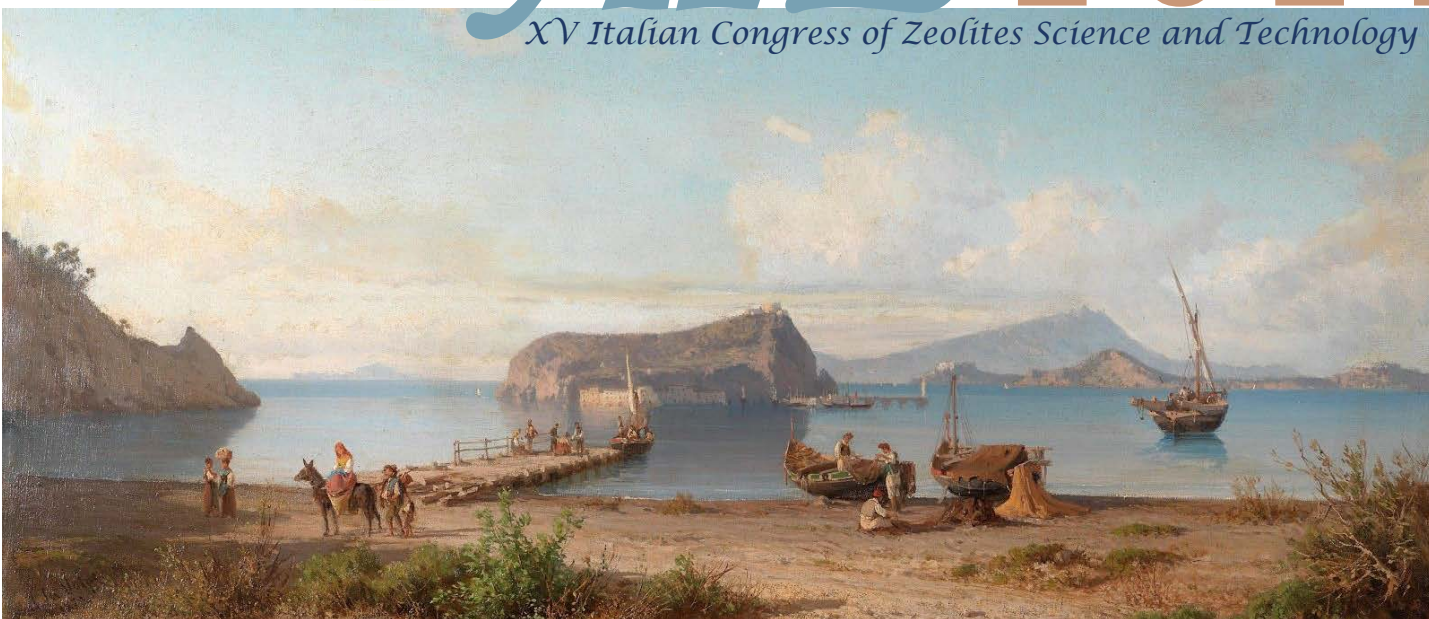




AIZ 2021

XV Italian Congress of Zeolites Science and Technology



Celebration Event

*International Symposium on Future Challenges in
Zeolites Science and Technology*

and

*Centenary of the birth of Professor Riccardo Sersale
30th Anniversary of the Italian Zeolite Association*

9th - 11th of December 2021, Napoli (Italy)

PROGRAMME



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Dipartimento
di Ingegneria Chimica,
dei Materiali e della
Produzione Industriale
Università degli Studi
di Napoli Federico II

Welcome

The Italian Zeolite Association (AIZ) and the University of Napoli Federico II are pleased to welcome the participants of the XV Italian Congress of Zeolites Science and Technology (AIZ 2021) which will include the International Symposium on Future Challenges in Zeolites Science and Technology the joint Celebration of the Centenary of the birth of Professor Riccardo Sersale and the 30th Anniversary of the Italian Zeolite.

We believe the event will represent an excellent way to promote knowledge and to share and discuss the recent progresses and future trends in the science and technology of zeolite and related materials but it will also be a good opportunity to visit Napoli and other beautiful places of Campania Region.

Have a nice conference and enjoy your stay in Napoli!

Napoli, 9th of December 2021

The Organizing Committee of AIZ 2021

Committees

Committee of Honor

(AIZ Founders and Former Presidents)

Carmine Colella (President Emeritus of the AIZ)

Rosario Aiello

Maurizio de' Gennaro

Paolo Ciambelli

Aldo Gamba

Roberto Millini

Girolamo Giordano

Giuseppe Cruciani

Scientific Committee

(AIZ Board)

Domenico Caputo (President)

Paola Lanzafame (Secretary-Treasurer)

Paolo Lotti

Raffaele Pirone

Stefano Zanardi

Local Organizing Committee

Domenico Caputo (Chair)

Paolo Aprea

Bruno De Gennaro

Fabio Iucolano

Barbara Liguori

Ottavio Marino

Secretariat

Paola Desidery

Assunta Campanile

Enrica Luzzi

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Graphic Project

O'Bone – A Drimer of Pictures / Visual Arts

Web Design and Mastering

Francesco Fimiani

Invited Speakers

Martin Hartmann, President of the IZA,

Svetlana Mintova, President of the FEZA

Giuseppe Bellussi, Former Eni R&D Senior Vice-President

Mario Collepari, ENCO – Engineering Concrete

General Information

Conference Venue

*Università degli Studi di Napoli Federico II – Sede di Ingegneria
Piazzale V. Tecchio 80 – 80125 Fuorigrotta, Napoli*

Registration Desk

Registration Desks will be located at Aula Magna (first floor) at Università degli Studi di Napoli Federico II

The Registration Desk will be open as follow:

Thursday, December 9th, from h. 13:30 to h. 16:00

Registration Fees:

<i>Full Delegate</i>	<i>€ 130</i>
<i>Student</i>	<i>€ 80</i>
<i>Accompanying person</i>	<i>€ 40</i>

Regular participant and student fee includes:

- welcome reception*
- coffee breaks*
- light lunch*
- social dinner at “Trattoria dell’Oca”, Via Santa Teresa a Chiaia, Napoli*
- transfer from conference venue to “Trattoria dell’Oca” and return*
- access to the plenary session*
- book of summaries*
- delegate's kit*
- visit to the Real Museo di Mineralogia dell’Università di Napoli Federico II, Via Mezzocannone 8, Napoli*
- transfer from conference venue to Real Museo di Mineralogia*

Accompanying person fee includes:

- welcome reception*
- coffee breaks*
- social dinner at “Trattoria dell’Oca”, Via Santa Teresa a Chiaia, Napoli*
- transfer from conference venue to “Trattoria dell’Oca” and return*
- visit to the Real Museo di Mineralogia dell’Università di Napoli Federico II, Via Mezzocannone 8, Napoli*
- transfer from conference venue to Real Museo di Mineralogia*

Instructions for Contributors

Time for Oral Presentations

Depending on your contribution, different times will be allocated for your lecture:

- Plenary Lecture (PL): 35 min + 5 min questions
- Oral (O): 12 min + 3 min questions
- Short Oral (SO): 10 min

The chairman will advise the lecturer 5 minutes (for plenary) or 3 minutes (for orals and short orals) before the end of the available time (excluding the question time) and will stop the presentation in any case when the time will exceed the maximum available (question time included).

Slides Preparation

Please prepare your oral presentation using Microsoft Office PowerPoint software.

Save your presentation in a pptx file.

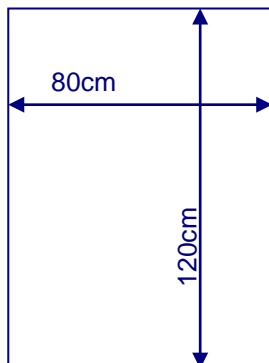
All contributions will be presented using our PCs, so ensure to bring your pptx file on a USB stick to the Conference Room before the beginning of your session, to copy it on the PC and to check if everything works fine.

Poster Presentation

Authors should guarantee their presence at the poster during the session. Please refer to the "Posters" Section of this document for the board assigned to your poster. See also the map of posters number.

The Poster Session will open, Friday, December 10th from h. 10.45.

The dimensions of the poster should not exceed 80 cm (width) x 120 cm (height).



Please, use big enough text and illustrations to be read easily from a 2 meter distance. Double-sided tape to hang your poster will be supplied.

Coffee Breaks and Light Lunches

Coffee breaks and light lunch will be served at buffets located at the Conference room

Social Events

Opening Ceremony

December 9th, Thursday, h. 14:30 at the Conference Room (Aula Magna)

Social Dinner - Typical traditional Neapolitan cuisine

December 9th, Thursday, h. 20:00 at "Trattoria dell'Oca", Via Santa Teresa a Chiaia, Napoli
Meeting Point for transfer: Conference venue, Piazzale Tecchio 80, Napoli

Visit to the Real Museo di Mineralogia dell'Università di Napoli Federico II,

Via Mezzocannone 8, Napoli

December 11th, Saturday, h. 9:30

Meeting Point for transfer: Conference venue, Piazzale Tecchio 80, Napoli.

All the indications for the return are available in the "Transfer Information" section.

Official Language

The official language is: Italian for Celebrations (9th of December) and English for the Symposium (10th of December).

Transfer Information

The city of Naples can be reached in several ways:

By plane

Airport of Napoli, Capodichino, 10 km of distance from centre of Napoli. From the airport you can reach centre of Naples by taxi (time of journey about 10 min.) or by bus (ALIBUS or ANM line from the airport to the railway station "Piazza Garibaldi").

Napoli International Airport web site for info: <https://www.aeroportoedinapoli.it/>

From the airport you can reach directly the **Conference Venue by taxi** (time of journey about 15 min.) and the cost of service is about €25.00.

By train

You can reach Napoli railway station "Piazza Garibaldi" from anywhere you are:

- From Roma Termini railway station every 1 hour
- For Train Connections info: www.trenitalia.com

From the Napoli railway station "Piazza Garibaldi" you can reach the **Conference Venue by metro** (line 2 to "Campi Flegrei"- direction: "Pozzuoli").

From Real Museo di Mineralogia to Napoli railway station "Piazza Garibaldi"

You can reach the metro station "Piazza Garibaldi" by metro (line 1- "Università" station- Piazza Bovio).

Tourist Information

Once in Napoli, tickets for the local Buses and Metro trains can be purchased at the train station, newspaper stands ("Edicola") or tobacco/cigarette shops ("Tabaccheria" or "Tabaccaio").

Monetary exchange service is provided by the hotel and most banks (normally open from h. 8:30 to h. 13:30).

Programme

December 9th, Thursday

- 13:30-16:00** **Registration**
- 14:30-14:50** **Opening Ceremony**
- **Prof. Luigi Carrino**, Chair of the Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, Università di Napoli Federico II
 - **Dr. Svetlana Mintova**, President of the FEZA - Federation of European Zeolite Associations
 - **Prof. Diego Gatta**, Vice-President of the INZA - International Natural Zeolite Association
 - **Prof. Domenico Caputo**, President of the AIZ - Associazione Italiana Zeoliti
- 14:50-16:00** **Centenary of the birth of Professor Riccardo Sersale**
- **Memories** - **Prof. Carmine Colella**, **Prof. Raffaele Cioffi**
 - **Invited lecture** - Calcestruzzo per un progresso sostenibile, **Prof. Mario Collepardi**
- 16:00-17:10** **30th Anniversary of the Italian Zeolite Association**
- **Memories** - **Prof. Domenico Caputo**
 - **Invited lecture** - Climate change: the potential contribution of zeolites and zeolite-like materials to the energy transition, **Dr. Giuseppe Bellussi**
- 17:10-17:30** **Coffee Break**

17:30-19:00 **AIZ Business**

20:00 **Social Dinner** - Typical traditional Neapolitan cuisine at "Trattoria dell'Oca", Via Santa Teresa a Chiaia, Napoli

December 10th, Friday

International Symposium on Future Challenges in Zeolites Science and Technology

- 9:00-10:45** **Session 1 - Chair: Girolamo Giordano**
- 9:00** **PL1 - Synthesis and catalytic properties of hierarchical zeolites**
MARTIN HARTMANN
- 9:40** **O1 - Pressure-driven crystal-fluid interaction in natural Erionite-K**
T. BATTISTON, D. COMBONI, F. PAGLIARO, P. LOTTI, G. D. GATTA
- 9:55** **O2 - Effect of hierarchical porosity of 3D-printed geopolymer/ZSM-5 on the catalytic performance in SCR of NO_x**
E. M. CEPOLLARO, S. CIMINO, L. LISI, R. BOTTI, G. FRANCHIN, P. COLOMBO
- 10:10** **O3 - Rationalization of TS-1 synthesis through the design of experiments approach**
F. ROSSO, A. RIZZETTO, A. AIRI, K. KHOMA, M. SIGNORILE, V. CROCELLÀ, S. BORDIGA, S. GALLIANO, C. BAROLO, E. ALLADIO, F. BONINO
- 10:25** **SO1 - Production of liquid fuels from multifunctional Fe-based catalysts**
E. CORRAO, F. SALOMONE, R. PIRONE, S. BENSALD
- 10:35** **SO2 - Zeolite-based hybrid UV filters: Shielding health and environment**
R. FANTINI, A. ZAMBON, M. FABBIANI, F. DI RENZO, L. MINO, R. CAVALLI, M. ARGENZIANO, G. VEZZALINI, R. ARLETTI

10:45 *Coffee Break & Posters Session*

11:15-13:00 *Session 2 - Chair: Raffaele Pirone*

11:15 **PL2** – *Exploration and exploitation of defects in zeolites*
SVETLANA MINTOVA

112:55 **04** – *ZSM-5 surface modification via secondary Sil-1 synthesis*
G. FERRARELLI, D. COZZA, F. DALENA, M. MIGLIORI, G. GIORDANO, E. DIB, S. MINTOVA, V. VALTCHEV, M. DATURI

12:10 **05** – *Removal of contaminants of emerging concern using surfactant modified Chabazite-rich Tuff from Campanian Ignimbrite: Preliminary results*
F. IZZO, A. LANGELLA, B. DE GENNARO, P. CAPPELLETTI, C. GERMINARIO, C. GRIFA, C. RISPOLI, M. MERCURIO

12:25 **06** – *Role of zeolites in the direct CO₂ hydrogenation to DME*
G. BONURA, S. TODARO, C. CANNILLA, M. MIGLIORI, G. GIORDANO, F. FRUSTERI

12:40 **S03** – *Magnetic metal-ceramic nanocomposites as adsorbent of agrochemicals and antibiotics from water: Application of smart materials from zeolite precursors*
O. TAMMARO, F. SANNINO, M. PANSINI, A. MAROCCO, P. ALLIA, P. TIBERTO, G. BARRERA, D. PIROZZI, S. ESPOSITO

12:50 **S04** – *A promising way for cerium recovery: the ion exchange capacity of LTL zeolite*
R. ARLETTI, G. CONFALONIERI, G. VEZZALINI, F. DI RENZO

13:00 *Light lunch & Posters Session*

14:00-15:05 *Session 3 - Chair: Bruno de Gennaro*

14:00 **07** – *Surface modification of zeolite-templated carbon: Assessment in electrocatalytic CO₂ reduction*
D. COZZA, G. PAPANIKOLAOU, P. LANZAFAME, S. PERATHONER, G. CENTI, G. GIORGIANNI, F. DALENA, M. MIGLIORI, G. GIORDANO

14:15 **08** – *Synthesis of FAU-X porous monoliths by Geopolymer Gel Conversion*
A. CAMPANILE, B. LIGUORI, D. CAPUTO, C. FERONE, L. GIGLI, P. APREA

14:30 **09** – *CO₂ capture and storage by natural and synthetic zeolites*
M. DOSA, M. CAVALLO, N. G. PORCARO, K. KHOMA, F. C. BONINO, V. CROCELLÀ, S. BENSALD, M. PIUMETTI

14:45 **S05** – *PFAS as emerging pollutants in the environment: a challenge with zeolites for the management of water resources*
M. MANCINELLI, A. MARTUCCI, M. ARDIT, F. COLOMBO, L. PASTI, G. M. SALANI, G. BIANCHINI

14:55 **S06** – *Zeolite-chitosan composite aerogels for CO₂ capture*
E. LUZZI, P. APREA, M. SALZANO DE LUNA, D. CAPUTO, G. FILIPPONE

15:05-15:45 *Discussion & Closing Remarks (Chair: Diego Gatta)*

December 11th, Saturday

9:30-12:30 *Visit to the Real Museo di Mineralogia dell'Università di Napoli Federico II, Via Mezzocannone 8, Napoli*

Poster

P1 – *Production of oxyfuel additives by glycerol etherification over BEA-zeolite catalysts*

C. CANNILLA, S. TODARO, M. MIGLIORI, G. GIORDANO, F. FRUSTERI, G. BONURA

P2 – *Molecular traps based on natural zeolites for environmental remediation*

R. PAPARO, M. TRIFUOGGI, G. CAROTENUTO, L. NICOLAIS

P3 – *Modification and characterization of Clinoptilolite for the CO-immobilization of formate dehydrogenase and glycerol dehydrogenase enzymes*

C. COCUZZA, G. PIETRICOLA, V. CAUDA, M. DOSA, D. FINO, C. OTTONE, O. ROMERO, T. TOMMASI, M. PIUMETTI

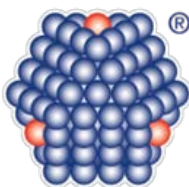
P4 – *Ti-MWW zeolites for partial oxidation of bulky substrates*

F. ROSSO, A. AIRI, M. SIGNORILE, S. BORDIGA, V. CROCELLÀ, F. BONINO

Organization



Under the auspices of:



With the contribution of:



DI
C
Ma
PI

Dipartimento
di Ingegneria Chimica,
dei Materiali e della
Produzione Industriale
Università degli Studi
di Napoli Federico II



**REAL
FABBRICA di
CAPODIMONTE**



istituto ad indirizzo raro
della ceramica e della porcellana
giovanni caselli