AFYON KOCATEPE ÜNİVERSİTESİ ULUSLARARASI MÜHENDİSLİK TEKNOLOJİLERİ ve UYGULAMALI BİLİMLER DERGİS

Afyon Kocatepe University
International Journal of Engineering Technology and Applied Sciences

Afyon Kocatepe University International Journal of Engineering Technology and Applied Sciences

http://dergipark.org.tr/akuumubd

e-ISSN:2667-4165

Afyon Kocatepe University

International Journal of Engineering Technology and

Applied Sciences (AKU-IJETAS)

Volume: VIII / Number: I / June - 2025

Owner / Publisher: Prof. Dr. Ayhan EROL for Afyon Kocatepe University

Editor in Chief Assoc. Prof. Dr. Güray SONUGÜR

Published Afyon Kocatepe University, June 2025,

ijetas@aku.edu.tr

This work is subject to copyright. All rights are reserved, whether the whole or part of the material

is concerned. Nothing from this publication may be translated, reproduced, stored in a

computerized system or published in any form or in any manner, including, but not limited to

electronic, mechanical, reprographic or photographic, without prior written permission from the

Publisher Afyon Kocatepe University www.ijetas.aku.edu.tr ijetas@aku.edu.tr The individual

contributions in this publication and any liabilities arising from them remain the responsibility of

the authors. The publisher is not responsible for possible damages, which could be a result of

content derived from this publication.

CONTACT INFORMATION

Afyon Kocatepe University International Journal of Engineering Technology and Applied Science

Afyon Kocatepe University, Technology Faculty, 03200 Afyonkarahisar, TURKEY

Phone: +90-272-2281446 /ext.

Fax: +90-272 228 1449

e-mail: ijetas@aku.edu.tr, aerol@aku.edu.tr

ii

Welcome to AKU-LIETAS

Dear Researchers.

The Afyon Kocatepe University International Journal of Engineering and Applied Sciences (AKU-

IJETAS) has been publishing high-quality scientific articles in both Turkish and English since

2018. Our journal is a peer-reviewed, open-access electronic journal (e-ISSN: 2667-4165), issued

biannually in June and December.

All submitted manuscripts are evaluated through a double-blind peer-review process by at least

two independent reviewers. In this process, the identities of both the authors and the reviewers

remain confidential to ensure impartiality and objectivity.

Authors can submit their original scientific research articles through our online submission system

and track the evaluation process via the journal platform. Please note that our journal only considers

original work that has not been published or submitted elsewhere.

We cordially invite researchers to contribute to our journal both as authors and reviewers. Thank

you in advance for your valuable support, and we wish you continued success in your academic

endeavors.

Sincerely,

Assoc. Prof. Dr. Güray SONUGÜR

Editor-in-Chief

iii

Danışma Kurulu / Editörler/ Editorial Board

Ahmet AKSOY	Akdeniz University	TURKEY
Ahmet YILDIZ	Afyon Kocatepe University	TURKEY
Alexander ONUFRAK	Pavol Jozef Safarik University	SLOVAKIA
Anas Sarwar QURESHI	Agriculture University	PAKISTAN
Artay YAGCI	Afyon Kocatepe University	TURKEY
Asım Gokhan YETGIN	Dumlupinar University	TURKEY
Behçet GULENC	Gazi University	TURKEY
Bojan ZLENDER	Maribor University	SLOVENIA
Cahit GURER	Afyon Kocatepe University,	TURKEY
David NOZADZE	Georgian Technical University	GEORGIA
Dinçer BURAN	Süleyman Demirel University	TURKEY
Dunja PERIC	Kansas State University, Manhattan	ABD
Dusan ORAC	Kosice Technical University	SLOVAKIA
Elena Cristina RADA	Trento University	ITALY
Gabor PAY	University College of Nyiregyhaza	HUNGARY
Gratiela BOCA DANA	Technical University Cluj Napoca	ROMANIA
Hazizan Md AKİL	Sains Malaysia University	MALAYSIA
Huseyin Ali YALIM	Afyon Kocatepe University	TURKEY
Huseyin AKBULUT	Afyon Kocatepe University	TURKEY
Ilhan KOŞALAY	Ankara University	TURKEY
Ioan ABRUDAN	Technical University Cluj Napoca	ROMANIA
Ivan KURIK,	Technical University Zilina	SLOVAKIA
Iveta VASKOVA	Kosice Technical University	SLOVAKIA
João Pedro SILVA	Leiria Polytechnic Institute	PORTUGAL
Lucian Ionel CIOCA	Lucian Blaga University of Sibiu	ROMANIA
Marco RAGAZZI	Trento University	ITALY
Martina HRUBOVCAKOVA	Kosice Technical University	SLOVAKIA
Matjaž ŠRAML	Maribor University	SLOVENIA
Merlinda EBIBI	Mother Teresa University	MACEDONIA
Mihai BANICA	Technical University Cluj Napoca	ROMANIA
Mircea HORGOS	Technical University Cluj Napoca	ROMANIA
Monica Lopez ALONSO	University of GRANADA	SPAIN
Muhammed YURUSOY	Afyon Kocatepe University	TURKEY
Mustafa ERSOZ	University of Selcuk	TURKEY
Mustaque HOSSAIN	Kansas State University, Manhattan	ABD
Nadras OTHMAN	Sains University	MALAYSIA
Nicolae UNGUREANU	Technical University Cluj Napoca	ROMANIA
Neritan TURKESHI	Mother Teresa University	MACEDONIA
Olivera PETKOVSKA	Mother Teresa University	MACEDONIA
Olga OROSOVA	Pavol Jozef Safarik University	SLOVAKIA
P. Trinatha RAO	Gitam University	INDIA

Peter MONKA	Technical University Kosice	SLOVAKIA
Prasanna RAMAKRISNAN	Neo Education Institu	MALAYSIA
Ramazan KAÇAR	Karabük University	TURKEY
Radu COTETIU	Technical University Cluj Napoca	ROMANIA
Regita BENDIKIENĖ	Kaunas Technology University	LITVANIA
Renata PANOCOVA	Pavol Jozef Safarik Üniversity	SLOVAKIA
Rıdvan UNAL	Afyon Kocatepe University	TURKEY
Robert CEP	Technical University Ostrava	CZECH
Serdar SALMAN	Marmara University	TURKEY
Serhat BASPINAR	Afyon Kocatepe University	TURKEY
Sermin OZAN	Fırat University	TURKEY
Sezai TAŞKIN	Celal Bayar University	TURKEY
Snezhina ANDONOVA	Sauth-West University	BULGARIA
Suleyman GUNDUZ	Karabük University	TURKEY
Stanislaw LEGUTKO	Poznan University of Technology	POLAND
Tomasz NIZNIKOWSKI	Lomza State University Applied Science	POLAND
Tomaz TOLLAZZI	Maribor University	SLOVENIA
Ugur CALIGULU	Firat University	TURKEY
Yılmaz YALCIN	Afyon Kocatepe University	TURKEY
Yuksel OĞUZ	Afyon Kocatepe University	TURKEY
Zoran TRIFUNOV	Mother Teresa University	MACEDONIA

CONTENTS

	Page
Polimer Çözeltilerinde Statik Işık Saçılmasının Simülasyon Te	emelli Bir İncelemesi: Rayleigh
Mie, Debye ve Guinier Modellerinin Araştırılması	(Araştırma Makalesi)
Ali AKYÜZ, Kazım KUMAŞ	1-13
Ortopedik Engelli Bireyler İçin Arduino Tabanlı Tek Elle C	Gitar Çalma Sistemi Tasarımı
Engelsiz Kutu	(Araştırma Makalesi)
Belgin BAĞRIAÇIK, Ata İSKENDEROĞLU, Doğa GÜMÜŞAY, A	Agah YILDIZ14-22
Videolarda Optik Akış ve Gauss Karışım Modeli Kullanarak	Nesne Tanıma
	(Araştırma Makalesi)
Hozaıfah ALKHATTAB, Fatih BAYRAM	23-32
Tekstil Atıklarının Kompozit Malzemelerde Takviye Eleman	ı Olarak Kullanımı
	(Derleme Makale)
Setenay Gökçe SULTAN GÜL, Beyza ASLAN, Ali GÜRSEL	33-40