Zeolite conference 2018  
Preliminary programme

Sunday 24.06.2018
18.00-20.00 Welcome Cocktail and registration

Monday 25.06.2018

9.00 – 9.30. Welcome speech

**9.15 – 10.00. Invited lecture**
Prof. Alessio Langella, Universita’ del Sannio (Italy)- World Production and Use of Natural Zeolites: A Critical Review

**10.00 – 11.00 Session 1**
Zeolite Formation and Occurrence
1. A review of 58 years in the US natural zeolite industry & 8211; Old markets and new opportunities
2. Epithermal zeolite mineralization, Taupo Volcanic Zone, New Zealand
3. Trace and rare earth elements in the zeolitized pyroclastics from Plazishte Formation (Eastern Rhodopes, Bulgaria)

**11.00 – 11.30 coffee break**

**11.30 – 13.00 Session 2**
Zeolite Formation and Occurrence
1. Contribution to Bulgarian zeolite deposits & 8211; a tribute to Professor Hideo Minato
2. Structural comparison between Cs and Tl exchanged clinoptilolite after Rietveld refinements
3. Detection and exploration sedimentary Zeolite deposits using Spectral Angle Mapper (SAM) method in Aftar area, Semnan province Iran

**13.00 – 14.00 lunch**

**14.00 – 15.30 Session 3**
Zeolite Formation and Occurrence & Mineralogy of Natural Zeolites
1. Plasma treatment techniques for the functionalization of Philippine natural zeolite (PNZ)
2. The effect of HCl and NaCl treatment as pre-conditioning step prior to functionalization of the Philippine natural zeolites (PNZ)
3. Nanoporosity and differential adsorption curves in clinoptilolite zeolites from Mexico
4. Some economic aspects of the applications of Zeolite

**15.30 - 16.30 Poster session with coffee**
Zeolite Formation and Occurrence

FAU-type/ANA-type zeolite synthesis from Philippine bentonite

Physicochemical properties of natural and synthetic zeolites modified by acid treatment

The effect of calcination temperature on metakaolin activity in zeolite synthesis

Functionalization of Zeolite Surface

Synthesis and characterization of Philippine natural zeolite PNZ/CuO nanowire composites for hydrogen sulfide gas adsorption

Applications in Engineering and Environmental Protection

Determination of the heavy metals concentration profile through the zeolite barrier in groundwater remediation

Polishing of water contaminated with diclofenac and Zn(II) onto novel Fe-Mn binary oxide zeolite, Mn-zeolite and commercial product KlinoCarb

Kinetics of Cs+ uptake by clinoptilolite and Rietveld refinement of the way of occupation of the ion-exchange sites

Landfill leachate treatment using hybrid zeolite based processes

Warmix-cel &8211; an additive able to produce asphalt pavement at lower temperatures

Sorption of Cd2+ cations on synthetic zeolite aggregate

Post-synthesis modification of clinoptilolite. Kinetic studies of Cd2+ sorption

Adsorption of inorganic anions on surfactant modified zeolite materials

Surface functionalized Philippine natural zeolite (SM-PNZ) for arsenic adsorption in an aqueous solution

Zeolites as potential sorbents of toxic compounds in energetic sector.

The application of modified vermiculites in Selective Catalytic Reduction NO by Ammonia (SCR-NH3)

Vermiculites modified with novel metals as catalysts in DeNOx

Complementary numerical analysis of the carbon dioxide adsorption properties of vermiculit and fly ash zeolites obtained by various methods
Tuesday 26.06.2018

9.30 – 10.00 invited lecture
Prof. David L. Bish, Indiana University (USA) – „Water“ In Zeolites Is Not Really Water

10.00 – 11.00 Session 4
Mineralogy of Natural Zeolites & Functionalization of Zeolite Surface

1. New insights into the crystal-fluid interactions in laumontite: A natural nanosponge
2. Framework modification and dehydration path of the Ag-exchanged form of stellerite (STI)
3. Synthesis of 1-D ZnO nanostructures on Philippine natural zeolite (PNZ) via thermal decomposition process of a solution based precursor

11.00 – 11.30 coffee break

11.30. – 13.00 Session 5
Functionalization of Zeolite Surface

1. In-situ characterization and thermal decomposition behavior of ammonium-exchanged zeolites
2. Emerging contaminants (ECs) and surface modified natural zeolites (SNMZs): A new promising environmental challenge
3. Thermal and sterility properties of pristine and plasma-treated silver-zeolite-chitosan composites
4. Sponsor Malvern/Panalytical

13.00 – 14.00 Lunch

14.00 – 15.30 Session 6
Functionalization of Zeolite Surface

1. Recent Advances in Natural Zeolite Sciences and Technologies in Iran: Reserves, Research & Development, Applications
2. Modified Canadian Natural Zeolite for use in the Removal of Bacteria from Contaminated Drinking Water
3. Adsorption of mycotoxins by unmodified and modified phillipsite
4. Surface modification of PNZ for the dechlorination of mine drainage wastewater

15.30 - 16.30 Poster session with coffee
Zeolites in agriculture and building materials

Celfos: mineral product for the development of a sustainable agriculture

Biocel and Ecocel: natural organo mineral product compatible with organic production methods

Synthetic natural zeolite agglomerates & clinoptilolite-based geopolymers

Zeolite-containing plant rooting gel

Influence of Modified Zeolites on the Composting of Wood Waste

Zeolite tuffs as a mineral filler in mix asphalts

Potential use of zeolites in substrates for mutamba - Guazuma ulmifolia Lan. seedlings production’s and irrigation variation

Zeolite: catalysts and modern applications

Perlitess; attractive raw materials for synthesis of microporous phases with useful properties

Isomerization of limonene over natural zeolite- clinoptilolite

Isomerization of alpha-pinene over natural minerals and synthetic titanium-silicate catalysts & comparison of activity

Oxidation of R-(+)-limonene with hydrogen peroxide over vermiculite clay

Smectite nanoclays as catalyst in R-(+)-limonene oxidation process with hydrogen peroxide

Polish halloysite nanotubes as catalyst in R-(+)-limonene oxidation process with hydrogen peroxide

Synthesis, characteristic and application in the isomerization process of limonene of high-order siliceous materials of SBA-16 type structure modified with titanium compounds

Cation exchanged Philippine natural zeolite (PNZ) as an alternative catalyst in catalytic converter

Hydrogen Storage comparison of natural and synthetic zeolites

Zeolites in medicine

Ibuprofen adsorption on a natural zeolite modified with cationic surfactant: direct method of composites preparation

Comparison of hematological and histological analysis of “Ervit” and “Litovit” in mice
Wednesday 27.06.2018

9.30-10.00 Invited lecture
Prof. Athanasios Godelitsas, University of Athens (Greece) – Natural Zeolite Science: Past, Present, And Future

10.00 – 11.00 Session 7
Applications in Engineering and Environmental Protection
1. Study of the Serbian natural clinoptilolite in regard of its adsorptive, catalytic and antimicrobial applications
2. Strategic metal removal from aqueous media with an efficient natural zeolite.
3. Removal of phosphate from contaminated lake water using a modified Canadian natural zeolite

11.00 – 11.30 coffee break

11.30 – 13.00 Session 8
Applications in Engineering and Environmental Protection
1. Nitrogen reduction using Cu-PNZ Type Zeolite as intake air filter in a gasoline engine
2. Chromate Sorption onto HDTMA-Modified Clinoptilolite
3. Effect of pH on the Cr(VI) sorption onto HDTMA-zeolites
4. Dehydration Behaviour of Natural Zeolite and Na-exchanged Form using in situ Temperature-Programmed Diffuse Reflectance Infrared Fourier Transform Spectroscopy

13.00 – 14.00 Lunch
Thursday 28.06.2018

9.30 – 10.00 Invited lecture
Prof. Jolanta Warchol, Wrocław University of Science and Technology (Poland) – Chromate Sorption Onto Surfactant-Modified Zeolites

10.00 – 11.00 Session 9
Applications in Engineering and Environmental Protection

1. Hybrid sorption properties of zeolites: Adsorption of As(V), P(V) and Cl- by clinoptilolite exchanged with Pb, Zn and Cd

Zeolites in agriculture and building materials

2. NEREA Zeoponic Substrates: Positive and Negative Facts after 30 years of Development

3. Study the effect of compost modified with natural zeolite on soil quality

11.00 – 11.30 coffee break

11.30 – 13.00 Session 10
Zeolites in agriculture and building materials

1. Effect of zeolite on vineyard soil fertility

2. Application of natural zeolites in asphalt foaming process

3. The effect of zeolitic tuff on the properties of concretes

Zeolite: catalysts and modern applications

4. Catalytic And Sorptive Properties Of Silver-Impregnated Montmorillonite

5. Clinoptilolite derived templated carbon for hydrogen storage application

13.00-14.00 Lunch

14:00-15:00 INZA – meeting

15:30-22.00 Conference Dinne [ Zalesie Manor Complex] with Wieliczka Salt Mine Tour
Friday 28. 06.2018

10:00-11.00  Session 11.
Zeolite: catalysts and modern applications

1. Electrochemical performance of metal oxide/Philippine natural zeolite (MOPNZ) nanocomposites for pseudocapacitor applications

2. Nanoporosity and differential adsorption curves in clinoptilolite zeolites from Mexico

3. Application of natural and synthetic zeolites for selected petroleum derivatives removal

Zeolite in medicine

4. New insights on surface modified natural clinoptilolite-rich carrier for sorption and in vitro release of ibuprofen sodium salt

5. A comparative study of the physicochemical properties of natural zeolites from Cuba and Mexico for oral and topical applications in human beings

11.30 Closing Ceremony

11.30-12.30 Soft lunch with coffe

Saturday 29. 06.2018

7:00 ZEOCEM Technical excursion