



KASTAMONU UNIVERSITY JOURNAL OF ENGINEERING AND SCIENCES





**KASTAMONU UNIVERSITY
JOURNAL OF ENGINEERING AND SCIENCES**

e-ISSN 2667-8209

Kastamonu University Journal of Engineering and Science

Kastamonu University Journal of Engineering and Science publish as blind peer review and two times in a year.



Kastamonu University
Journal of Engineering and Science

Vol: 9 Issue: 2 December 2023 E-ISSN:2667-8209

Owner:

Prof. Dr. Ahmet Hamdi TOPAL
Rector

General Publishing Manager:

Prof. Dr. İzzet ŞENER
Dean

Editor:

Prof. Dr. Savaş CANBULAT

Associated Editors

Assoc. Prof. Dr. Osman ÇİÇEK
Assoc. Prof. Dr. Kaan IŞINKARALAR
Asst. Prof. Dr. Ali Burak ÖNCÜL

Technical Assistants

Dr. Instructor Selim ÜNAL
Res. Assist. Halil Oğuzhan KARA



Kastamonu University
Journal of Engineering and Science

Vol: 9 Issue: 2 December 2023 E-ISSN:2667-8209

This Issue of the Referee

Prof. Dr. Deniz GÜNEY
Prof. Dr. Fatih DUMAN
Prof. Dr. Hakan ŞEVİK
Prof. Dr. Mehmet ÇİÇEK
Prof. Dr. Ahmet Hanifi ERTAŞ
Prof. Dr. Hayati MAMUR
Prof. Dr. Yahya Hıřman ÇELİK
Prof. Dr. Zafer BARLAS
Assoc. Prof. Dr. Sevdan YILMAZ
Assoc. Prof. Dr. Salih GÖRGÜNOĞLU
Assoc. Prof. Dr. Ayşe KALAYCI ÖNAÇ
Assoc. Prof. Dr. İsmail KOÇ
Assoc. Prof. Dr. Şemsettin KULAÇ
Assoc. Prof. Dr. Oğuzhan Yavuz BAYRAKTAR
Assoc. Prof. Dr. Gökhan KAPLAN
Assoc. Prof. Dr. Hülya DURMUŞ
Asst. Prof. Dr. Fatih ADIGÜZEL
Asst. Prof. Dr. Ayşe ÖZTÜRK PULATOĞLU
Asst. Prof. Dr. Sinem KARAKUŞ
Asst. Prof. Dr. Öznur İŞINKARALAR
Dr. Nail ÜÇYOL
Dr. Dilek KAHRAMAN YILMAZ
Dr. Barıř BAYRAK

Compositors:

Asst. Prof. Dr. Öznur İŞINKARALAR

Kastamonu University Faculty of Engineering and Architecture 37150 Kastamonu / TÜRKİYE

Tel: +(90)366 2802901

Fax: +(90)366 2802900

Web: <https://dergipark.org.tr/tr/pub/kastamonujes>

e-mail: kujes@kastamonu.edu.tr

This journal is published two times in a year.

June and December

Kastamonu University Journal of Engineering and Science

Indexed and Abstracted in: Dergipark



Kastamonu University
Journal of Engineering and Science

Vol: 9 Issue: 2 December 2023 E-ISSN:2667-8209

CONTENTS

<i>Halobacillus trueperi</i> CT7: A Spore-Forming, Gelatinase Producing, Salt-Tolerant Bacteria Isolated from Çankırı Salt Mine	<i>Research article</i> Fevziye Işıl Kesbiç, Nejdet Gültepe, Naci Tüzemen	46
Assessment of Afforestation Activities in Thrace Region using Some Oak (<i>Quercus</i> sp.) Varieties	<i>Research article</i> Halil Barış Özel, Mesut Tandoğan, Nilüfer Şahin, Vedat Aslan, Mehmet Özdemir, Hakan Şevik	53
Comparative Performance Analysis of Ensemble Learning Algorithms for Rock Classification	<i>Research article</i> Ebru Efeoğlu	61
Microstructure and Hardness Properties of Ni-Si ₃ N ₄ Composite Materials Produced by Powder Metallurgy Method	<i>Research article</i> Hasaneen Houssain, Serkan Islak, Uğur Çalığülü	67
The Feasibility of using Annual Rings to Monitor Changes in Boron Concentrations in Air	<i>Research article</i> Burak Arıcak, Şemsettin Kulaç	73
Accumulation and Transfer of P and K, Macronutrient Elements for Plants, in <i>Corylus colurna</i> L. Stem Sections	<i>Research article</i> Kubra Key, Şemsettin Kulaç	83
Determination of the Changes in Airborne Ba and Mn Concentrations in Düzce City Center in the Last 40 Years with the Help of <i>Cedrus atlantica</i> Annual Rings	<i>Research article</i> Sümeyya Uslu, Nurcan Yiğit	90
A Low-Power 30MHz, 6 th Order Bandpass Differential Gm-C Filter on Chip Utilizing Floating Current Source	<i>Research article</i> Hüseyin Demirel, Arsen Ahmed Mohammed	96
Investigation of the Use of <i>Arthrospira</i> (<i>Spirulina</i>) <i>platensis</i> and <i>Cladophora glomerata</i> Algae in <i>Agaricus bisporus</i> (white button mushroom) Cultivation to Increase Growth and Yield	<i>Research article</i> Göksal Sezena, Mustafa Turunçoğlu	104