

S C I E N T I F I C P A P E R S
(Selection)
Professor Dr. Dinca Nicolae

A. PhD thesis

“Physico-chemical methods for separation and purification of natural products”,
Scientific leader Prof. Dr. Ioan Oprean, Babes-Bolyai University Cluj-Napoca, 1999

B. Books and chapters published

B1. Title: CHEMICAL STRUCTURE IDENTIFICATION BY DIFFERENTIAL MASS SPECTRA Author(s): **Dinca, Nicolae**, Source: APPLICATIONS OF MASS SPECTROMETRY IN LIFE SAFETY Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology Pages: 221-233 DOI: 10.1007/978-1-4020-8811-7_16 ISSN 1871-4641 Published: 2008

B2. Title: STRUCTURAL ANALYSIS OF CHONDROITIN SULFATE DISACCHARIDES BY ELECTROSPRAY IONIZATION HIGH CAPACITY ION TRAP MASS SPECTROMETRY Author(s): Muresan, Adina; Galusca, Mirela; Seidler, Daniela G.; **Dinca, Nicolae** and Zamfir, Alina D. Source: APPLICATIONS OF MASS SPECTROMETRY IN LIFE SAFETY Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology Pages: 85-95 DOI: 10.1007/978-1-4020-8811-7_6 ISSN 1871-4641 Published: 2008

B3. Title: STEREOCHEMISTRY STUDIES OF SOME 1,3-DIOXANE DERIVATIVES BY DIFFERENTIAL MASS SPECTROMETRY AND COMPUTATIONAL CHEMISTRY Author(s): Harja, Florian; Bettendorf, Christine; Grosu, Ion; **Dinca, Nicolae**, Source: APPLICATIONS OF MASS SPECTROMETRY IN LIFE SAFETY Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology Pages: 185-191 DOI: 10.1007/978-1-4020-8811-7_12 ISSN 1871-4641 Published: 2008

B4. Title: MALDI-TOF MASS SPECTROMETRY IN TEXTILE INDUSTRY Author(s): Munteanu, Florentina-Daniela; **Dinca, Nicolae**; Cavaco-Paulo, Artur Book Editor(s): Popescu, C; Zamfir, AD; Dinca, N Source: APPLICATIONS OF MASS SPECTROMETRY IN LIFE SAFETY Book Series: NATO Science for Peace and Security Series A-Chemistry and Biology Pages: 193-203 DOI: 10.1007/978-1-4020-8811-7_13 Published: 2008

C. Work ISI published

C1. Title: New Quantitative Structure-Fragmentation Relationship Strategy for Chemical Structure Identification Using the Calculated Enthalpy of Formation as a Descriptor for the Fragments

Produced in Electron Ionization Mass Spectrometry: A Case Study with Tetrachlorinated Biphenyls

Author(s): **Nicolae Dinca**, Simona Dragan, Mihael Dinca, Eugen Sisu, and Adrian Covaci,
Anal. Chem., **2014**, 86 (10), pp 4949–4955

C2. Title: Structural identification by differential mass spectrometry as a criterion for selecting the best quantum chemical calculation of formation enthalpy for tetrachlorinated biphenyls

Author(s): **Dinca, Nicolae**; Covaci, Adrian

Source: RAPID COMMUNICATIONS IN MASS SPECTROMETRY Volume: 26 Issue: 17
Pages: 2033-2040 DOI: 10.1002/rcm.6321 Published: SEP 15 2012

C3. Title: Analysis of novel over- and under-sulfated glycosaminoglycan sequences by enzyme cleavage and multiple stage MS

Author(s): Zamfir, Alina D.; Flangea, Corina; Sisu, Eugen; Serb Alina F.; **Dinca, Nicolae**; et al.

Source: PROTEOMICS Volume: 9 Issue: 13 Pages: 3435-3444 DOI:
10.1002/pmic.200800440 Published: JUL 2009

C4. Title: Synthesis and structural characterization of amino-functionalized polysaccharides

Author(s): Sisu, Ioana; Udrescu, Valentina; Flangea, Corina; Tudoe, Sorin; **Dinca, Nicolae**; et al.

Source: CENTRAL EUROPEAN JOURNAL OF CHEMISTRY Volume: 7 Issue: 1 Pages: 66-
73 DOI: 10.2478/s11532-008-0090-8 Published: MAR 2009

C5. Title: Coupling of fully automated chip-based electrospray ionization to high-capacity ion trap mass spectrometer for ganglioside analysis

Author(s): Almeida, Reinaldo; Mosoarca, Cristina; Chirita, Marius; Udrescu, Valentina; **Dinca, Nicolae**; et al.

Source: ANALYTICAL BIOCHEMISTRY Volume: 378 Issue: 1 Pages: 43-52 DOI:
10.1016/j.ab.2008.03.039 Published: JUL 1 2008

C6. Title: Enhanced electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry of long-chain polysaccharides

Author(s): Perdivara, Irina; Sisu, Eugen; Sisu, Ioana; **Dinca, Nicolae**; et al.

Source: RAPID COMMUNICATIONS IN MASS SPECTROMETRY Volume: 22 Issue: 6
Pages: 773-782 DOI: 10.1002/rcm.3435 Published: 2008

C7. Synthesis and stereochemistry of some new 1,3,5-tris(1,3-dioxan-2-yl)-benzene derivatives

Author(s): Florian, Maria C.; Circu, Monica; Toupet, Loic; Terec, Anamaria; Grosu, Ion; Ramondenc, Yvan; **Dinca, Nicolae**; Ple, Gerard

Source: CENTRAL EUROPEAN JOURNAL OF CHEMISTRY Volume: 4 Issue: 4 Pages:
808-821 DOI: 10.2478/s11532-006-0040-2 Published: DEC 2006

C8. Title: Mass spectrum fragmentation of 10,11-dihydro-5H-dibenzo[a,d]cyclohepten-5-one

Author(s): Stanescu, Michaela Dina; **Dinca, Nicolae**; Sisu, Eugen

Source: REVUE ROUMAINE DE CHIMIE Volume: 51 Issue: 7-8 Pages: 669-673 Published:
JUL-AUG 2006

C9. Title: Synthesis of glycosyl sulphone in PTC conditions

Author(s): Sisu, Ioana; **Dinca, Nicolae**; Sisu, Eugen

Source: REVISTA DE CHIMIE Volume: 57 Issue: 6 Pages: 615-618 Published: JUN 2006

C10. Title: Copper-coated microsyringe interface for on-line sheathless capillary electrophoresis electrospray mass spectrometry of carbohydrates

Author(s): Zamfir, AD; **Dinca, N**; Sisu, E; et al.

Source: JOURNAL OF SEPARATION SCIENCE Volume: 29 Issue: 3 Pages: 414-422 DOI: 10.1002/jssc.200500374 Published: FEB 2006

C11. Title: The obtaining of S- and O-glycosides in CTI conditions

Author(s): Sisu, I; Bercean, V; Niculescu, M; **Dinca, N**; Sisu, E

Source: REVISTA DE CHIMIE Volume: 56 Issue: 12 Pages: 1249-1251 Published: DEC 2005

C12. Title: The differential mass spectrometry (Dif MS) and the computational chemistry. II. Dif MS and MO semiempirical analyses of exo- and endo-5,10-methylene-10,11-dihydro-5H-dibenzo[a,d]cyclohepten-11-ols

Author(s): **Dinca, N**; Stanescu, MD; Sisu, E; et al.

Source: REVISTA DE CHIMIE Volume: 55 Issue: 5 Pages: 346-350 Published: MAY 2004

C13. Title: Differential mass spectrometry (Dif MS) and computational chemistry. Part I - Dif MS and semiempirical MO analysis of 3- and 4-nitrobenzophenone dimethyl acetals

Author(s): **Dinca, N**; Sisu, E; Mracec, M; et al.

Source: REVUE ROUMAINE DE CHIMIE Volume: 49 Issue: 3-4 Pages: 331-338 Published: MAR-APR 2004

C14. Title: Synthesis and stereochemistry of some new 1,3-dioxane derivatives obtained from 2-acetyl and 2,6-diacetylpyridine.

Author(s): Balog, M; Totos, S; Florian, CM; Grosu, I; Ple, G; Toupet, L; Ramondenc, Y; **Dinca, N**

Source: HETEROCYCLIC COMMUNICATIONS Volume: 10 Issue: 2-3 Pages: 139-144 Published: 2004

C15. Title: The synthesis of lactose block - a valuable synthon in glycosphingolipids synthesis

Author(s): Sisu, E; Sisu, I; Zamfir, A; **Dinca, N**; et al.

Source: REVISTA DE CHIMIE Volume: 53 Issue: 10 Pages: 648-651 Published: OCT 2002

C16. Title: Analysis possibilities by GC/MS and Dif MS of mint oils in order to identify and dose the biologic active compounds of the terpenoids

Author(s): **Dinca, N**; Sisu, E; Oprean, I

Source: REVISTA DE CHIMIE Volume: 53 Issue: 7 Pages: 562-567 Published: JUL 2002

C17. Title: Differential mass spectrometry. 3. The differential analysis of 2-,3- and 4-nitrobenzophenones mass spectra

Author(s): **Dinca, N**; Sisu, E; Sisu, I; et al.

Source: REVISTA DE CHIMIE Volume: 53 Issue: 5 Pages: 332-336 Published: MAY 2002

C18. Title: Differential analysis in mass spectrometry. 2 - GC-MS and differential mass spectrometry analysis of 3- and 4-nitrobenzophenone dimethyl acetals

Author(s): **Dinca, N**; Sisu, E; Sisu, I; et al.

Source: REVUE ROUMAINE DE CHIMIE Volume: 47 Issue: 3-4 Pages: 379-385 Published: MAR-APR 2002

C19. Title: Nitrobenzophenones and their derivatives. 3 - New acetals of mono and dinitrobenzophenones

Author(s): Sisu, E; Sisu, I; **Dinca, N**; et al.

Source: REVUE ROUMAINE DE CHIMIE Volume: 47 Issue: 3-4 Pages: 339-342 Published: MAR-APR 2002

C20. Title: Nitrobenzophenones and derivatives. 2. Differences and similitudes of the mass spectra of nitrobenzophenones

Author(s): Sisu, E; Sisu, I; **Dinca, N**; et al.

Source: REVISTA DE CHIMIE Volume: 53 Issue: 2 Pages: 113-117 Published: FEB 2002

C21. Title: Synthesis and stereochemistry of some new 1,3-dioxane derivatives obtained from 1,3-benzenedicarboxaldehyde

Author(s): Pop, M; Grosu, I; Ple, G; Mager, S; Muntean, L; Marginean, D; **Dinca, N**

Source: HETEROCYCLIC COMMUNICATIONS Volume: 8 Issue: 1 Pages: 35-38 Published: 2002

C22. Title: Nitrobenzophenones and derivatives. 1. The synthesis and the characterization of mono and dinitrobenzophenones

Author(s): Sisu, E; Rusu, V; Sisu, I; **N. Dinca** et al.

Source: REVISTA DE CHIMIE Volume: 53 Issue: 1 Pages: 39-43 Published: JAN 2002

E. Patents

E1. DE102005028944-A1, 2007-208974

Title: Identifying chemical structures comprises correlating differential mass spectra with heat of formation or fragmentation activation energy values calculated by quantum chemical methods

Assignee: BETTENDORF C

Inventor(s): BETTENDORF C, **DINCA N.**

E2. RO122817-B1, 2010-J59963

Title: PROCESS FOR BLEACHING CELLULOSE PULP OBTAINED FROM NATURAL CELLULOSIC FIBERS OR CELLULOSIC MATERIALS, BY CATALYTIC OXIDATION WITH POLYOXOMETALATES

Assignee: UNIV ARAD AUREL VLAICU

Inventor(s): BOTAR A, BOTAR B, **DINCA N.**, et. al

E3. RO122728-B1, 2010-G08162

Title: ENVIRONMENTAL FRIENDLY PROCESS FOR BLEACHING NATURAL FIBRES BY CATALYTIC OXIDATION WITH POLYOXOMETALATES

Assignee: UNIV ARAD AUREL VLAICU

Inventor(s): BOTAR A, CRACIUN G, **DINCA N.**, et. al

19.02.2019