

Copyright © 2024

Email : [bilgumus@gmail.com](mailto:bilgumus@gmail.com)

Visit our home page on [www.dergipark.org.tr/mejs](http://www.dergipark.org.tr/mejs)

MEJS is an open access journal. This journal licensed under creative common 4.0 International (CC BY 4.0) license. You are free to share and adapt for any purpose, even commercially.

Under the following terms:

Attribution — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.

No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Notices:

You do not have to comply with the license for elements of the material in the public domain or where your use is permitted by an applicable exception or limitation.

No warranties are given. The license may not give you all of the permissions necessary for your intended use. For example, other rights such as publicity, privacy, or moral rights may limit how you use the material.



## **Editor-in-Chief**

**Zülküf GÜLSÜN**

Atomic and Molecular Physics, NMR Spectroscopy  
(Prof.Dr., General Director of INSERA, Dicle Teknokent, Dicle University, Diyarbakır, TURKEY))  
[zulkufgulsun@gmail.com](mailto:zulkufgulsun@gmail.com)

## **Language Editor**

**Dr. Mustafa BULUT**

Dicle University Vocational School, Diyarbakır/TURKEY  
[mbulut@dicle.edu.tr](mailto:mbulut@dicle.edu.tr)

## **Co-Editor**

**Bilal GÜMÜŞ**

Dicle University Faculty of Engineering, Dep. of Electrical and Electronics Engineering, Diyarbakır/TURKEY  
[bilgumus@dicle.edu.tr](mailto:bilgumus@dicle.edu.tr)

## **Members of Editorial Board and their fields**

**Abdülkadir MASKAN**

**Field:** Physics Education, Science Education

(Prof.Dr., Dicle University, Faculty of Education, Turkey) [akmaskan@dicle.edu.tr](mailto:akmaskan@dicle.edu.tr)

**Abdulselam ERTAŞ**

**Field:** Natural products, Pharmacognosy<sup>[11]</sup><sub>SEP</sub> (Assoc.Prof.Dr., Dicle University, Faculty of Pharmacy, Department of Pharmacognosy, Turkey) [abdulselamertas@hotmail.com](mailto:abdulselamertas@hotmail.com)

**Abdullah SESSİZ**

**Field:** Agricultural Machinery and Technologies Engineering

(Prof.Dr., Dicle University, Faculty of Agriculture, Turkey) [asesiz@dicle.edu.tr](mailto:asesiz@dicle.edu.tr)

**Ahmad ALI**

**Field:** Biotechnology, DNA Extraction, Molecular Biology, Lifesciences

(PhD., University of Mumbai, Dep. of Life Sciences, Mumbai, INDIA) [ahmadali@mu.ac.in](mailto:ahmadali@mu.ac.in)

**Ahmet ALTINDAL**

**Field:** Condensed Matter Physics, Electronic Structure, Thin Films and Low-Dimensional Structures

(Prof.Dr., YILDIZ Technical University, Faculty of Arts and Sciences, Turkey) [altindal@yildiz.edu.tr](mailto:altindal@yildiz.edu.tr)

**Ahmet ONAY**

**Field:** Botany, General Biology

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Biology, Turkey) [ahmeto@dicle.edu.tr](mailto:ahmeto@dicle.edu.tr)

**Alexander PANKOV**

**Field:** Partial Differential Equations, Nonlinear Analysis and Critical Point Theory, Mathematical Physics, Applied Mathematics

(Prof.Dr., Morgan State University, USA) [alexander.pankov@morgan.edu](mailto:alexander.pankov@morgan.edu)

***Ali YILMAZ***

**Field:** Atomic and Molecular Physics, Biophysics, NMR Spectroscopy

(Prof.Dr., Retirad, Turkey) yilmz.ali@gmail.com

***Arun Kumar Narayanan NAIR***

**Field:** Polymer Chemistry, Computer Simulation

(PhD., King Abdullah University of Science and Technology, Saudi Arabia) [anarayanannair@gmail.com](mailto:anarayanannair@gmail.com)

***Azeez Abdullah BARZINJY***

**Field:** Material Science, Physics

(Associate Prof.Dr., Materials Science, Department of Physics, Salahaddin University, IRAQ)

azeez.azeez@su.edu.krd

***Bayram DEMİR***

**Field:** Nuclear Physics, Nuclear Medicine, Medical Imaging

(Prof.Dr., İstanbul University, Faculty of Science, Turkey) bayramdemir69@yahoo.com

***Birol OTLUDİL***

**Field:** General Biology, Pharmaceutical Biology, Science Education

(Prof.Dr., Dicle University, Faculty of Education, Turkey) birolotludil@dicle.edu.tr

***Enver SHERIFI***

**Field:** Herbolgy, Biology, Agricultural Science

(Prof.Dr., University of Prishtina, Kosovo) e\_sherifi@yahoo.com

***Feyyaz DURAP***

**Field:** Inorganic Chemistry

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Chemistry, TURKEY) fdurap@dicle.edu.tr

***Gültekin ÖZDEMİR***

**Field:** Agricultural Science, Horticulture

(Prof.Dr., Dicle University, Faculty of Agriculture, Department of Horticulture, Turkey) [gozdemir@gmail.com](mailto:gozdemir@gmail.com)

***Hamdi TEMEL***

**Field:** Pharmaceutical Chemistry

(Prof.Dr., Dicle University, Fac. of Pharmacy, Dep. of Pharmaceutical Chemistry, Turkey)

htemelh@hotmail.com

***Hasan Çetin ÖZEN***

**Field:** Botany, General Biology

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Biology, Turkey) [hasancetino@gmail.com](mailto:hasancetino@gmail.com)

***Hasan İÇEN***

**Field:** Veterinary Internal Disease

(Prof.Dr., Dicle University, Faculty of Veterinary, Dep. of Internal Disease, TURKEY) hasanicen@dicle.edu.tr

***Hasan KÜÇÜKBAY***

**Field:** Organic Chemistry, Peptide Chemistry, Heterocyclic Chemistry, Medicinal Chemistry

(Prof.Dr., İnönü University, Faculty of Science and Letters, Dep. of Chemistry, Turkey)

hkucukbay@gmail.com

***Hadice Budak GÜMGÜM***

**Field:** Atomic and Molecular Physics, NMR Spectroscopy

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Physics, TURKEY) [hbudakg@gmail.com](mailto:hbudakg@gmail.com)

***Hüseyin ALKAN***

**Field:** Protein Separation Techniques, Pharmacy

(Assoc.Prof.Dr., Dicle University Faculty of Pharmacy, Department of Biochemistry, TURKEY)

mhalkan@dicle.edu.tr

***Ishtiaq AHMAD***

**Field:** Numerical Analysis, Computer Engineering

(PhD., Austrian Institute of Technology, Austria) [ishtiaq.ahmad.fl@ait.ac.at](mailto:ishtiaq.ahmad.fl@ait.ac.at)

***İlhan DAĞADUR***

**Field:** Mathematics, Analysis and Functions Theory

(Prof.Dr., Mersin University Faculty of Arts and Sciences, Dep. of Mathematics, Turkey)

ilhandagdur@yahoo.com; [idadagdur@mersin@edu.tr](mailto:idadagdur@mersin@edu.tr)

***İsmail YENER***

**Field:** Analytical Techniques, Pharmacy

(PhD., Dicle University, Faculty of Pharmacy, Department of Analytical Chemistry, Turkey)

ismail.yener@dicle.edu.tr

***Javier FOMBONA***

**Field:** Science Education

(Prof.Dr., University of Oviedo, Spain) [fombona@uniovi.es](mailto:fombona@uniovi.es)

***Jonnalagadda Venkateswara RAO***

**Field:** Algebra, General Mathematics

(Prof.Dr., School of Science & Technology, United States International University, Nairobi, KENYA)

drjvenkateswararao@gmail.com

***Lotfi BENSAPHLA-TALET***

**Field:** Ecology, Hydrobiology

(Assoc. Prof.Dr., Department of Biology, Faculty of Natural Sciences and Life, University Oran1-Ahmed

BENBELLA, Algeria) [btlotfi1977@gmail.com](mailto:btlotfi1977@gmail.com)

***M.Aydın KETANİ***

**Field:** Veterinary, Histology and Embryology

(Prof.Dr., Dicle University, Fac. of Veterinary, Dep. of Histology and Embryology, TURKEY)

***Mohammad ASADI***

**Field:** Agriculture, Entomology, Pesticides toxicology

(Dr., Department of Plant Protection, Faculty of Agriculture and Natural Resources,

University of Mohaghegh Ardabili, Ardabil, IRAN) [assadi20@gmail.com](mailto:assadi20@gmail.com)

***Mukadder İĞDİ ŞEN***

**Field:** Astronautics Engineering

(Dr., Trakya University, Edirne Vocational College of Technical Sciences, Turkey)

mukaddersen@trakya.edu.tr

***Murat AYDEMİR***

Field: Inorganic Chemistry

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Chemistry, TURKEY) aydemir@dicle.edu.tr

***Murat HÜDAVERDİ***

Field: High Energy and Plasma Physics

(Dr., Yıldız Technical University, Faculty of Science and Letters, Dep. of Physics, TURKEY)

hudaverd@yildiz.edu.tr

***Müge SAKAR***

Field: General Mathematics

(Assoc.Prof.Dr., Dicle University, Turkey) mugesakar@hotmail.com

***Mustafa AVCI***

Field: General Mathematics

(Assoc.Prof.Dr., Batman University, Turkey) mustafa.avci@batman.edu.tr

***Nuri ÜNAL***

Field: High Energy and Plasma Physics

(Retired Prof.Dr., Akdeniz University, Faculty of Science, Turkey) nuriunal@akdeniz.edu.tr

***Özlem GÜNEY***

Field: Mathematics, Analysis and Functions Theory

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Mathematics, Turkey) ozlemg@dicle.edu.tr

***Petrica CRISTEA***

Field: Computational Physics, Condensed Matter Physics, Electromagnetism

(Assoc.Prof.Dr., University of Bucharest, Faculty of Physics, Romania) pcristea@fizica.unibuc.ro

***Sanaa M. AL-DELAIMY***

Field: Atomic and Molecular Physics, General Physics

(Ph.D., Physics Department, Education College for Pure Sciences, Mosul University, Mosul, Iraq)

sadelaimy@yahoo.com

***Selahattin GÖNEN***

Field: Physics Education, Science Education

(Prof.Dr., Dicle University, Faculty of Education, Turkey) sgonen@dicle.edu.tr

***Şemsettin OSMANOĞLU***

Field: Atomic and Molecular Physics, ESR Spectroscopy

(Retired Prof.Dr., Dicle University, Faculty of Science, Dep. of Physics) sems@dicle.edu.tr

***Sezai ASUBAY***

Field: Solid State Physics

(Prof.Dr., Dicle University, Faculty of Science, Dep. of Physics, Turkey) [sezai.asubay@gmail.com](mailto:sezai.asubay@gmail.com)

***Süleyman DAŞDAĞ***

Field: Biophysics

(Prof.Dr., İstanbul Medeniyet University, Faculty of Medicine, Dep. of Biophysics, Turkey)

[sdasdag@gmail.com](mailto:sdasdag@gmail.com)

***Tamraz H. TAMRAZOV***

Field: Biological Sciences

(Assoc.Prof.Dr., Department of Plant Physiology and Biotechnology, Research Institute of Crop Husbandry,  
Ministry of Agriculture of the Republic of Azerbaijan)

tamraz.tamrazov@mail.ru

***Yusuf ZEREN***

**Field:** Mathematics, Topology

(Assoc.Prof.Dr., Yıldız Technical University, Faculty of Science and Letters, Dep. of Mathematics, TURKEY)

yzeren@yildiz.edu.tr

***Z. Gökay KAYNAK***

**Field:** Nuclear Physics

(Retired Prof.Dr., Uludag University, Faculty of Science, Dep. of Physics, Turkey) kaynak@uludag.edu.tr



## CONTENTS

### Research Articles

- 1- PHYTOCHEMICAL PROFILING BY LC-ESI-MS/MS AND DETERMINATION OF ANTIOXIDANT, ANTI-ALZHEIMER AND ANTITYROSINASE ACTIVITIES OF TWO ASPARAGACEAE SPECIES: *Scilla Hyacinthoides* L. AND *Scilla Ingridiae* SPETA..... 79-94  
*Alevcan KAPLAN*
- 2 - BIOPHYSICAL INVESTIGATION OF MOLECULAR INTERACTIONS BETWEEN ALLIIN AND ANIONIC DMPG MODEL MEMBRANE: AN FTIR STUDY ..... 95-105  
*Nazli EZER ÖZER, Burcu KARAGÖZ TOPTAŞ, Ipek ŞAHİN*
- 3- OPTICAL, MORPHOLOGICAL, STRUCTURAL, AND PHOTOCATALYTICAL PROPERTIES OF PLASMONIC AU NPS PRODUCED BY PULSED LASER DEPOSITION ..... 106-117  
*İlhan CANDAN, Serap YİĞİT GEZGİN, Hadice BUDAK GÜMGÜM, Hamdi ŞÜKÜR KILIÇ*
- 4- OBSERVATIONS ON THE WINTERING OF WHITE-STORK *CICONIA CICONIA* (LINNAEUS, 1758) FROM SOUTH-EASTERN PART OF TÜRKİYE ..... 118-125  
*Recep KARAKAŞ*
- 5- NORTHERN BALD IBIS POPULATION DYNAMICS-TÜRKİYE (2012-2022)..... 126-143  
*Ahmet KILIÇ, Ersin UYSAL*
- 6- NEW GENERALIZED DIFFERENCE SEQUENCE SPACES AND THEIR KÖTHE-TOEPLITZ DUALS .....144-150  
*Gülcan ATICI TURAN*
- 7- ARCHIMEDES OPTIMIZATION ALGORITHM-BASED PITCH ANGLE CONTROL IN WIND ENERGY SYSTEMS.....151-166  
*Hasan Bektaş PERÇİN, Abuzer CALIŞKAN*
- 8- ADVANCED SKIN CANCER DETECTION USING CONVOLUTIONAL NEURAL NETWORKS AND TRANSFER LEARNING..... 167-178  
*Emrah ASLAN, Yıldırım ÖZÜPAK*

### Review Article

- 9- APPLICATION OF ARTIFICIAL INTELLIGENCE TECHNIQUES FOR DEFECT PREVENTION AND QUALITY CONTROL IN ARC WELDING PROCESSES: A COMPREHENSIVE REVIEW .....179-206  
*Turgay Tugay BILGIN, Musa Selman KUNDURACI, Ahmet METİN, Merve PAYAR, Erdal NAYIR*