ZEOLITE CONFERENCE 2018

Sunday 24.06.2018

18.00 - 20.00 Welcome Coctail and Registration
AGH-UST, building A0 ( number 7 on a map).

Monday 25.06.2018
Conference venue, AGH-UST building B-8 ( number 9 on a map)

9.00 – 9.30 Welcome speach
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 Chairmen: Aleksandra Daković, Hossein Kazemian
Zeolite Formation and Occurrence
1. D.T. Eyde - A review of 58 years in the US natural zeolite industry - Old markets and new opportunities
2. R.L. Brathwaite - Epithermal zeolite mineralization, Taupo Volcanic Zone, New Zealand
2. R. Ivanova, E. Stefanova, I. Peytcheva, M. Popov and A. Vlahov - Trace and rare earth elements in the zeolitized pyroclastics from Plazishte Formation (Eastern Rhodopes, Bulgaria)
11.00 – 11.45 Coffee break
11.45 – 12.45 Session 2 Chairmen: Alessio Langella, Athanasios Godelitsas
Zeolite Formation and Occurrence
1. R. Ivanova, N. Popov, T. Popova, D. Dimitrova, I. Sergeeva, L. Chiesa, K. Rujeva - Contribution to Bulgarian zeolite deposits - a tribute to Professor Hideo Minato
1. Khalil Rezaei - Detection and exploration sedimentary Zeolite deposits using Spectral Angle Mapper (SAM) method in Aftar area, Semnan province Iran
2. Jacek Engel - Some economic aspects of the applications of zeolite
3. Presentation - Guotoushengshi Chengde Science And Technology Co., Ltd
13.00 – 14.00 Lunch
14.00 – 15.00 Session 3 Chairmen: Ognyan Petrov, Reinhard X. Fischer
Zeolite Formation and Occurrence & Mineralogy of Natural Zeolites
15.30 - 16.30 Poster session with coffee Chairmen: Tomasz Bajda, Magdalena Wdowin
1. **Zeolite Formation and Occurrence**
   1.1. H.S.O. Cosinero, M.T. Conato - FAU-type/ANA-type zeolite synthesis from Philippine bentonite
   1.2. A.S. Radosavljević-Mihajlović, J. Stojanović, A. Došen, A. Šaponjić, A. Daković - Physicochemical properties of natural and synthetic zeolites modified by acid treatment
   1.3. M. Król, P. Rożek - The effect of calcination temperature on metakaolin activity in zeolite synthesis

3. **Functionalization of Zeolite Surface**
   3.1. L.T. Dimowa, O.E. Petrov, S.L. Petrov, S. Vladimirova-Atanasova, F. Ublekov - Structural comparison between Cs and Tl exchanged clinoptilolite after Rietveld refinements
   3.2. D. Smiljanić, M. Mercurio, F. Izzo, B. De Gennaro, A. Daković, C. Germinario, C. Grifa, A. Langella - Emerging contaminants (ECs) and surface modified natural zeolites (SNMzs): A new promising environmental challenge

4. **Applications in Engineering and Environmental Protection**
   4.1. Nuić, M. Trgo, N. Vukojević Medvidović, M. Ugrina - Determination of the heavy metals concentration profile through the zeolite barrier in groundwater remediation
   4.2. E. Chmielewská, H.B.I. Hawash, R. Górová, R. Sokolík - Purification of water contaminated with diclofenac and Zn(II) onto novel Fe-Mn binary oxide zeolite, Mn-zeolite and commercial product KlinoCarb
   4.3. N. Lihareva, L. Dimowa, O. Petrov, Y. Tzvetanova - Kinetics of Cs⁺ uptake by clinoptilolite and Rietveld refinement of the way of occupation of the ion-exchange sites
   4.5. C.L.D. Neves Filho, F.B. Faria - Warmix-cel - an additive able to produce asphalt pavement at lower temperatures
   4.6. M. Król, M. Cembala, P. Rożek - Sorption of Cd²⁺ cations on synthetic zeolite aggregate
   4.7. N. Lihareva, L. Dimowa, O. Petrov, Y. Tzvetanova, A. Nikolov, I. Piroeva - Kinetics of Cs⁺ and Sr²⁺ uptake by clinoptilolite from mix solutions – comparison with the single metal solutions
   4.8. K. Brylewska, M. Król, W. Mozgawa - Post-synthesis modification of clinoptilolite. Kinetic studies of Cd²⁺ sorption
   4.9. K. Brylewska, M. Król, W. Mozgawa - Adsorption of inorganic anions on surfactant modified zeolite materials
4.11. P. Kunecki, D. Czarna-Juszkiewicz, R. Panek, M. Wdowin - Zeolites as potential sorbents of toxic compounds in energetic sector
4.12. B. Samojeden, M. Morek, D. Duraczyńska, K. Zarębska, M. Kamienowska, M. Poddębiak, M. Motak - The application of modified vermiculites in Selective Catalytic Reduction NO by Ammonia (SCR-NH3)
4.13. M. Motak, K. Zarębska, M. Kamienowska, A. Mastalerz, B. Samojeden - Vermiculites modified with novel metals as catalysts in DeNOx
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 Chairmen: Rositsa Ivanova, Marina Trgo
Mineralogy of Natural Zeolites & Functionalization of Zeolite Surface
1. D. Comboni, G.D. Gatta, M. Merlini, P. Lotti, M. Hanfland - New insights into the crystal-fluid interactions in laumontite: A natural nanosponge
2. G. Cametti, S.V. Churakov - Framework modification and dehydration path of the Ag-exchanged form of stellerite (STI)

11.00 – 11.30 Coffee break

11.30 – 12.45 Session 5 Chairmen: David L. Bish, Reinhard X. Fischer
Functionalization of Zeolite Surface
2. M. Ugrina, N. Vukojević Medvidović, A. Daković, M. Marković, M. Trgo, I. Nuić, M. Mihajlović - The distribution and retardation coefficients as a tool in selection of low-cost sorbent as a material for permeable reactive barrier - SEM-EDS analysis
4. Sponsor Malvern/Panalytical

13.00 – 14.00 Lunch

14.00 – 15.15 Session 6 Chairmen: Gerardo Rodríguez-Fuentes, Rositsa Ivanova
Functionalization of Zeolite Surface
1. H. Kazemian, L. Kerr, J. Behin - Recent advances in natural zeolite sciences and technologies in Iran: reserves, research & development, applications
4. N. Sobuś, B. Michorczyk, M. Piotrowski, I. Czekaj - Nano-design of zeolites for selective conversion of biomass: process of lactic acid dehydration

15.30 - 16.30 Poster session with coffee Chairmen: Wojciech Franus, Magdalena Wdowin

Poster session Tuesday 26.06.2018

5. Zeolites in agriculture and building materials
5.1. F. Ferreira - Celfos: mineral product for the development of a sustainable agriculture
5.2. F. Ferreira - Biocel and Ecocel: natural organo mineral product compatible with organic production methods
5.3. Nikolov, H. Nugteren, O. Petrov, I. Rostovsky - Synthetic natural zeolite agglomerates - clinoptilolite-based geopolymers
5.4. K. Chakalov, T. Popova, V. Savov, G. Angelova, C. Metodieva, N. Again - Zeolite-containing plant rooting gel
5.5. T. Popova, K. Chakalov, V. Savov, G. Deleva - Influence of modified zeolites on the composting of wood waste
5.6. A. Woszuk, W. Franus - Zeolite tuffs as a mineral filler in mix asphalts
5.8. M.E. de Haro-Martí, M. Chahine, H. Neibling, L. Chen - Use of clinoptilolite in composting of dairy manure to reduce ammonia emissions and retain nitrogen

6. **Zeolite: catalysts and modern applications**
6.1. L. Dimitrov, O.E. Petrov, M.P. Tarassov, N. Lihareva - Perlites - attractive raw materials for synthesis of microporous phases with useful properties
6.2. M. Retajczyk, A. Wróblewska - Isomerization of limonene over natural zeolite-clinoptilolite
6.3. P. Miądlicki, A. Wróblewska, M.W. Malko - Isomerization of alpha-pinene over natural minerals and synthetic titanium-silicate catalysts - comparison of activity
6.4. M.W. Malko, A. Wróblewska, P. Miądlicki - Oxidation of R-(+)-limonene with hydrogen peroxide over vermiculite clay
6.5. M.W. Malko, A. Wróblewska, P. Miądlicki - Smectite nanoclays as catalyst in R-(+)-limonene oxidation process with hydrogen peroxide
6.6. M.W. Malko, A. Wróblewska, P. Miądlicki - Polish halloysite nanotubes as catalyst in R-(+)-limonene oxidation process with hydrogen peroxide
6.7. E. Makuch, M. Retajczyk, A. Wróblewska, B. Michalkiewicz - Synthesis, characteristic and application in the isomerization process of limonene of high-order siliceous materials of SBA-16 type structure modified with titanium compounds

7. **Zeolites in medicine**
7.2. J. Oyuntsetseg, A. Tsogtsetseg, R. Lkhagvajav, L. Tsogtzandan - Comparison of hematological and histological analysis of „Ervit” and „Litovit” in mice
7.3. L. Kerr, H. Kazemian - Modified Canadian natural zeolite for use in the removal of bacteria from contaminated drinking water
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 Chairmen: Panagiotis Misaelides, Piergiulio Cappelletti
Applications in Engineering and Environmental Protection
1. N. Rajić, J. Milenković, J. Pavlović, S. Jevtić, I. Kaplanec, A. Rečnik, J. Hrenović - Study of the Serbian natural clinoptilolite in regard of its adsorptive, catalytic and antimicrobial applications
2. P. Sáez, A. Rodríguez, J.M. Gómez, E. Díez, I. Bernabé, C. Fraile - Strategic metal removal from aqueous media with an efficient natural zeolite.
3. S. Kondo, H. Kazemian, R. Thring - Removal of phosphate from contaminated lake water using a modified Canadian natural zeolite
4. P. Misaelides, S. Sarri, F. Noli, N. Kantiranis, A. Filippidis - Cesium sorption from hyper-alkaline aqueous solutions by a greek HEU-type zeolitic material

11.00 – 11.30 Coffee break

11.30 – 13.00 Session 8 Chairmen: Athanasios Godelitsas, Jolanta Warchol,
Applications in Engineering and Environmental Protection
2. J.K. Warchol, P. Sobolewska - Chromate sorption onto HDTMA-modified clinoptilolite
3. M. Chojnacka, J. Warchol, P. Sobolewska - Effect of pH on the Cr(VI) sorption onto HDTMA-zeolites
5. A. Woszuk, J. Madej - Application of natural zeolites in asphalt foaming process

13.00 – 14.00 Lunch
Thursday 28.06.2018

9.30 – 10.00 Invited lecture
Prof. Jolanta Warchoł, Wrocław University of Science and Technology (Poland) – Chromate sorption onto surfactant-modified zeolites

10.00 – 11.00 Session 9 Chairs: David L. Bish, Linda Campbell
Zeolites in agriculture and building materials
2. G. Rodríguez-Fuentes, L.A. Rivero González - NEREA Zeoponic Substrates: Positive and negative facts after 30 years of development

11.00 – 11.30 Coffee break

11.30 – 13.00 Session 10 Chairs: Alessio Langella, Panagiotis Misaelides
Applications in Engineering and Environmental Protection
1. T. Bajda, B. Muir, P. Nowak - Hybrid sorption properties of zeolites: Adsorption of As(V), P(V) and Cl- by clinoptilolite exchanged with Pb, Zn and Cd
2. G.C. Calabria, M.C. Shinzato, T.S. Martins - Bacteriological efficiency of natural zeolites treated with Zn and Ag as filter media
3. G. Narin - Dehydration behaviour of natural zeolite and Na-exchanged form using in situ Temperature-Programmed Diffuse Reflectance Infrared Fourier Transform Spectroscopy

Zeolite in medicine
6. Erdem Ayvazoglu - Business Development Manager "Rota Zeolite Mining - A Global Supplier At a Glance"

13.15 - 14.00 Lunch
14.00 - 15:00 INZA – meeting
15:30 – Meeting point infront of a venue for a participant who declared to go on a tour
17.10—18.45 Wieliczka Salt Mine visit, after transfer directly to Conference Dinner place

18.15 Meeting point infront of a venue for transfer to the Conference Dinner

19.30 -22.30 Conference Dinner [Zalesie Manor Complex]
Friday 29.06.2018

10:00 – 11.15 Session 11 Chairmen: Aleksandra Daković, Athanasios Godelitsas
Zeolite: catalysts and modern applications

2. N.M. Musyoka, J.Ren, H.W. Langmi, B. North, M. Mathe - Clinoptilolite derived templated carbon for hydrogen storage application
3. E.M. Olegario, L.V.A. Sayson, C.M. Pelicano, N. Chanlek, H. Nakajima, G.N. Santos - Electrochemical performance of metal oxide/Philippine natural zeolite (MOPNZ) nanocomposites for pseudocapacitor applications
5. L. Bandura, W. Franus - Application of natural and synthetic zeolites for selected petroleum derivatives removal

11.30 – 11:45 Closing Ceremony
12.00 – Lunch

Saturday 30.06.2018

ZEOCEM Technical excursion

7:00 a.m. – Kraków departure – meetingpoint: infront of the conference venue.
12:30 - 1:30 p.m. - Lunch for participants – hotel close to quarry / 8 km transfer by bus
1:30 p.m. - Presentation of a Quarry
3:30 p.m. - Light snacks for Guests before coming back, time for refreshment
4:00 p.m. – bus transfer to Kraków
9:00 p.m. – Arrival to Kraków

Timetable can change due to bad traffic or other unexpected events.