



# National Institute for Research and Development in Electrical Engineering, ICPE-CA, Bucharest

# INVITAŢIE-PROGRAM

BUCUREŞTI 13 februarie 2015

## ACADEMIA ROMÂNĂ

Secția de Științe Chimice Comisia de Analiză Termică și Calorimetrie

#### **INCDIE ICPE-CA**

National Institute for Research and Development in Electrical Engineering, ICPE-CA, Bucharest

Vă invită să participați la

# LUCRĂRILE CELUI DE-AL 24-LEA SIMPOZION ANUAL DE COMUNICĂRI ȘTIINȚIFICE - EUGEN SEGAL

care va avea loc vineri, 13 februarie 2015, ora 8<sup>30</sup>, în Amfiteatrul *Heliade Rădulescu* al Bibliotecii Academiei Române, Calea Victoriei nr.125 (intrarea și prin B-dul Dacia)

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### Program:

### February 13, 2015, 830h

# President of the Section of Chemistry Sciences of Romanian Academy, Acad. Prof. MARIUS ANDRUH

Opening address

#### PETRU BUDRUGEAC<sup>1</sup>, ANDREI ROTARU<sup>2,3</sup>

<sup>1</sup>National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest <sup>2</sup> University of Craiova

<sup>3</sup> INFLPR - National Institute for Laser, Plasma and Radiation Physics, Măgurele

Topical trends in Thermal Analysis and Calorimetry. Report on the "The 11th European Symposium on Thermal Analysis and Calorimetry" ESTAC 11, Espoo, Finland

#### ANDREI ROTARU 1,2

<sup>1</sup> University of Craiova

<sup>2</sup> INFLPR - National Institute for Laser, Plasma and Radiation Physics, Măgurele Thermally-induced processes in relaxor tetragonal tungsten bronzes

## VALENTIN MUNTEANU<sup>1</sup>, MARIA MÎŢU<sup>2</sup>, DOMNINA RĂZUS<sup>2</sup>, DUMITRU OANCEA<sup>1</sup>

<sup>1</sup> Department of Physical Chemistry, University of Bucharest <sup>2</sup> "Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest Kinetics of methyl tert-butyl ether catalytic oxidation on platinum using an isothermal microcalorimetric method

#### NICOLINA POP

"Politehnica" University of Timisoara, Department of Physical Foundation of Engineering

Thermodynamic properties of the oscillators systems and correlation

with isokinetic temperature

## CORNEL HAŢIEGAN¹, NICOLINA POP², MIHAELA RĂDUCA¹, GILLICH GILBERT RAINER¹, CODRUŢA HAMAT¹, EUGEN RĂDUCA¹, LENUŢA CÎNDEA¹, IOAN PĂDUREANU¹

<sup>1</sup> Faculty of Electrical and Computer Engineering, "Eftimie Murgu" University, Resita <sup>2</sup> Politehnica University of Timisoara, Department of Physical Foundation of Engineering Modeling and Simulation of thermal analysis of a teflon coated plate

#### DANA LUCA MOTOC

Transilvania Univesity of Brasov, Material Science Department, Brasov

Dynamic mechanical properties of basalt/flax and carbon/flax

hybrid polymer composites

#### TRAIAN ZAHARESCU

National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest Radiation effects on the thermal stability of EPDM/IIR systems

### 11-11<sup>30</sup> Coffee break

# CARMEN PARASCHIV<sup>1</sup>, ANDREI CUCOS<sup>1</sup>, SERGIU SHOVA<sup>2</sup>, AUGUSTIN M. MADALAN<sup>3</sup>, CĂTĂLIN MAXIM<sup>3</sup>

<sup>1</sup> National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest

<sup>2</sup> "Petru Poni" Institute of Macromolecular Chemistry, Iasi, Romania

<sup>3</sup> Inorganic Chemistry Laboratory, Faculty of Chemistry, University of Bucharest, Bucharest

Synthesis and characterization of new Zn(II) coordination polymers constructed from

amino-alcohols and aromatic dicarboxylic acids

## OANA ANDREEA MIU<sup>1</sup>, CRISTINA CARSOTE<sup>2</sup>, ELENA BADEA<sup>3,4</sup>, PETRU BUDRUGEAC<sup>5</sup>

<sup>1</sup> Mira Telecom, Bucharest

<sup>2</sup> Centre of Research and Scientific Investigation, National Museum of Romanian History, Bucharest
 <sup>3</sup> Department of Chemistry, Faculty of Mathematics and Natural Sciences, University of Craiova
 <sup>4</sup> Advanced Research for Cultural Heritage – ARCH, National Research and Development Institute for Textile and Leather, ICPI Division, Bucharest

<sup>5</sup> National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest

A new method for automatic determination of hydrothermal stability (shrinkage activity) of historical collagen-based materials by combined microscopy and image processing techniques

### ANDREI CUCOS<sup>1</sup>, CARMEN GAIDĂU<sup>2</sup>, ELENA BADEA<sup>2,3</sup>

- <sup>1</sup> National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest
- <sup>2</sup> National Research and Development Institute for Textile and Leather, ICPI Division, Bucharest
- <sup>3</sup> Department of Chemistry, Faculty of Mathematics and Natural Sciences, University of Craiova

Studies on denaturation behavior of some chrome-tanned leathers

# ELENA BADEA<sup>1,2</sup>, CRISTINA CARSOTE<sup>3</sup>, LUCREȚIA MIU<sup>2</sup>, GIUSEPPE DELLA GATTA<sup>4</sup>

Department of Chemistry, Faculty of Mathematics and Natural Sciences, University of Craiova Advanced Research for Cultural Heritage – ARCH, National Research and Development Institute for Textile and Leather, ICPI Division, Bucharest

Centre of Research and Scientific Investigation, National Museum of Romanian History, Bucharest
 Department of Chemistry, University of Turin, Turin, Italy

Micro differential scanning calorimetry and thermal microscopy analysis of historical leather

# TEODORA STAICU<sup>1</sup>, VIOREL CÎRCU<sup>2</sup>, GABRIELA IONIȚĂ<sup>3</sup>, CORNELIU GHICA<sup>4</sup>, VLAD TUDOR POPA<sup>3</sup>, MARIN MICUTZ<sup>1,3</sup>

<sup>1</sup>Department of Physical Chemistry, University of Bucharest

<sup>2</sup> Department of Inorganic Chemistry, University of Bucharest

<sup>3</sup> "Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest

<sup>4</sup> National Institute of Materials Physics, Bucharest

On bimodal thermally-induced denaturation of collagen type I in acidic solutions

# IOANA STANCULESCU<sup>1,2</sup>, MARIAN VIRGOLICI<sup>1</sup>, MIHAELA MANEA<sup>1</sup>, SILVANA VASILCA<sup>1,2</sup>, COSMIN PINTILIE<sup>1</sup>, MIHALIS CUTRUBINIS<sup>1</sup>, DANIEL NEGUT<sup>1</sup>, BOGDAN LUNGU<sup>1</sup>, VALENTIN MOISE<sup>1</sup>

<sup>1</sup> IRASM Radiation Processing Department, Horia Hulubei National Institute for Physics and Nuclear Engineering, Măgurele

<sup>2</sup> Department of Physical Chemistry, Faculty of Chemistry, University of Bucharest

Spectral and thermoanalytical study of wooden artifacts consolidated by radio-polymerization

#### VLAD TUDOR POPA

"Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest

Microcalorimetric bacterial growth evaluation: problems in signal

processing and interpretation

### ADINA MAGDALENA MUSUC<sup>1</sup>, RALUCA DUMITRU<sup>2</sup>, ALINA STAN<sup>1</sup>, CORNEL MUNTEANU<sup>1</sup>, RUXANDRA BIRJEGA<sup>3</sup>, ANDREI CUCOS<sup>4</sup>, OANA CARP<sup>1</sup>

1 "Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest
 2 University "Politehnica" of Timisoara, Faculty for Industrial Chemistry and Environmental Engineering
 3 INFLPR - National Institute for Laser, Plasma and Radiation Physics, Măgurele
 4 National Institute for Research and Development in Electrical Engineering ICPE-CA, Bucharest

Synthesis, characterization and thermoreactivity of some methylcellulose-zinc composites

# VIOREL SASCA<sup>1</sup>, DAN ROŞU<sup>2,3</sup>, MARIUS-SILVIU MILEA<sup>2</sup>, MIHAI-COSMIN PASCARIU<sup>4</sup>, EUGEN ŞIŞU<sup>5</sup>, MIRCEA NICULESCU<sup>6</sup>

<sup>1</sup> Institute of Chemistry Timişoara of Romanian Academy, Timişoara

<sup>2</sup> "Politehnica" University of Timişoara, Faculty of Industrial Chemistry and Environmental Engineering, Timişoara

<sup>3</sup> INCEMC Timișoara

<sup>4</sup> "Vasile Goldiş" Western University of Arad, Faculty of Medicine, Pharmacy and Dental Medicine, Arad

<sup>5</sup> "Victor Babeş" University of Medicine and Pharmacy of Timişoara, Faculty of Medicine, Timişoara

<sup>6</sup> "Chemical Semper" Association, Timişoara

Thermal behaviour studies of new homopolynuclear coordination compound  $[Fe(C_2O_4)(OH)(OH_2).0.3H_2O]_n$ 

SUZANA MIHAIU<sup>1</sup>, IMRE MIKLÓS SZILÁGYI<sup>2</sup>, IRINA ATKINSON<sup>1</sup>, OANA-CATALINA MOCIOIU<sup>1</sup>, DÁVID HUNYADI<sup>2</sup>, JEANINA PANDELE-CUSU<sup>1</sup>, ALEXANDRA TOADER<sup>1</sup>, JÁNOS MADARÁSZ<sup>3</sup>, GYÖRGY POKOL<sup>3</sup>, MARIA ZAHARESCU<sup>1</sup>

1 "Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest
 2 MTA-BME Technical Analytical Chemistry Research Group of the Hungarian Academy of Sciences, Budapest University of Technology and Economics, Department of Inorganic and Analytical Chemistry, Budapest, Hungary

<sup>3</sup> Department of Inorganic and Analytical Chemistry, Budapest University of Technology and Economics, Budapest, Hungary

Thermal decomposition of the intermediates formed during the synthesis of the ZnO-based TCO's films

VIOREL SASCA, ALEXANDRU POPA, ORSINA VERDES

Institute of Chemistry Timișoara of Romanian Academy, Timișoara

Quantitative measurement of Brönsted acidity from  $H_3[PMo_{12}O_{40}]$  and its Cs1 salt, in bulk and supported on SBA15, by TPD of ammonia

#### GABRIEL MUNTEANU

"Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest

Thermo-programmed reduction of magnetite

DANIELA GHEORGHE, SPERANȚA TĂNĂSESCU, IULIA CONTINEANU, FLORENTINA-CRISTINA MIHĂILESCU, MARIETA BALCAN, DAN-FLORIN ANGHEL, LUDMILA ARICOV

"Ilie Murgulescu" Institute of Physical Chemistry, Romanian Academy, Bucharest

Thermodynamic study of some microemulsion systems containing Diesel and Colza oil used as alternative fuels