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Education Information

Doctorate, Yildiz Technical University, Graduate School Of Natural And Applied Sciences, Makine Mühendisliği, Turkey
2018 - 2024

Postgraduate, Sakarya University, Fen Bilimleri Enstitüsü, Makine Mühendisliği, Turkey 2015 - 2018

Undergraduate, Sakarya University, Faculty Of Engineering, Makine Mühendisliği, Turkey 2011 - 2015

Dissertations

Doctorate, MANUFACTURING, CHARACTERIZATION AND MODELING OF FUNCTIONALIZED GRAPHENE-EPOXY NANOCOMPOSITES, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2024

Postgraduate, Köşe Kaynak Konstrüksiyonlarının Statik Dayanımının İncelenmesi, Sakarya Üniversitesi, Mühendislik Fakültesi, Makine Mühendisliği, 2018

Academic Titles / Tasks

Research Assistant PhD, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2024 - Continues

Research Assistant, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Mechanical Engineering, 2017 - 2024

Published journal articles indexed by SCI, SSCI, and AHCI

- I. Experimental investigation of the effect of functionalized graphene on the creep behavior of epoxy**
BAKBAK O., Colak O.
Journal of Reinforced Plastics and Composites, vol.43, no.19-20, pp.1133-1150, 2024 (SCI-Expanded)
- II. Stress relaxation behavior of graphene-epoxy nanocomposites: Effects of graphene fraction, strain levels, and temperature**
Acar A., Bakbak O., Colak O.

- Journal of Reinforced Plastics and Composites, 2024 (SCI-Expanded)
- III. **Time-dependent thermo-mechanical behavior of graphene epoxy nanocomposites: Creep, relaxation, compression**
BİRKAN B. E., BAKBAK O., Colak O., ACAR A.
Journal of Composite Materials, vol.57, no.22, pp.3449-3462, 2023 (SCI-Expanded)
 - IV. **Modeling wide range of viscoelastic-viscoplastic behavior of Araldite LY 564 epoxy using cooperative viscoplasticity theory based on overstress model**
Bakbak O., Çolak Çakır Ö. Ü.
Journal of Applied Polymer Science, vol.140, no.9, 2023 (SCI-Expanded)
 - V. **Functionalized graphene-epoxy nanocomposites: experimental investigation of viscoelastic and viscoplastic behaviors**
Colak Ö. Ü., Birkan B., BAKBAK O., ACAR A., Uzunsoy D.
Mechanics of Time-Dependent Materials, vol.27, no.1, pp.185-205, 2023 (SCI-Expanded)
 - VI. **Simplified cooperative viscoplasticity theory based on overstress model for nanocomposites**
Bakbak O., Çolak Çakır Ö. Ü.
JOURNAL OF APPLIED POLYMER SCIENCE, vol.139, no.28, pp.1-18, 2022 (SCI-Expanded)
 - VII. **Mechanical characterization of Araldite LY 564 epoxy_ creep, relaxation, quasi-static compression and high strain rate behaviors**
BAKBAK O., BİRKAN B. E., ACAR A., Colak Ö. Ü.
Polymer Bulletin, vol.79, no.4, pp.2219-2235, 2022 (SCI-Expanded)

Articles Published in Other Journals

- I. **Creep compliance of functionalized graphene-epoxy nanocomposites**
Bakbak O., Çolak Çakır Ö. Ü.
Journal of Structural Engineering & Applied Mechanics (Online), vol.7, no.1, pp.24-33, 2024 (Peer-Reviewed Journal)
- II. **Effect of graphene on the creep and stress relaxation behaviors of epoxy-nanocomposite in viscoplastic deformation regime**
Bakbak O., Çolak Çakır Ö. Ü.
SIGMA JOURNAL OF ENGINEERING AND NATURAL SCIENCES, vol.42, no.1, pp.49-56, 2024 (ESCI)

Papers Published in Refereed Scientific Meetings

- I. **"Material Model Development from Quasi Static to High Strain Rate for Thermoset Polymers"**
Çolak Çakır Ö. Ü., Bakbak O.
COST Action HISTRATE 2024, Advanced Composites under High Strain Rates Loading: A Route to Certification-by-Analysis., İstanbul, Turkey, 5 - 06 June 2024, pp.1
- II. **Micromechanical Modeling of Graphene Platelets Based Nanocomposites**
Bakbak O., Çolak Çakır Ö. Ü.
COST ACTION CA21121 - European Network for the Mechanics of Matter at the Nano-Scale (MecaNano), Vienna, Austria, Vienna, Austria, 1 - 03 May 2024, pp.61
- III. **Fonksiyonel Grafen-Epoksi Nanokompozitlerin Sürünme Kompliyansı**
Bakbak O., Çolak Çakır Ö. Ü.
23. ULUSAL MEKANİK KONGRESİ, Konya, Turkey, 4 - 08 September 2023, pp.635-643
- IV. **Viscoelastic and Viscoplastic Behavior of Graphene - Epoxy Nanocomposites: Experiments and Constitutive Modeling**
Çolak Çakır Ö. Ü., Bakbak O.
COST ACTION CA21121 - European Network for the Mechanics of Matter at the Nano-Scale (MecaNano), Madrid,

Spain, 26 - 27 April 2023, pp.43

- V. **Manufacturing, Mechanical Characterization and Modeling of Functionalized Graphene Epoxy Nanocomposites**
Çolak Çakır Ö. Ü., Bakbak O., Birkan B. E., Acar A.
22nd Edition of International Conference on Materials Science & Engineering, Amsterdam, Netherlands, 2 - 03 December 2021, pp.2
- VI. **Cooperative- Viscoplasticity Theory based on Overstress Model for Modeling Graphene-Epoxy Nanocomposites**
Çolak Çakır Ö. Ü., Bakbak O.
International Conference on Mining, Material, and Metallurgical Engineering, Florence, Italy, 19 January - 20 February 2022, pp.14-17
- VII. **THREE ROLL MILLING FOR MANUFACTURING OF GRAPHENE- EPOXY NANOCOMPOSITES**
Birkan B. E., Bakbak O., Acar A., Çolak Çakır Ö. Ü.
6th International Conference on Advances in Mechanical Engineering,, İstanbul, Turkey, 20 - 22 October 2021, pp.925-929
- VIII. **MECHANICAL BEHAVIOR OF FUNCTIONALIZED GRAPHENE-EPOXY NANOCOMPOSITES AROUND GLASS TRANSITION TEMPERATURE**
Bakbak O., Birkan B. E., Acar A., Çolak Çakır Ö. Ü.
6th International Conference on Advances in Mechanical Engineering,, İstanbul, Turkey, 20 - 22 October 2021, pp.112-117
- IX. **High Strain Rate and Quasi Static Behavior of Araldite LY564 Epoxy**
Bakbak O., Birkan B. E., Acar A., Çolak Çakır Ö. Ü., Taşdemirci A.
"Virtual Congress on Materials Science & Engineering". Materials Info 2020, Delaware, United States Of America, 9 - 10 November 2020, pp.20
- X. **Creep and Relaxation Behavior of Araldite LY564 Epoxy**
Birkan B. E., Bakbak O., Çolak Çakır Ö. Ü., Acar A.
"Virtual Congress on Materials Science & Engineering". Materials Info 2020, 9 - 10 November 2020, pp.19
- XI. **DAİRESEL ÇENTİKLİ BİR MİLİN ORANTISAL DİNAMİK YÜKLEME ALTINDAKİ DAVRANIŞINDA ÖTELEME GERİLME ETKİSİNİN TESPİTİ**
BAKBAK O., AKŞEN T. A., ESENER E., FIRAT M.
9th International Automotive Technologies Congress, Bursa, Turkey, 07 May 2018, pp.304-310
- XII. **Investigation of Notch Root Strain Behaviors Under Combined Loadings**
Akşen T. A., Bakbak O., Esener E., Ercan S., Fırat M.
4th International Conference on Engineering and Natural Science, Kyyiv, Ukraine, 2 - 06 May 2018, pp.484-492

Supported Projects

EKER B., BİRKAN B. E., TAŞDEMİR M., BAKBAK O., Project Supported by Higher Education Institutions, Grafen ve Çinko Borat Takviyeli Geri Dönüşümlü Polipropilen Nano Kompozit Malzemenin Mekanik Termal ve Morfolojik Özelliklerinin İncelenmesi, 2021 - 2023

Çolak Çakır Ö. Ü., ACAR A., TUBITAK Project, Yüksek şekil değiştirme hızlarında Nano kompozit malzeme karakterizasyonu ve modellenmesi, 2018 - 2022

Metrics

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