

## İLERİ MALZEMELER LABORATUARI 2015 YILI FALİYET RAPORU

**Laboratuvar:** İleri Malzemeler Laboratuvarı

**Koordinatör:** Prof. Dr. Tamer SINMAZÇELİK

### YÜRÜTÜLEN PROJELER:

1. **213M563 nolu 1001 projesi:** Volkanik Küllerin Otomotiv ebdüstrisindeki polimerler için alternatif takviye malzemesi olarak kullanılabilirliği
2. **114M785 nolu 1001 projesi :** Polifenilen Sülfid (PPS) Matrisli kompozitlerin tribolojik Özelliklerinin ve Kırılma Davranışının İyileştirilmesi

### BASILAN YAYIN LİSTESİ

1. **"Scratch Behavior of Glass Fibre Reinforced Polyester Matrix Composite After Solid Particle Erosion"**, M. Özgür Bora, Sinan Fidan, Onur Çoban, Zafer Yücel, Polymer Composites, Accepted Manuscript, DOI: 10.1002/pc.23105, (2015)
2. **"DAMAGE CHARACTERIZATION OF REPEATEDLY IMPACTED GLASS FIBER REINFORCED POLYESTER-ARMOUR STEEL COMPOSITES WITH CONE BEAM COMPUTED TOMOGRAPHY TECHNIQUE"**, Sinan Fidan, Mustafa Özgür Bora, Onur Çoban, Volkan Tuna , Polymer Composites, Basım Aşamasında, DOI: 10.1002/pc.23215, (2015)
3. **"THE INFLUENCE OF LOW VELOCITY REPEATED IMPACTS ON RESIDUAL COMPRESSIVE PROPERTIES OF HONEYCOMB SANDWICH STRUCTURES"**, Abdullah AKATAY, Mustafa Özgür BORA, Onur ÇOBAN, Sinan Fidan, Volkan Tuna, Composite Structures, 125, 425-433, (2015)
4. **"THE SCRATCH BEHAVIOR OF ACCELERATED AGED CARBON FIBRE REINFORCED EPOXY MATRIX COMPOSITE"**, Sinan Fidan, M. Özgür Bora, Onur Çoban, Eyüp Akagündüz, Polymer Composites, Accepted Manuscript, DOI: 10.1002/pc.23552, (2015)
5. **"Volcanic Ash Reinforcement Concentration Effect on Thermal Properties of Polyvinyl Chloride Composites"**, Sinan Fidan, Acta Physica Polonica A, 127 (4), 1002-1003, (2015)
6. **"THE INFLUENCE OF DIFFERENT CIRCULAR HOLE PERFORATIONS ON INTERLAMINAR SHEAR STRENGTH OF A NOVEL FIBRE METAL LAMINATES"**, Mustafa Özgür Bora, Onur Çoban, Tamer Sinmazçelik, İsmail Cürgül, Polymer Composites, BASIM AŞAMASINDA, DOI: 10.1002/pc.23256, (2015)
7. **"EFFECT OF MIXED SIZE PARTICLES REINFORCING ON THE THERMAL AND DYNAMIC MECHANICAL PROPERTIES OF Al<sub>2</sub>O<sub>3</sub>/ PPS COMPOSITES "**, Onur ÇOBAN, Mustafa Özgür BORA, Tamer SINMAZÇELİK , POLYMER COMPOSITES, BASIM AŞAMASINDA, DOI: 10.1002/pc.23520, (2015)
8. **"Evaluation of Volcanic Ash Concentration Effect on Mechanical Properties of Poly(Vinyl Chloride) Composites "**, Mustafa Özgür BORA, Acta physica polonica a, 127/4, 1004-1006, (2015)
9. **"Solid Particle Erosion Behavior of Volcanic Ash/PVC Composites"**, Onur ÇOBAN, Acta Physica Polonica A, 127, 998, (2015)
10. **"Effect of Chain Extender and Terpolymers on Tensile and Fracture Properties of Polyamide 6"**, Sinan Yılmaz, Okan Gul, Taner Yılmaz, Polymer, 65, 63-71, (2015)

11. "Effect of CBC and G-POSS on Tribological Behaviour of Polyamide 6 and Short Glass Fiber Reinforced Polyamide 6 Composites", O. Gul, S. Yilmaz, T. Yilmaz, ACTA PHYSICA POLONICA A, , , (2015)
12. "Effect of CBC and G-POSS on Tribological Behaviour of Polyamide 6 and Short Glass Fiber Reinforced Polyamide 6 Composites", O. Gul, S. Yilmaz, T. Yilmaz, ACTA PHYSICA POLONICA A, , , (2015)
13. **"Comparison of the mechanical, thermomechanical, thermal, and morphological properties of pumice and calcium carbonate-filled poly(phenylene sulphide) composites"**, Alp Eren ŞAHİN, Nevin Gamze KARSLI, Tamer SINMAZÇELİK, Polymer Composites, , , (2015)

#### KATILINILAN BİLİMSEL ETKİLİKLER

1. **"POMZA TOZU VE KARBON ELYAF TAKVİYELİ POLİFENİLEN SÜLFİD (PPS) KOMPOZİTLERİN ADHEZİF AŞINMA DAVRANIŞININ İNCELENMESİ"**, Sinan Yılmaz, Alp Eren ŞAHİN, Taner Yılmaz, Tamer SINMAZÇELİK, , Uluslararası Katılımlı III. Ege Kompozit Malzemeler Sempozyumu, , , (2015)
2. **"Improvement the Toughness and Crack Propagation Resistance Properties of Poly(Phenylene Sulfide)"**, Beysim Çetin, Alp Eren ŞAHİN, Nevin Gamze KARSLI, Taner YILMAZ, Tamer SINMAZÇELİK, İsmail CÜRGÜL, , 5th International Advances in Applied Physics and Materials Science Congress & Exhibition , (2015)
3. **"Geri Dönüştürülmüş PET/Polikarbonat Harmanlarının Özelliklerinin Zincir Uzatıcı Kullanılarak İyileştirilmesi"**, Okan Gül, Nevin Gamze Karşlı, Sinan Yılmaz, Taner Yılmaz, , I. Ulusal Plastik Teknolojileri Sempozyumu"Plastikler, Polimer Kompozitler, Şekillendirme Teknolojileri", , , (2015)
4. **"EROSIVE WEAR OF VOLCANIC ASH REINFORCED POLYPHENYLENE SULFIDE COMPOSITES"**, Sinan Fidan, Onur Çoban, Mustafa Özgür Bora, Tamer Sınmazçelik, Proceedings of the 4th International Conference of Engineering Against Failure, 4th International Conference of Engineering Against Failure, , 62-67, (2015)
5. **"MICRO-COMPUTED TOMOGRAPHY CHARACTERIZATION OF VOLCANIC ASH PARTICLES USED AS REINFORCEMENT IN POLYPHENYLENE SULFIDE COMPOSITES"**, Sinan Fidan, Onur Çoban, Mustafa Özgür Bora, Tamer Sınmazçelik, Proceedings of the 4th International Conference of Engineering Against Failure, 4th International Conference of Engineering Against Failure, , 85-90, (2015)
6. **"Influence of volcanic ash filler content on mechanical properties of polyphenylene sulfide composites"**, Mustafa Özgür Bora, Onur Çoban, Sinan Fidan, Tamer Sınmazçelik, Proceedings of the 4th International Conference of Engineering Against Failure, 4th International Conference of Engineering Against Failure, , 76-84, (2015)
7. **"Thermal and Dynamic Mechanical Properties of Volcanic Ash Reinforced Polyphenylene Sulfide Composites"**, Onur Çoban, Mustafa Özgür Bora, Sinan Fidan, Tamer Sınmazçelik, Proceedings of the 4th International Conference of Engineering Against Failure, 4th International Conference of Engineering Against Failure, , 105-112, (2015)

#### YÜRÜTÜLEN TEZ ÇALIŞMALARI

1. Doktora Tez Öğrencisi: Sinan YILMAZ  
Poliamit Kompozitlerin Kırılma Tokluğu ve Kırılma Davranışının Esas Kırılma İşi ve J-İntegral Metotları ile Analizi

2. Doktora Tez Öğrencisi: Alp Eren ŞAHİN  
Eko Kompozit Üretimi ve Karakterizasyonu

3. Yüksek Lisans Öğrencisi: Beysim ÇETİN  
TERPOLİMER İLAVESİNİN POLİ (FENİLEN SÜLFİT) İN MEKANİK, TERMAL VE TERMOMEKANİK  
ÖZELLİKLERİ ÜZERİNE ETKİSİ