

MINISTRY OF NATIONAL EDUCATION AND SCIENTIFIC RESEARCH
NATIONAL AUTHORITY FOR SCIENTIFIC RESEARCH AND INNOVATION
NATIONAL R&D INSTITUTE FOR CRYOGENICS AND ISOTOPIC
TECHNOLOGIES - ICSI RM. VALCEA

The 21st Conference
“Progress in Cryogenics and Isotopes Separation”

P R O G R A M

19-21 OCTOBER, 2016
CALIMANESTI - CACIULATA, VALCEA
R O M A N I A

**MINISTRY OF NATIONAL EDUCATION AND SCIENTIFIC RESEARCH
NATIONAL AUTHORITY FOR SCIENTIFIC RESEARCH AND INNOVATION**

**NATIONAL R&D INSTITUTE FOR CRYOGENICS AND ISOTOPIC
TECHNOLOGIES - ICSI RM. VALCEA**

PROGRAM OF THE 21st CONFERENCE

“Progress in Cryogenics and Isotopes Separation”

CALIMANESTI - CACIULATA, VALCEA, OCTOBER 19-21, 2016

Wednesday October 19, 2016		Thursday October 20, 2016		Friday October 21, 2016	
8 ³⁰ -10 ⁰⁰	REGISTRATION	8 ³⁰ -10 ³⁰	Lectures, Oral Papers	9 ⁰⁰ -11 ⁰⁰	Oral Papers
10 ⁰⁰ -10 ³⁰	Conference Opening	10 ³⁰ -11 ⁰⁰	Coffee Break	11 ⁰⁰ -11 ³⁰	Coffee Break
10 ³⁰ -11 ³⁰	Lectures	11 ⁰⁰ -12 ³⁰	Oral Papers	11 ³⁰ -12 ⁴⁵	Oral Papers
11 ³⁰ -12 ⁰⁰	Coffee Break	12 ³⁰ -13 ¹⁵	Poster Papers	12 ⁴⁵ -14 ⁰⁰	Lunch *
12 ⁰⁰ -13 ³⁰	Lectures	13 ¹⁵ -14 ¹⁵	Lunch *	14 ¹⁰	Conference Closure
13 ³⁰ -15 ⁰⁰	Lunch *	14 ³⁰ -19 ⁰⁰	Visit of the Underground Saltworks/Mine, Ocnele Mari		
15 ⁰⁰ -16 ⁰⁰	Poster Papers **	20 ⁰⁰ -24 ⁰⁰	Dinner ***		
16 ⁰⁰ -17 ³⁰	Lectures and Oral Papers				
17 ³⁰ -18 ⁰⁰	Coffee Break				
18 ⁰⁰ -19 ³⁰	Oral Papers				
20 ⁰⁰ -22 ⁰⁰	Cocktail *				

Organizing Committee

*Restaurant Hotel COZIA

**General Assembly of the Romanian Hydrogen Association

***Restaurant Hotel CACIULATA

THE 21st CONFERENCE
“PROGRESS IN CRYOGENICS AND ISOTOPES SEPARATION”
OCTOBER 19-21, 2016 – CALIMANESTI-CACIULATA, ROMANIA

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Mihai Culcer

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Organizing Committee

**The 21st Conference
“Progress in Cryogenics and Isotopes Separation”**

P R O G R A M

Hotel "COZIA" Hall

October 19, 2016

PLENARY LECTURES

Chairman: Dr. Damian Axente
Co-chairman: Dr. Roxana Ionete
Presentation time: 30 min.

10³⁰ - 11³⁰

1. MAIN TRITIUM ISSUES IN DESIGNING THE *EU DEMO*

Ion CRISTESCU

Karlsruhe Institute of Technology, Germany

2. MANAGEMENT OF TRITIUM – RD CHALLENGES & GAPS

Raluca FAKO, Gheorghe PETRE

CITON - Centre of Technology and Engineering for Nuclear Projects, Bucharest, Magurele, Ilfov, Romania

11³⁰ - 12⁰⁰ Coffee Break

12⁰⁰ - 13³⁰

3. INC-DTCI - ICSI RM.VALCEA IN FUSION PROGRAMME

Sebi BRAD, Sorin SOARE, Marian CURUIA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

4. Zn – AIR BATTERIES IN *IEES*, PAST AND PRESENT

I. ILIEV^{1,2}, A. KAISHEVA^{1,2}, S. GAMBURZEV^{1,2}, B. ABRASHEV¹, D. UZUN¹, K. PETROV¹

¹Acad. EvgeniBudevski Institute of Electrochemistry and Energy Systems, Bulgarian Academy of Sciences, Acad. G. Bonchev, Sofia, Bulgaria; ²Deceased.

5. TAKING A LEAP FORWARD IN THE MISSING LINK OF THE HYDROGEN-BASED RENEWABLE ENERGY STORAGE CHAIN – PEM ELECTROLYSIS DEVELOPMENT <RESTORE>

D. ION-EBRASU^{1*}, S. ENACHE¹, M. VARLAM¹, I. STEFANESCU¹, K. PETROV^{1,2}

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Rm. Vâlcea, Romania; ²Acad. EvgeniBudevski Institute of Electrochemistry and Energy Systems, Bulgarian Academy of Sciences

13³⁰ – 15⁰⁰ Lunch

15⁰⁰ – 16⁰⁰ Poster Papers / General Assembly of the Romanian Hydrogen Association

16⁰⁰ - 17³⁰

PLENARY LECTURES

Chairman: Dr. Nicolae Aldea
Co-chairman: Dr. Elena Carcadea
Presentation time: 30 min.

6. TRENDS IN MULTI-SCALE CHARACTERIZATION METHODS AND TECHNIQUES FOR EFFICIENT ENERGY STORAGE APPLICATIONS

Stanica ENACHE, Daniela ION - EBRASU, Mihaela Ramona BUGA, Constantin BUCULINCA, Mihai VARLAM, Ioan STEFANESCU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

7. SOLAR CONVERTERS FOR PASSIVATED BUILDINGS IN RURAL AND URBAN SETTLEMENTS

R. GHERASIM^{1,2}, I. STAMATIN², M. CUZMINSCHI², V. RATA², A. ZUBAREV^{2,3}

¹CITON - Centre of Technology and Engineering for Nuclear Projects, Bucharest, Magurele, Ilfov, Romania; ²University of Bucharest, Faculty of Physics, Doctoral School of Physics, Bucharest, Magurele, Ilfov, Romania; ³National Institute of Laser, Plasma and Radiation Physics, Bucharest, Magurele, Ilfov, Romania

ORAL PAPERS

Presentation time: 15 min.

8. SIMULTANEOUS SEPARATION OF ¹⁵N AND ¹⁴N BY ISOTOPIC EXCHANGE IN NITROX SYSTEM AT PRESSURE

Damian AXENTE, Anuța BALLA, Cristina MARCU, Ștefan GERGELY

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

9. SOME FAILURE MODES OF ICSI CRYOGENIC DISTILLATION SYSTEM AS BASIS FOR SAFETY ANALYSIS

George ANA, Nicolae SOFILCA, Alina NICULESCU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Rm. Vâlcea, Romania

17³⁰ - 18⁰⁰ Coffee Break

18⁰⁰ - 19³⁰

10. RADIOACTIVE CHARACTERIZATION OF TRITIATED WATER USING ESR SPECTROMETRY

C. POSTOLACHE, D. C. NEGUT, C. S. TUTA, V. FUGARU

Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

11. PROGRESS OF THE TRITIUM SCIENCE AND TECHNOLOGY RESEARCH IN DT CENTER OF CAEP

Jiangfeng SONG, Luo DELI, Chen CHANG'AN, DT team of CAEP

Institute of Materials, China Academy of Engineering Physics, Sichuan, China

12. CFD INVESTIGATION OF GAS DIFFUSION LAYERS COMPRESSION ON THE PEM FUEL CELL PERFORMANCE

Elena CARCADEA¹, Mihai VARLAM¹, Derek Binns INGHAM², Laurentiu Gabriel PATULARU¹, Adriana MARINOIU¹, Daniela ION-EBRASU¹ and Ioan STEFANESCU¹

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²University of Sheffield, UK

13. PROPOSAL FOR ACHIEVEMENT OF HYDROGEN USING AND PRODUCTION PILOT STATION IN VRANCEA

Ioan MATEESCU¹, Gheorghe BADEA², Gabriel IVAN¹, Ovidiu MATEESCU¹

¹Romanian Association for Hydrogen Energy, Bucharest Branch; ²Romanian Association for Hydrogen Energy, Cluj-Napoca Branch

14. Pt-SWCNTs/P₂O₅ AS POTENTIAL ACTIVE BED FOR HUMIDITY SENSING

Eusebiu Ilarian IONETE¹, Stefan Ionut SPIRIDON¹, Bogdan Florian MONEA¹, Daniela EBRASU-ION¹, Ashok VASEASHTA²

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²Institute for Advanced Sciences Convergence & Int'l Clean Water Institute, USA

15. PANI/CNTs NANOCOMPOSITES FOR GAS SENSORS: PREPARATION METHODS AND CHARACTERIZATION

Stefan-Ionut SPIRIDON, Eusebiu Ilarian IONETE, Bogdan Florian MONEA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

20⁰⁰ - 22⁰⁰ – Cocktail

Organizing Committee

**The 21st Conference
“Progress in Cryogenics and Isotopes Separation”**

**P R O G R A M
of the Poster Session**

Hotel "COZIA" Hall

October 19, 2016

ISOTOPES SEPARATION AND CRYOGENIC TECHNOLOGIES

P.1. CATALYTIC REACTOR FOR SULFURIC ACID CONVERSION TO SULFUR DIOXIDE

Ancuța BALLA, Damian AXENTE, Cristina MARCU

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

P.2. DYNAMIC SIMULATION OF A CRYOGENIC DISTILLATION COLUMN FOR DEUTERIUM-TRITIUM SEPARATION

Alina NICULESCU, Toma CONSTANTIN, George ANA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.3. PROGRES CONCERNING THE CATALYSE OF HYDROGEN - WATER ISOTOPIC EXCHANGE

Gheorghe IONITA, Ionut SPIRIDON, Irina WAGNER and Ioan STEFANESCU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea - Radioisotopes Laboratory, Râmnicu Vâlcea, Romania

P.4. SUPERVISORY CONTROL AND DATA ACQUISITION OF THE CRYOGENIC DISTILLATION INSTALLATION FROM PESTD ICSI RM. VALCEA

Iuliana STEFAN, Mihai VIJULIE, Ciprian BUCUR, Ovidiu BALTEANU, Nicolae SOFILCA, Carmen MORARU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

NUCLEAR ENERGY - FISSION AND FUSION

**P.5. LOW-LEVEL TRITIUM WASTE IMMOBILIZATION IN NEW CEMENT MIXTURES
V. FUGARU¹, C. POSTOLACHE¹, MARIA GHEORGHE², LIDIA RADU², NASTASIA SACA², G. BUBUEANU¹, C. S. TUTA¹**

¹“Horia Hulubei” National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania; ²Technical University of Civil Engineering of Bucharest, Romania

P.6. TEXTURE ANALYSIS IN ZIRCALOY-4 CLADDINGS

Alice DINU, Andrei RIZOIU

RATEN ICN, Pitesti, Romania

P.7. ICSI TRANSFER KNOWLEDGE TO LPCE DESIGN FOR CTRF

Marius ZAMFIRACHE, Anisia BORNEA, Ovidiu BALTEANU, Ciprian BUCUR, Liviu STEFAN

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.8. NEW RECOMMENDATIONS OF IAEA CONCERNING RADIATION PROTECTION AND SAFETY OF RADIATION SOURCES

Nusa-Crenguta MADGALIN, Ionela Ramona ARANGHEL

CITON - Centre of Technology and Engineering for Nuclear Projects, Bucharest - Magurele, Ilfov, Romania

ENERGETIC TECHNOLOGIES OF HYDROGEN

P.9. STIRLING ENGINE INTEGRATED IN ROMEST INFRASTRUCTURE

Gheorghe BADEA¹, Simona Maria RĂBOACĂ², Andrei Lucian CONSTANTIN², Mihai ANGHEL², Raluca-Andreea FELSEGHİ¹, Ioan AȘCHILEAN¹, Dan MUREȘAN¹, Andrei BOLBOACĂ¹

¹*Building Services Engineering Department, Technical University of Cluj-Napoca, Cluj - Napoca, Romania;*

²*National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania*

P.10. THE MODELING OF A HYBRID POWER SYSTEM FOR AN ELECTRIC VEHICLE

Gheorghe BADEA¹, Simona Maria RĂBOACĂ², Andrei Lucian CONSTANTIN², Raluca-Andreea FELSEGHİ¹, Ioan AȘCHILEAN¹, Dan MUREȘAN¹, Teodor CHIRA¹

¹*Technical University of Cluj-Napoca, Faculty of Installations, Cluj-Napoca, Romania;* ²*National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania*

P.11. OBTAINING IODINATED GRAPHENE MATERIALS BY CHEMICAL REDUCTION USING HI WITHOUT CATALYSTS

Bianca SUCEA, Elena MARIN, Adriana MARINOIU, Mihai VARLAM, Irina VAGNER

National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.12. OPTIMAL OPERATION CONDITIONS IDENTIFICATION OF AN OPEN CATHODE PEMFC FOR MOBILE APPLICATIONS

Dorin SCHITEA¹, Laurențiu PĂTULARU¹, Elena CARCADEA¹, Gabriel RĂSOI¹, Ioan AȘCHILEAN²

¹*National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Vâlcea, Râmnicu Vâlcea, Romania;* ²*Technical University of Cluj-Napoca, Building Services Engineering Department, Cluj-Napoca, Romania*

P.13. PROMOTED ALUMINA SUPPORTED Ni CATALYST FOR ETHANOL STEAM REFORMING

Monica DAN^{1*}, Maria MIHET¹, Mihaela D. LAZAR^{1*}, Liana M. MUREȘAN^{2*}

¹*National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania;* ²*Babeș-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania*

P.14. HYBRID MATERIALS BASED ON MOFS FOR HYDROGEN PRODUCTION FROM FORMIC ACID

Maria MIHET, Diana LAZĂR, Gheorghe BORODI, Gabriela BLĂNITĂ^{*}

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

P.15. DEVELOPMENT OF ADHESIVES USED IN PEM FUEL CELLS ENVIRONMENT

Laurentiu PATULARU, Catalin JIANU, Dorin SCHITEA, Irina PETREANU, C-tin BUBULINCA, Radu ENE

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Vâlcea, Râmnicu Vâlcea, Romania

P.16. INVESTIGATION ON MECHANICAL ALLOYING PROCESS FOR ODS ALLOYS FABRICATION

Madalina STANCIULESCU¹, Marioara ABRUDEANU², Paula CARLAN¹, Maria MIHALACHE¹
¹Institute for Nuclear Research, Mioveni, Arges, Romania; ²University of Pitesti, Pitesti, Arges, Romania

P.17. RECENT RESULTS ON THE U-Pu-Pb-Bi-O PHASE RELATION

Karin POPA^{1*}, Damien PRIEUR¹, Philippe M. MARTIN², Jean-François VIGIER¹, Ondrej BENEŠ¹, Philippe E. RAISON¹, Rudy J.M. KONINGS¹, Joseph SOMERS¹
¹European Commission, Joint Research Centre, Institute for Transuranium Elements, Karlsruhe, Germany; ²CEA Marcoule, CEA, DEN, DTEC/SECA/LCC, F-30207 Bagnols-sur-Ceze Cedex, France

P.18. STUDY OF INCONEL 718 ALLOY TESTED BY HEAT-CYCLING

Lucian VELCIU, T. MELEG, M. PANTIRU, D. PETRESCU, F. VOICU
 RATEN - Institute for Nuclear Research Pitești, România

P.19. CRYOGENIC TEMPERATURE SENSOR WITH Pt DECORATED CARBON NANOTUBES

Bogdan-Florian MONEA¹, Eusebiu Ilarian IONETE¹, Stefan Ionut SPIRIDON¹, Amalia SOARE¹, Aurel LECA², Anda STANCIU², Petre EMIL³
¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²National Institute of Materials Physics, Magurele, Ilfov, Romania; ³Faculty of Automation, Computers and Electronics, University of Craiova, Craiova, Romania

P.20. THE ROLE OF GRAPHENES IN THE ELECTRIC VEHICLE INDUSTRY

Tudor POPESCU, Octavian TUDOR
 Compact Industrial SRL

P.21. POLYELECTROLYTE MATERIALS FOR PROTON EXCHANGE MEMBRANE FUEL CELLS

Irina PETREANU, Claudia ȘIȘU, Adriana MARINOIU, Vasile TANISLAV
 National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.22. CYCLIC VOLTAMMETRY MEASUREMENTS ON ELECTRODES OBTAINED BY RECYCLING OF LEAD ACID BATTERIES

M. RADA¹, L. RUS², S. RADA^{1,2}, E. CULEA², A. BOT¹, L. MAGERUSAN¹, N. ALDEA¹
¹National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania; ²Department of Physics & Chemistry, Technical University of Cluj-Napoca, Cluj-Napoca, Romania

ENVIRONMENTAL, LIFE QUALITY AND FOOD SAFETY

P.23. INTERLABORATORY COMPARISON OF METHODS FOR THE DETERMINATION OF THE ACTIVITY OF TRITIATED WATER

Andrei ANTOHE, Mihail-Razvan IOAN^{*}, Maria SAHAGIA, Aurelian LUCA
 "Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Romania

P.24. DETERMINATION OF LOW ACTIVITY TRITIUM SURFACE DISTRIBUTION USING BETA IMAGER

G. BUBUEANU, A. SILISTEANU, C. POSTOLACHE, C. S. TUTA
 "Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Romania

P.25. SYNTHESIS AND STEREOCHEMISTRY OF THE 1,2-HYDROXYL-AMINO DERIVATIVES OF (1S,6R) -3,7,7- TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE

Sergiu CURLAT, Liudmila LOGHINA, Alic BARBA, Elena GORINCIOI, Fliur MACAEV
 Institute of Chemistry, Academy of Sciences of Moldova, Chișinău, Republic of Moldova

P.26. EMISSION FACTOR *FE* DETERMINATION TO NATURAL GAS USED IN THERMAL AND ENERGETIC PLANTS

Marius CONSTANTINESCU, Felicia BUCURA, Anca ZAHARIOIU, Claudia SANDRU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.27. THE USEFULNESS OF WATER QUALITY INDEX FOR THE EVALUATION OF RIVER OLT QUALITY

Claudia SANDRU, Elena DAVID, Felicia BUCURA, Marius CONSTANTINESCU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.28. A COMPREHENSIVE REVIEW ON APPLICATION OF COAL FLY ASH AND ITS ENVIRONMENTAL IMPACT

E. DAVID¹, M. MUREȘANU², A. REISS², S. PREDA³, C. ȘANDRU¹, A. ARMEANU¹

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²University of Craiova, Faculty of Chemistry, Craiova, Romania; ³University of Craiova, Research Station for Fruit Growing Valcea, Râmnicu Vâlcea, Romania

P.29. RADIOCARBON LEVEL IN THE ATMOSPHERE OF RAMNICU VALCEA, ROMANIA

Ionut FAURESCU, Carmen VARLAM, Irina VAGNER, Denisa FAURESCU, Diana BOGDAN, Diana COSTINEL

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.30. THE USE OF LIQUID CHROMATOGRAPHY TECHNIQUE FOR ANTHOCYANINS IDENTIFICATION FROM WINES

Nadia PAUN, Violeta NICULESCU, Radu TAMAIA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P. 31. INTEGRATED SOLUTIONS FOR LONG-TERM PROTECTION OF ROMANIAN SHORELINES

Gabriela LUNGESCU^{1,2}, Sorin-George MEGLEA¹, Marian ANDRONE¹

¹CITON - Centre of Technology and Engineering for Nuclear Projects, Bucharest, Magurele, Ilfov, Romania; ²University of Bucharest, Faculty of Physics, Doctoral School of Physics, Bucharest, Magurele, Ilfov, Romania

P.32. REAL-TIME METHODOLOGY FOR SEISMIC RESPONSE EVALUATION USING NONLINEAR SOLUTIONS

Marian ANDRONE¹, Madalina Angela ZAMFIR¹, Gabriela LUNGESCU^{1,2}

¹CITON - Centre of Technology and Engineering for Nuclear Projects, Bucharest, Magurele, Ilfov, Romania; ²University of Bucharest, Faculty of Physics, Doctoral School of Physics, Bucharest, Magurele, Ilfov, Romania

P.33. K-ras AND P53 WHOLE BLOOD TESTS VERSUS TISSUE TEST FOR FAST DIAGNOSIS OF COLORECTAL CANCER

Camelia STANCIU-GAVAN¹, Raluca-Ioana STEFAN-VAN STADEN², Stefan NEAGU¹, Costel ȘAVLOVSCHI¹, Iurie ȚURCAN¹, Octavia RUSU¹, Horia PANȚU-BASCA¹, Narcis COPCĂ³, Sorin Mircea OPRESCU¹

¹Sector IV Surgery, University Emergency Hospital Bucharest; UMF Carol Davila; ²Laboratory of Electrochemistry and PATLAB, National Institute for Electrochemistry and Condensed Matter, Bucharest, Romania; ³Surgical Clinic Hospital St. Mary, Bucharest, Romania

The papers programmed on Wednesday, October 19, 2016, will be placed on panels Wednesday from 8⁰⁰-9⁰⁰ a.m. and removed Wednesday after 18⁰⁰ p.m. or Thursday in the morning.

Organizing Committee

**The 21st Conference
„Progress in Cryogenics and Isotopes Separation”**

P R O G R A M

Hotel "COZIA" Hall

October 20, 2016

**Chairman: Prof. Konstantin Petrov
Co-chairman: Dr. Carmen Varlam**

8³⁰ – 10³⁰

Plenary Lectures

Presentation time: 30 min.

1. SMALL ANGLE X-RAY AND NEUTRON SCATTERING STUDIES ON LOW DIMENSION SYSTEMS

**N. ALDEA¹, M. RADA¹, S. RADA², R. – C. SUCIU¹, WU ZHONGHUA³, XING XUEQING³,
F. MATEI⁴, V. BODNARCHUK⁵, A. I. KUKLIN⁵, R. V. ERHAN^{5,6}, V. REDNIC¹**

¹National Institute for R&D of Isotopic and Molecular Technologies, Cluj-Napoca, Romania; ²Department of Physics & Chemistry, Technical University of Cluj-Napoca, Romania; ³Beijing Synchrotron Radiation Facilities of Beijing Electron Positron Collider National Laboratory, Beijing, People's Republic of China; ⁴UASVM, Cluj-Napoca, Romania, ⁵Frank Laboratory of Neutron Physics, Joint Institute for Nuclear Research, Dubna, Russian Federation, ⁶Horia Hulubei National Institute for Research and Development in Physics and Nuclear Engineering, Magurele, Romania

2. MULTISENSOR SYSTEMS WITH APPLICATIONS IN THE QUALITY CONTROL

C. APETREI¹, I. M. APETREI²

¹Faculty of Sciences and Environment, “Dunarea de Jos” University of Galati, Romania; ²Faculty of Medicine and Pharmacy, “Dunarea de Jos” University of Galati, Romania

ORAL PAPERS

Presentation time: 15 min

3. IMPROVEMENT OF THE DEHYDROGENATING KINETICS OF THE Mg(NH₂)₂/LiH MATERIALS BY INDUCING LiBH₄

Jingchuan WANG, Jiangfeng SONG, Changan CHEN and Deli LUO

Institute of Materials, Chinese Academy of Engineering Physics, Sichuan, China

4. IODINE DOPED GRAPHENE SYNTHESIS VIA A FACILE ELECTROPHILIC SUBSTITUTION. HIGH PERFORMANCE ORR ELECTROCATALYST FOR PEMFC

**Adriana MARINOIU, Elena CARCADEA, Irina PETREANU, Elena MARIN, Bianca SUCEA,
Amalia SOARE, Mircea RACEANU**

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

5. NEW INTERACTION CHAMBER FOR EVALUATION OF THE OUTER SPACE EFFECTS IN MATERIALS

Cristian POSTOLACHE, Viorel FUGARU

Horia Hulubei” National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

6. DIRECT AND FAST LSC METHODS

Jasmina Kozar LOGAR, Romana KRIŠTOF

Jožef Stefan Institute, Ljubljana, Slovenia

10³⁰ - 11⁰⁰ Coffee Break

11⁰⁰ – 12³⁰

7. TRITIUM LEVEL EVOLUTION IN THE ENVIRONMENT AT EXPERIMENTAL PILOT FOR TRITIUM AND DEUTERIUM SEPARATION - ICSI

Carmen VARLAM, Ioan STEFANESCU, Ionut FAURESCU, Irina VAGNER, Denisa FAURESCU, Diana BOGDAN

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

8. STUDY ON PROPERTIES OF ZrCo_{0.8}M_{0.2}(M=Co, Cu, Cr, Mn, Al) ALLOYS FOR HYDROGEN STORAGE

Xingbo HAN, Wei LIU*, Dongxun ZHANG, Yuan QIAN

Shanghai Institute of Applied Physics, Chinese Academy of Sciences, Shanghai, China

9. POWER-TO-GAS – ROMANIAN BUSINESS CASE ANALYSIS

Mihai BALAN, Mihaela BUGA, Alexandru CIOCAN

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Vâlcea, Râmnicu Vâlcea, Romania

10. POSITRON SPECTROSCOPY LABORATORY AT ELI-NP

A. OPRISA, N. DJOURELOV, V. LECA, D. DINESCU

Extreme Light Infrastructure-Nuclear Physics, Horia Hulubei National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

11. COMPLEX MATERIALS WITH NANOMETRIC STRUCTURE BASED HEAVY ALLOYS FOR SPECIAL APPLICATIONS

Irina CARCEANU¹, Nicolae CONSTANTIN¹, Robert BOLOLOI¹, Ioan NEDELICU²

¹POLITEHNICA University of Bucharest; ²R&D Special Alloys SRL

12. STRUCTURAL, OPTICAL AND ELECTROCHEMICAL BEHAVIOR OF ANTIMONY (III) OXIDE - LEAD - LEAD DIOXIDE GLASSES AND VITROCERAMICS

S. RADA^{1,2}, M. ZAGRAI¹, M. RADA², N. ALDEA², L. MAGERUSAN², S. MACAVEI²,

A. BOT², E. CULEA¹

¹Department of Physics & Chemistry, Technical University of Cluj-Napoca, Cluj-Napoca, Romania;

²National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania

12³⁰ 13¹⁵ - Poster Papers

13¹⁵ – 14¹⁵ - Lunch

14³⁰ - 19⁰⁰ – Visit of the Underground Saltworks/ Mine, Ocnele Mari

20⁰⁰ – 24⁰⁰ - Dinner

Organizing Committee

**The 21st Conference
"Progress in Cryogenics and Isotopes Separation"**

**P R O G R A M
of the Poster Session**

Hotel "COZIA" Hall

October 20, 2016

ISOTOPES SEPARATION AND CRYOGENIC TECHNOLOGIES

P.1. PURIFICATION SYSTEM DEVELOP FOR HYDROGEN IN DETRITIATION PLANT

Marius ZAMFIRACHE, Anisia BORNEA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.2. ASSESSMENT OF THE FEASIBLE CONFIGURATIONS FOR THE TREATMENT SYSTEM OF THE PURGE GASES FOR THE PESTD RM. VALCEA

Mirela DRĂGHIA¹, Gheorghe PASCA¹, George ANA², Alin FUCIU¹

¹S.C. I.S.TECH S.R.L Timisoara; ²National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.3. OPTIMUM DESIGN OF MULTI-STAGE ISOTOPE SEPARATION CASCADES FOR CARBON ISOTOPE SEPARATION

J-ZS. SZÜCS-BALÁZS, C. VARODI, S. BUGEAC, M. GLIGAN, A. BÂLDEA

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

NUCLEAR POWER – FISSION AND FUSION

P.4. DETERMINATION OF THE URANIUM ENRICHMENT RATIO BY USING THE GAMMA-RAY SPECTROMETRY METHOD

Simona-Ionela ILIE

"Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

P.5. DETERMINATION OF TRITIUM CONTENTS IN INCINERABLE SAMPLES

V. FUGARU, C. POSTOLACHE, G. BUBUEANU

"Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

P.6. RADIONUCLIDE CHARACTERIZATION OF TRITIATED WATER USING NMR SPECTROMETRY

C. S. TUTA, C. POSTOLACHE, V. FUGARU

"Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

P.7. CHARACTERIZATION OF CORROSION DEPOSITS ON CANDU STEAM GENERATOR USING LASER DIFFRACTION

Julia DUMITRESCU, Maria MIHALACHE, Mariana TUNARU

Institute for Nuclear Research-Pitesti, Campului Street, No.1, Mioveni, Romania

ENERGETIC TECHNOLOGIES OF HYDROGEN

P.8. ENERGY STORAGE TECHNOLOGIES FOR RENEWABLE ENERGY SOURCES USING A CSP EQUIPPED WITH A STIRLING ENGINE, A WIND TURBINE, PHOTOVOLTAIC CELLS, LI-ION BATTERIES AND A BOILER FOR TES

Alexandru CIOCAN, Mihai BALAN, Mihaela PISLARU, Alexandru RIZOIU, Andrei CONSTANTIN, Mihai ANGHEL

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.9. SIMULATION OF A HYBRID SYSTEM WITH OPAL-RT TECHNOLOGIES

Gheorghe BADEA¹, Simona Maria RĂBOACĂ², Andrei Lucian CONSTANTIN², Raluca Andreea FELSEGHI¹, Ioan ASCHILEAN¹, Andrei BOLBOACĂ¹, Emil MOLDOVAN¹

¹Technical University of Cluj-Napoca, Faculty of Installations, Cluj-Napoca, Romania; ²National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.10. PREPARATION OF HALOGENATED DOPED GRAPPHENE USING ELECTROPHILIC SUBSTITUTION

Elena MARIN, Adriana MARINOIU, Bianca SUCEA, Elena CARCADEA, Mihai VARLAM, Marius CONSTANTINESCU

National Research and Development Institute for Cryogenic and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.11. A GREEN METHOD FOR THE SYNTHESIS OF MIL-101

Diana LAZĂR, Monica DAN^{*}, Gheorghe BORODI, Gabriela BLĂNIȚĂ

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

P.12. MODIFIED ELECTRODES BASED ON METAL ORGANIC FRAMEWORKS FOR ELECTROOXIDATION OF FORMIC ACID

Adriana VULCU^{*}, Camelia BERGHIAN-GROSAN, Gabriela BLĂNIȚĂ

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

SCIENCE AND MATERIALS ENGINEERING

P.13. CONSIDERATIONS CONCERNING THE MANUFACTURING OF MgB₂ SUPERCONDUCTORS CREATED THROUGH MODERN TECHNOLOGIES OF POWDER METALLURGY

Irina CARCEANU¹, Ioan NEDELCU¹, Petre BADICA², Gheorghe ALDICA², Monica ENCULESCU², Mihail BURDUSEL²

¹R&D Special Alloys SRL; ²National Research Institute of Materials Physics

P.14. UNCONVENTIONAL TECHNICAL SOLUTIONS UNTESTED IN ROMANIA

Ioan MATEESCU¹, Gabriel IVAN¹, Sorin POPESCU²

¹Romanian Association for Hydrogen Energy, Bucharest Branch; ²Romanian Association for Hydrogen Energy, Dolj Branch

P.15. OBTAINING OF SPATIAL FORMATIONS FULLERENES TYPE, MADE UP OF CARBON ATOMS, BY APPLYING DISCHARGES PULSED ELECTRIC PROCESS *DEI* OVER METALLIC SURFACES, WITH GRAPHITE CATHODE

Laurentiu MARIN¹, Pavel TOPALA²

¹National Institute for Research and Development in Chemistry and Petrochemistry - ICECHIM Bucharest, Romania; ²"Alec Russo" Bălți State University, Republic of Moldova

P.16. TRANSITIONAL METALS IN SILICA MESO-SPACE – NEW TRENDS IN HETEROGENEOUS CATALYSIS

Violeta NICULESCU¹, Ramona ENE², Viorica PARVULESCU²

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²"Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest, Romania

P.17. OPTIMIZATION OF THE AMOUNT OF BINDER IN THE CHEMICAL SYNTHESIS OF A PT/GRAPHENE ELECTROCATALYST

Irina PETREANU¹, Adriana MARINOIU¹, Claudia SISU¹, Constantin TEODORESCU², Constantin BUBULINCA¹, Mihai VARLAM¹, Ioan STEFANESCU¹

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²S.C. Oltchim S.A., Research Center, Ramnicu Valcea, Romania

P.18. MEMBRANE BIOREACTOR (MR) TECHNOLOGY- A NEW AND EFFECTIVE TREATMENT OF WASTEWATER

Ramona ZGAVAROGEA^{1,2}, Cristina COVALIU⁴, Violeta NICULESCU^{1*}, Marius MIRICIOIU^{1,3}, Nadia PAUN¹, Andreea IORDACHE¹, Marin NEACȘA²

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²Politehnica University of Bucharest, Faculty of Engineering and Management of Technological Systems, Bucharest, Romania; ³Politehnica University of Bucharest, Faculty of Applied Chemistry and Materials Science, Bucharest, Romania; ⁴Politehnica University of Bucharest, Faculty of Biotechnical Systems Engineering, Romania

P.19. PERFORMANCE ASSESSMENT OF LI-ION 18650 BATTERIES BY USING THE MULTI-TAG FUELCON WORK TEST STATION

Constantin BUBULINCA, Stanica ENACHE, Mihaela Ramona BUGA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.20. THE PREPARATION AND STRUCTURAL PROPERTIES OF STABILIZED ZIRCONIA WITH Y₂O₃ AND HfO₂ FOR DENTAL APPLICATIONS

S. RADA^{1,2}, E. CULEA¹, M. RADA², N. ALDEA², A. BOT², S. MITRICI¹, S. STAN¹, M. MANOLE³

¹Department of Physics & Chemistry, Technical University of Cluj-Napoca, Cluj-Napoca, Romania; ²National Institute for Research and Development for Isotopic and Molecular Technologies, Cluj-Napoca, Romania; ³Iuliu Hatieganu University of Medicine and Pharmacy Cluj-Napoca, Cluj-Napoca, Romania

ENVIRONMENTAL, LIFE QUALITY AND FOOD SAFETY

P.21. THE SUPPORT OFFERED BY THE ROMANIAN RADIONUCLIDE METROLOGY LABORATORY TO THE NATIONAL FOOD SAFETY CHAIN

M-R. IOAN, A. ANTOHE*, A. LUCA, M. SAHAGIA

"Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

P.22. MEASUREMENT OF NATURAL RADIOACTIVITY AND PHYSICO-CHEMICAL PARAMETERS IN RAW MATERIALS FOR BUILDING MATERIALS USED IN ROMANIA

M. R. CALIN, Ileana RADULESCU, Diana CHIPER*

"Horia Hulubei" National Institute for Physics and Nuclear Engineering, Magurele, Ilfov County, Romania

P.23. NMR SPECTROSCOPY FOR CHEMISTS- FROM THE LABORATORIES ROUTINE TO THE EMOTION OF DISCOVERY

Elena GORINCIOI¹, Alic BARBA¹, Nikon UNGUR¹, Marina GRINCO¹, Natalia MASHCENKO², Angela GUREV², Fliur MACAEV¹, Eugenia STANGACI¹, Marina ZVEAGHINTEVA¹, Sergiu POGREBNOI¹, Eduard COROPCEANU¹

¹Institute of Chemistry, Academy of Sciences of Moldova, Chişinău, Republic of Moldova; ²Institute of Genetics and Plant Physiology of Academy of Sciences of Moldova, Chisinau MD-2002, Republic of Moldova

P.24. CALORIFIC BENEFITS OF GEOTHERMAL GAS/WATER

Felicia BUCURA, Marius CONSTANTINESCU, Claudia SANDRU, Anca ZAHARIOIU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.25. $\delta^{18}\text{O}$ OF ETHANOL AND WATER IN WINE AND FRUIT JUICE FOR IMPROVED DETECTION OF ETHANOL ORIGIN AND WATERING

Diana COSTINEL, Roxana Elena IONETE, Oana Romina BOTORAN si Raluca POPESCU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.26. ISOLATION OF URSOLIC ACID FROM LAVENDER WASTES AND IDENTIFICATION OF SOME ITS SYNTHETIC DERIVATIVES VIA NMR SPECTRAL STUDIES

Ala FULGA, Elena GORINCIOI, Alic BARBA, Ion DRAGALIN, Nikon UNGUR

Institute of Chemistry, Academy of Sciences of Moldova, Chişinău, Moldova

P.27. CHANGES OF POLYPHENOLIC CONTENT IN SKINS OF DIFFERENT GRAPES CULTIVARS DURING RIPENING

Elisabeta-Irina GEANĂ^{1,*}, Roxana-Elena IONETE¹, Violeta NICULESCU¹, Victoria ARTEM², Aurora RANCA²

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²Research Station for Viticulture and Oenology Murfatlar, Romania

P.28. IN SILICO PREDICTIONS ON ADME-TOX PROFILE OF SOME NOVEL CHROMENYL DERIVATIVES

Radu TAMAIAAN^{1,2,3}, Ioana Andrada IONUȚ⁴, Ilioara Elena ONIGA⁵, Ovidiu ONIGA⁴, Brîndușa Georgeta TIPERCIUC⁴

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²University of Bucharest, Faculty of Physics, ³Nano-SAE Research Centre, Bucharest-Măgurele, Romania; ⁴Biotech Corp SRL, Râmnicu Vâlcea, Romania; ⁵Pharmaceutical Chemistry Department, Iuliu Hațieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania; ⁶Pharmacognosy Department, Hațieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

P.29. WHITE WINES FROM THE INTRA- AND EXTRA-CARPATHIC AREAS AND THEIR PARTICULARITIES ON AROMA

Diana STEGARUS, Corina CIUCURE, Roxana IONETE

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.30. INVESTIGATION OF HEAVY METAL CONTENT OF AROMATIC PLANT USED AS SPICES

Andreea Maria IORDACHE¹, Ramona ZGAVAROGEA¹, Cezara VOICA², Diana COSTINEL¹, Roxana Elena IONETE¹, Monica CULEA³

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania; ³"Babes-Bolyai" University, Biomolecular Physics Department, Cluj-Napoca, Romania

P.31. RAPID MOLECULAR DIAGNOSTIC SCREENING FOR DIGESTIVE CANCERS BY DETECTING HER-1 IN BIOLOGICAL FLUIDS USING STOCHASTIC SENSOR

Ahed EL-KHATIB¹, Camelia GĂVAN¹, Raluca Van STADEN², Horia PANȚU BASCA¹, Răzvan BORCAN¹, Iurie ȚURCAN¹, Narcis COPCĂ³, Sorin Mircea OPRESCU¹

¹Sector IV Surgery, University Emergency Hospital Bucharest; UMF Carol Davila; ²Laboratory of Electrochemistry and PATLAB, National Institute for Electrochemistry and Condensed Matter, Bucharest, Romania; ³Surgical Clinic, Hospital "St. Mary", Bucharest, Romania

P.32. PLANTS WITH BIOACTIVE POTENTIAL - AN INVESTIGATION OF THEIR CONTENT IN ANTHOCYANINS AND TANNINS

Corina Teodora CIUCURE, Roxana IONETE, Diana Ionela STEGARUS

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

P.33. GOLD AND SCREEN-PRINTED ELECTRODES MODIFIED WITH N-DOPED GRAPHENE NANOCOMPOSITE WITH APPLICABILITY IN HEAVY METAL ION DETECTION

Lidia MAGERUSAN*, Crina SOCACI, Maria COROS, Florina POGACEAN, Marcela-Corina ROSU, Stela PRUNEANU

National Institute for Research and Development of Isotopic and Molecular Technologies, Cluj-Napoca, Romania

The papers programated on Thursday, October 20, 2016, will be placed on panels Thursday in the morning from 8⁰⁰-9⁰⁰ a.m.

Organizing Committee

**The 21st Conference
"Progress in Cryogenics and Isotopes Separation"**

P R O G R A M

Hotel "COZIA" Hall

October 21, 2016

Chairman: Dr. Sebastian Brad
Co-chairman: Dr. Gabriela Blăniță
Presentation time: 15 min.

9⁰⁰ – 10⁴⁵ - Oral Papers

1. ELECTRIC PROPULSION WITH HYDROGEN FUEL CELLS FOR MOBILE APPLICATIONS

Mihai CULCER, Mariana ILIESCU, Adrian ENACHE, Mircea RACEANU, Mihai ANGHEL, Andrei CONSTANTIN

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

2. THE BEHAVIOUR OF C25/30 CONCRETE USED FOR CERNAVODA NPP SPENT FUEL POOLS INFRASTRUCTURE UNDER THERMAL STRESS CONDITIONS IN WET ENVIRONMENT

Irina PARASCHIV, Paula CÂRLAN

Institute for Nuclear Research, Mioveni, Arges, Romania

3. MECHANICAL CHARACTERISATION OF PWR CLADDING TUBE USING NON-STANDARD TESTING METHOD

Alexandru NITU¹, Marioara ABRUDEANU², Vasile RADU¹

¹Institute for Nuclear Research, Pitesti, Romania; ²University of Pitesti, Pitesti, Romania

4. INFLUENCE OF TEMPERATURE VARIATION OVER CHARACTERISTIC CAPACITY IN 18650 LI-ION RECHARGEABLE BATTERY

Constantin BUBULINCA, Stanica ENACHE, Mihaela Ramona BUGA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

5. COMPARISON OF THE RADIOCARBON SAMPLE PREPARATION METHODS AND LSC MEASUREMENTS ON THE ENVIRONMENTAL SAMPLES FROM THE BAKONY MOUNTAIN

Gergő BÁTOR^{1,2}, András BEDNÁR^{1,2}, Tibor KOVÁCS^{1,2}

¹Institute of Radiochemistry and Radioecology, University of Pannonia, Veszprém, Hungary; ²Social Organization for Radioecological Cleanliness, Veszprém, Hungary

6. DISCRIMINATIVE STUDY ON FRUIT BOTANICAL ORIGIN VIA ISOTOPIC FINGERPRINT OF BIO-ELEMENTS (CHO)

Oana-Romina BOTORAN, Diana COSTINEL, Raluca POPESCU, Roxana Elena IONETE

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

7. OZONE ACTION IN FOOD SAFETY AND PUBLIC HEALTH

Vlad GRIGORE¹, Gheorghe BADEA², Sorin ULINICI¹, Ioan MATEESCU³

¹ICPE Bistrita, ²AiIR Cluj-Napoca; ³Romexim Plus, Bucharest

8. ASSESSING THE AUTHENTICITY OF VINEGAR BY COMBINED ²H-SNIF-NMR AND ¹³C-IRMS ANALYSIS

Raluca POPESCU, Oana BOTORAN, Diana COSTINEL, Roxana Elena IONETE

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

11⁰⁰ – 11³⁰ - Coffee Break

11³⁰ – 12⁴⁵ - Oral Papers

9. COMPARISON AMONG MOLECULAR PROFILES OF *MEDICAGO SATIVA* (L) PERTAINED TO DIFFERENT ECOSYSTEMS FROM THE IMPACT CNE AREA

Sorina POPESCU¹, Ioan SĂRAC¹, Gheorghe TIȚESCU², Alexandru NEDELICU³

Gallia BUTNARU^{1*}

¹Banat University of Agricultural Sciences and Veterinary Medicine “Regele Mihai I al României” Timișoara, Romania; ^{}Academy of Romanian Scientists; ²National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ³CNE Cernavoda, Romania*

10. FUKUSHIMA NPP ACCIDENT IN TERMS OF NUCLEAR SAFETY CULTURE

Gheorghe POPESCU, Eusebiu IONETE, Alina NICULESCU, Marian VACARU, Ionut SPIRIDON, Bogdan MONEA, Claudiu COSTEANU

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania

11. METHOD FOR ORGANICALLY BOUND TRITIUM ANALYSIS FROM SEDIMENT USING A COMBUSTION BOMB

Irina VAGNER, Carmen VARLAM, Ionut FAURESCU, Denisa FAURESCU, Diana BOGDAN and Felicia BUCURA

National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Tritium Laboratory, Râmnicu Vâlcea, Romania

12. APPLICATION OF MIXED MATRIX MEMBRANES FOR REMOVING CO₂ FROM VARIOUS GASES

Marius Gheorghe MIRICIOIU^{1,2}, Violeta NICULESCU¹, Gheorghe NECHIFOR²

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²Politehnica University of Bucharest, Faculty of Applied Chemistry and Materials Science, Romania

13. ENERGY GENERATION BY FERMENTATION OF GLUCOSE IN A MEDIUM VOLUME MICROBIAL FUEL CELL OPERATED IN BATCH MODE

Silviu-Laurentiu BADEA¹, Stanica ENACHE¹, Radu TAMAIAAN^{1,2,3}, Mihai VARLAM¹

¹National Research and Development Institute for Cryogenics and Isotopic Technologies - ICSI Rm. Valcea, Râmnicu Vâlcea, Romania; ²University of Bucharest, Faculty of Physics, ³Nano-SAE Research Centre, Bucharest-Măgurele, Romania; ³SC Biotech Corp SRL, Râmnicu Vâlcea, Romania

12⁴⁵ – 14⁰⁰ - Lunch

14¹⁰ - Conference Closure

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