

Alkali Activated Materials and Geopolymers: Sustainable Construction Materials and Ceramics Made Under Ambient Conditions

Calabria, Italy
28 May – 2 June 2023

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Monday, May 29, 2023

07:30 – 09:00 Breakfast buffet

Session 1: Fundamental Chemistry

Session Chair: Waltraud M. Kriven

09:00 – 09:40

KEYNOTE

Current knowledge of geopolymers and AAMs network

Angel Palomo, Eduardo Torroja[†] Institute (CSIC), Madrid, Spain

Cristina Leonelli, University of Modena and Reggio Emilia, Italy

1

09:40 – 10:00

Designing alkali-activated materials based on the precursor volume fraction and molar concentration of activator

Vlastimil Bílek Jr., Brno University of Technology, Czech Republic

2

10:00 – 10:20

Exploration of the phase composition of activated calcined clay-slag mixtures using ²⁷Al and ²⁹Si MAS NMR spectroscopy

Souayfan Faten, Ecole Centrale de Nantes, France

3

10:20 – 10:50

Coffee break

10:50 – 11:10

The origin of the acceleration period in alkali-activated fly ash

Luiz Miranda de Lima, TU Delft, Netherlands

4

11:10 – 11:30

Metakaolin particle size reduction and geopolymer composite modeling for higher strength

Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA

5

11:30 – 12:00

Discussion

12:00 – 14:00

Lunch

Session 1: Fundamental Chemistry (continued)

Session Chair: Raudhatul Islam Chaerun

14:00 – 14:40

KEYNOTE

Organic ligands improve the reactivity of aluminosilicate precursors and accelerate AAM hardening

Juho Yliniemi, University of Oulu, Finland

6

14:40 – 15:00

Acid attacks on metakaolin based-geopolymers with recycled corundum: A study focused on the role of anions by NMR characterization

Giovanni Dal Poggetto, University of Modena and Reggio Emilia, Italy

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15:00 – 15:40

Coffee break

Monday, May 29, 2023 (continued)

Session 2: Composites

Session Chairs: Rania Derouiche & David Markusík

15:40 – 16:20	KEYNOTE Recent developments in geopolymer composites and their potential applications Waltraud M. Kriven, University of Illinois at Urbana-Champaign, USA	8
16:20 – 16:40	On the use of varied natural fibers as sustainable sources to tailor highly efficient geopolymer composite materials Ana Carolina Trindade, University of Illinois at Urbana-Champaign, USA	9
16:40 – 17:00	Recent advances on the mechanical properties of geopolymers through the design of hybrid particulate-fiber reinforced composites Ana Carolina Trindade, University of Illinois at Urbana-Champaign, USA	
17:00 – 17:20	Development of gamma-ray and neutron radiation shielding using geopolymer-particulate composites Alexander Fields, University of Illinois at Urbana-Champaign, USA	10
17:20 – 17:40	Discussion	
17:40 – 19:30	Networking / Time for leisure	
19:30 – 21:00	Dinner	

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07:30 – 09:00	Breakfast buffet	
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Session Chairs: Yangmei Yu

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Flash Poster Presentation

Session Chairs: Prihutami Pramesti and Ali Alloul

17:30 – 18:15	Posters from 101 to 110 (included) will be presented with 1 to 3 slides in 5 min.
18:15 – 19:30	Poster Session (All the posters will be discussed in the two poster sessions)
19:30 – 21:00	Dinner

Wednesday, May 31, 2023

07:30 – 09:00	Breakfast	
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	Laura Ricciotti, University of Campania, Italy	
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	Sima Kamali, University of Oulu, Finland	
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	Johanna Laukkanen, University of Oulu, Finland	
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	<u>Flash Poster Presentation</u> Session Chairs: Luiz Miranda De Lima & Gulsen Nazerian	
17:30 – 18:15	Posters from 111 to 121 (included) will be presented with 1 to 3 slides in 5 min.	
17:30 – 19:30	Poster Session (All the posters will be discussed in the two Poster Sessions)	
19:30 – 21:30	Conference Banquet	

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