



REVISTA DE CHIMIE

Chemistry Sciences

Chemical and Biochemical Engineering

Environmental Chemistry and Engineering

Chemistry Application in Food, Nutrition, Agriculture

Medical and Pharmaceutical Chemistry

Materials

JANUARY 2022

Print ISSN: 0034-7752 / Online ISSN: 2668-8212

<https://revistadechimie.ro>

<https://doi.org/10.37358/Rev.Chim.1949>



**REVISTA DE CHIMIE FOUNDED IN 1949
BUCURESTI ROMANIA**

EDITORIAL BOARD

**Editor-in-Chief:
Gabriel Lucian RADU**

Politehnica University of Bucharest, Romania

**Editorial Manager:
Ion ANDRONACHE**

Revista de Chimie SRL, Bucharest, Romania

EDITORS:

Ionel MANGALAGIU – Chemistry Sciences
Alexandru Ioan Cuza University, Iasi, Romania

Irinel Adriana BADEA – Chemistry Sciences
University of Bucharest, Romania

Costin Sorin BILDEA – Chemical and Biochemical Engineering
Politehnica University of Bucharest, Romania

Ioana FECHETE - Chemical and Biochemical Engineering
Université de Technologie de Troyes, France

Gheorghe NECHIFOR – Environmental Chemistry and Engineering
Politehnica University of Bucharest, Romania

Simona Gabriela BUNGAU - Environmental Chemistry and Engineering
University of Oradea, Romania

Adela PINTEA - Chemistry Application in Food, Nutrition, Agriculture
University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca, Romania

Gabriela RAPEANU - Chemistry Application in Food, Nutrition, Agriculture
Dunarea de Jos University of Galati, Romania

Gabriel Ovidiu BRATU - Medical and Pharmaceutical Chemistry
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Camelia DIACONU - Medical and Pharmaceutical Chemistry
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Maria CAZACU – Materials
Petru Poni Institute of Macromolecular Chemistry, Iasi, Romania

Iulian ANTONIAC – Materials
Politehnica University of Bucharest, Romania

ASOCIATE EDITORS:

Lotfi ALEYA

Université de Franche-Comté, France

Patrick Da COSTA

Sorbonne Université, France

Remi CHAUVIN

University of Toulouse, France
Huaqiao University, Xiamen Campus, China

Giuseppe GATTUSO

University of Messina, Italy

Andrei JITIANU

Lehman College of The City University of New York, USA

Piotr KURCOK

Centre of Polymer and Carbon Materials Polish Academy of Sciences, Poland

Bouchta SAHRAOUI

University of Angers, UFR Sciences
Institute of Sciences and Molecular Technologies of Angers, France

Yanzhong ZHANG

College of Chemistry, Chemical Engineering & Biotechnology Donghua University, China

EDITORIAL ADVISORY BOARD:

Sanda ANDREI

University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania

Narcis BARSAN

Vasile Alecsandri University of Bacau, Romania

Ede BODOKI

Iuliu Hatieganu University of Medicine & Pharmacy, Cluj-Napoca, Romania

Andreea BUNEA

University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania

Ioan CALINESCU

Politehnica University of Bucharest, Romania

Simona CAPRARESCU

Politehnica University of Bucharest, Romania

Otilia CINTEZA

University of Bucharest, Romania

Simona CLICHICI

University of Medicine and Pharmacy, Cluj-Napoca, Romania

Carolina CONSTANTIN

Victor Babes National Institute, Bucharest, Romania

Lucian Octav COPOLOVICI

Aurel Vlaicu University, Arad, Romania

Calin Cristian CORMOS

Babeş-Bolyai University, Cluj Napoca, Romania

Dana CULITA

Institute of Physical Chemistry Ilie Murgulescu, Bucharest, Romania

Andrei DANET

University of Bucharest, Romania

Iulia Gabriela DAVID

University of Bucharest, Romania

Gyorgy DEAK

INCDPM, Bucharest, Romania

Kamel EARAR

Dunarea de Jos University of Galati, Romania

Petru FILIP

C. D. Nenitescu Institute of Organic Chemistry, Bucharest, Romania

Anca Irina GALACTION

University of Medicine and Pharmacy Grigore T. Popa, Iasi, Romania

Maria HARJA

Technical University Gheorghe Asachi, Iasi, Romania

Cosmin JINESCU

Politehnica University of Bucharest, Romania

Vasile LAVRIC

Politehnica University of Bucharest, Romania

Simona Carmen LITESCU

National Institute for Biological Sciences, Bucharest, Romania

Cristian MATEI

Politehnica University of Bucharest, Romania

Florin MICULESCU

Politehnica University of Bucharest, Romania

Maria MOHORA

Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Lucia MUTIHAC

University of Bucharest, Romania

Denisa NISTOR

Vasile Alecsandri University of Bacau, Romania

Octavian OLARU

Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Eliza OPREA

University of Bucharest, Romania

Ovidiu OPREA

Politehnica University of Bucharest, Romania

Cristian Valeriu PIRVU
Politehnica University of Bucharest, Romania

Ileana RAU
Politehnica University of Bucharest, Romania

Sonia SOCACI
University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, Romania

Bogdan SOCEA
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Irina STOIAN
Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Emanuel VAMANU
University of Agronomical Sciences and Veterinary Medicine, Bucharest, Romania

Camelia VIZIREANU
Dunarea de Jos University of Galati, Romania

Laurian VLASE
University of Medicine and Pharmacy Iuliu Hatieganu, Cluj Napoca, Romania

Maria ZAHARESCU
Institute of Physical Chemistry Ilie Murgulescu, Bucharest, Romania
Romanian Academy

PUBLISHER STAFF:

Alice CRISTEA – Manager
Elena ANDRONACHE – IT
Monica BALUTA – Editing
Iuliana GHITA – Accounting

Impact factor 2019: 1.755

CONTENTS

1 / 2022

FLAVIA POP, CRISTINA ANAMARIA SEMENIUC

Oxidative Stability of Avocado and Peanut Oils Under Different Heating Temperatures.....1

GANG LI, YING WANG, FENGBO WANG

Preparation and Properties of Mg(OH)₂ Whiskers by Ion Exchange Resin Method.....9

SIAMAK SHEHNI, SEYED MOSTAFA TABATABAEE GHOMSHEH

Modification Strategy of ZSM-5 Zeolite for Enhancing p-Xylene Selectivity in Toluene Disproportionation.....19

MENG CUN, JINCHENG MAO, JIZHEN TIAN, MINGJIN CAI, XIAOJIANG YANG, CHONG LIN, ZIGAO HUANG

Multifunctional Surfactant: Integration of Fracturing Fluid Flooding27

ORIANA PALMA CALABOKIS, ROSESTELA PERERA, CARMEN ROSALES, YAMID NUÑEZ, JAIRO SEGURA, ALVARO ARRIETA

Nanocomposite Poly(lactic acid)/sepiolite with Improved Mechanical and Biofilms Formation Properties.....41

GIOVANNI CHAVES-BEDOYA, EDGAR JOEL VERA, LUZ YINETH ORTIZ-ROJAS

Phytochemical Characterization of Ethanolic Extracts of the Leaves of *Zanthoxylum Caribaeum*
Lam and Evaluation of Antimicrobial Activity Against *Burkholderia Glumae*51

LTAIEF LAMMARI, SANA BEN KHLIFA, LINDA HAMED, KHALIL HAMRAOUI, HASSEN KHARROUBI

Determination of Physical and Mechanical Properties of Potatoes and the Importance in Food Chemistry.....62

QIAO JING LIN, XUE SUN, JIAN HUA CHEN, JING MEI WANG, WEI WEI LIN, LI JUN FANG

Adsorption of Dibenzothiophene in Gasoline by Si-MCM-41/ Sodium Alginate Porous Hybrid Membrane.....73

TONG ZUO, YI QIAN, HAONAN ZHANG, JIANBO LIU, LEI GONG, JUN ZHOU, XIAOQI YANG

Impact of Fe₃O₄ Nanoparticles on Methane Production from Anaerobic Digestion and Kinetic Analysis.....87

YANLIANG ZENG, CHUNFA LIAO, ZHENGXIN XU, FUPENG LIU

The Mechanism of Selective Separation of Antimony from Chloride Leachate of Copper Anode Slime.....99

YU TAN, MINGYU HE, YING LI, MAMATJAN YIMIT

Study on Degradation of Lignin by TiO₂-based Photocatalyst Doped with Carbon Dots.....114

QINWEI JIA, JUN ZHOU, HAONAN ZHANG, TONG ZUO, LUYU WANG, LEI GONG, FENG GENG

Microbial Degradation Pathways of Acrylic Paint Thinner Gas in Biotrickling Filter and
Comparison of Kinetic Models Under Different Gas Concentrations.....126

Short communication

MARISELVAM AMMASI KRISHNAN, MUTHU RAM PAZHANI SELVAM KAVITHA, PRAKASH VEERASAMY RADHAKRISHNAN, MURUGESAN GURUSAMY

The Outbreak of the COVID-19 Pandemic and its Healing Effects on the Environment145

GHEORGHE BENGA

IN MEMORIAM PETRE T. FRANGOPOL (1933-2020).....152

TIBOR BRAUN

Jorge Eduardo Hirsch and the Hirsch-index** a Personal Chronicle166