

**ANALELE  
UNIVERSITĂȚII  
“OVIDIUS”  
CONSTANȚA**

Seria:

**CHIMIE**

VOL.XVI, Number 2

ANUL XVI – 2005

*Special Edition for the National Conference  
“CHIMIE - PETROL Constanța 2005”,  
8-9 September 2005,  
Constanța, Romania*

ISSN – 1223 – 7221

# **ANALELE UNIVERSITĂȚII “OVIDIUS “CONSTANȚA Seria CHIMIE “OVIDIUS” UNIVERSITY ANNALS OF CHEMISTRY**

## **AIMS AND SCOPE**

Revista “Analele Universității Ovidius” Constanța seria Chimie este o revistă periodică cu referenți ce publică lucrări originale conținând rezultate nepublicate în alte reviste. Lucrările trebuie prezentate în limba engleză.

“Ovidius” University Annals of Chemistry aims to publish original unpublished papers in all branches of fundamental and applied chemistry: inorganic, analytical, biochemistry, organic, physical chemistry, technology and chemical engineering.

## **EDITOR IN CHIEF**

Elisabeta Chirilă

Mail address: “Ovidius” University, Faculty of Physics, Chemistry and Petroleum Technology, Department of Chemistry, 124, Mamaia Blvd., 900527 RO Constanța, Romania; e-mail: echirila@univ-ovidius.ro.

## **EDITORIAL ADVISORY BOARD**

ANDRUH Marius, University of Bucharest, RO (Inorganic Chemistry);  
BARBOSA TORRALBO Jose, University of Barcelona, ES (Analytical Chemistry);  
CHIRILĂ Elisabeta, “Ovidius” University of Constanța, RO (Analytical and Environmental Chemistry);  
GIROTTI Stefano, University of Bologna, IT (Analytical and Environmental Chemistry);  
LECA Minodora, University of Bucharest, RO (Physical Chemistry);

MAGEARU Vasile, University of Bucharest, RO (Analytical Chemistry);  
MANDALOPOL Dan, “Ovidius” University of Constanța, RO (Petroleum Technology);  
MOCANU Raluca “Al I.Cuza” University, Iasi, RO (Analytical and Environmental Chemistry);  
POPOVICI (CARAZEANU) Ionela “Ovidius” University of Constanța, RO (Inorganic Chemistry);  
ROȘCA Sorin Ioan “Politehnica” University of Bucharest, RO (Organic Chemistry);  
TĂRĂBĂȘANU-MIHĂILĂ Corneliu “Politehnica” University of Bucharest, RO (Organic Chemistry);

## **EDITOR ASSISTANTS**

Ionela Popovici, Simona Lupșor

Mail address: “Ovidius” University, Faculty of Physics, Chemistry and Petroleum Technology, Department of Chemistry, 124, Mamaia Blvd., 900527 RO Constanța, Romania; e-mail: icarazeanu@univ-ovidius.ro, sgutaga@univ-ovidius.ro.

## **Executive secretary**

Gabriela Stanciu, e-mail: gstanciu@univ-ovidius.ro.

## **ORDERING INFORMATION**

Revista poate fi procurată prin schimb de publicații cu instituții similare din țară și străinătate;  
The journal may be obtained on exchange basis with similar Romanian or foreign institutions;  
**124, Mamaia Blvd, 900527 – RO Constanta, ROMANIA**

© 2005 Ovidius University Press. All rights reserved.

Printed in Romania

This journal and the individual contributions contained in it are protected under copyright by Ovidius University Press and the following terms and conditions apply to their use:

Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Permission of the Publisher and payment of a fee is required for all other photocopying, including multiple or systematic copying. Permissions may be sought directly from Ovidius University Press, 124 Mamaia Blvd, 900527 RO Constanța, Romania

*National Conference*  
**“CHIMIE - PETROL Constanța 2005”,**  
**8-9 September 2005,**  
**Constanța, Romania**

**SCIENTIFIC COMMITTEE**

Prof. Dr.eng. **Horia IOVU**, “Politehnica” University of Bucharest

Prof.dr.eng. **Dan MANDALOPOL**, “Ovidius” University of Constanța

Prof.dr. eng. **Sorin Ioan ROȘCA**, “Politehnica” University of Bucharest

Prof.dr. eng **Paul ROȘCA**, Oil & Gas University of Ploiești

Prof.dr. eng. **Ilie SIMINICEANU**, “Gh.Asachi” Technical University of Iasi

Prof.dr. eng. **Corneliu TĂRABAȘANU MIHAILĂ**, “Politehnica” University of Bucharest

Dr.eng. **Claudia Irina KONCSAG**, “Ovidius” University of Constanța

Dr. **Gabriela STANCIU**, “Ovidius” University of Constanța

**ORGANISING COMMITTEE**

**CONFERENCE CHAIRPERSON:**

Prof.Dr.eng. **Dan MANDALOPOL**, “Ovidius” University of Constanța

**SECRETARY**

**Simona LUPSOR**, “Ovidius” University of Constanța

**MEMBERS**

Dr. eng. **Gabriela STANCIU**, “Ovidius” University of Constanța

Dr.eng. **Claudia Irina KONCSAG**, “Ovidius” University of Constanța

Dr. **Viorica POPESCU**, “Ovidius” University of Constanța

Dr.eng. **Irina NITA**, “Ovidius” University of Constanța

Dr.eng. **Lucica BARBES**, “Ovidius” University of Constanța

Dr.eng. **Anca STERPU**, “Ovidius” University of Constanța

Dr.eng. **Corina TEODORESCU**, “Ovidius” University of Constanța