Sadiqhikia, **M. Papila**, F.C. Cebeci, S.A. Gursel, "Graphene-reinforced Poly(vinyl alcohol) Electrospun Fibers as Building Blocks for High Performance Nanocomposites," RSC Advances, published online, **DOI:** 10.1039/C5RA15689K, September 2015.

K. Bilge and **M. Papila**, "Interlayer toughening mechanisms of composite materials," Toughening Mechanisms in Composite Materials, Edited by Q. Qin, and J. Ye, Woodhead Publishing-Elsevier, 2015.

K. Bilge, S. Venkataraman, Y. Z. Menceloğlu, and **M. Papila**, "Global and Local Nanofibrous Interlayer Toughened Composites for Higher In-Plane Strength," Composites Part A: Applied Science and Manufacturing, Vol. 58, pp.73-76, 2014.

K. Bilge, E. Özden-Yenigün, E. Şimşek, Y. Z. Menceloğlu, and **M. Papila**, "Structural composites hybridized with epoxy compatible polymer/MWCNT nanofibrous interlayers," Composites Science and Technology, 72 (14). pp. 1639-1645, 2012.

E. Özden-Yenigün, Y.Z. Menceloğlu, and **M. Papila**, "MWCNTs/P(St-co-GMA) composite nanofibers of engineered interface chemistry for epoxy matrix nanocomposites," ACS Applied Materials & Interfaces, 4 (2). pp. 777-784, 2012,

E. Özden, Y.Z. Menceloğlu, and **M. Papila**, "Engineering chemistry of electrospun nanofibers and interfaces in nanocomposites for superior mechanical properties," ACS Applied Materials & Interfaces, 2 (7). pp. 1788-1793, 2012,