NANOCEM Consortium Spring meeting 2018
April 24 – 26, 2018, Empa, Dübendorf, Switzerland

PROGRAMME

Tuesday April 24, 2018, late afternoon-evening, Empa Akademie

16:30-17:00 Welcome coffee/tea and registration

From 17:00 Welcome

17:00 – 17:30 New Members CHRYSO, Vanessa Kocaba, CHRYSO

17:30 – 19:00 Flash Poster presentation of completed partner projects and other projects, followed by Poster session and Barbecue

3-minute Flash presentations and Posters

- Completed partner projects:
  1. EPFL: Synthetic Calcium Silicate Hydrates – from synthetic synthesis to atomistic modelling and growth kinetics for early age strength and eco friendly cement & concrete, Aslam Kunhi Mohamed
  2. Empa: Plastic shrinkage cracking in concrete: from mechanisms to mitigation strategies, Zhangli Hu
  3. ETHZ: Long-term stable embeddable reference electrodes for concrete, Zhidong Zang
  4. NTNU: Alkali distribution in ASR affected concrete, Klaartje De Weerdt

- Other projects:
  5. ZAG: belite-sulphoaluminate clinker from secondary materials, Lea Zibret
  7. NTNU: Properties of Gypsum-free Cement, Harald Justnes

Posters

- Core project
  8. Core project 11: Changes in pore structure and transport properties of low-clinker cement materials during early stages of carbonation, project ifsttar
  9. Core project 14: Frost salt scaling of concrete

- New partner projects
  10. Univ. Leeds Performance of aged materials under extreme loading
  11. Empa Hydration mechanism and properties of low-CO2 cements based on magnesium hydroxycarbonates
  12. ETHZ Corrosion-induced cracking of the concrete cover
  13. NTNU MIKS – Microproportioning with manufactured sand
  14. Bauhaus Uni. Weimar Growth and porosity of C-S-H phases – development of the ‘Sheet Growth Model’ and coupling with experimental data (1H NMR, SEM)

- Internal proposals:
  15. Univ. Leeds Support for EPSRC Centre for Doctoral Training in Resilient Infrastructure from Materials to Systems (RIMS)
  16. PSI CemGEMS: A user-friendly web app for thermodynamic calculations of cement hydration with GEMS and Cemdata’18

18:00-19:00 Coordination meeting CP 15 “Nucleation and growth”, room NO 209, Empa NO building

From 19:15 Barbecue dinner
Presentations new partner projects

08:30 – 08:50 Univ. Leeds: Performance of aged materials under extreme loading, Leon Black
08:50 – 09:10 Empa: Hydration mechanism and properties of low-CO₂ cements based on magnesium hydroxycarbonates, Frank Winnefeld
09:10 – 09:30 NTNU: MIKS – Microproportioning concrete with manufactured sand, Stefan Jacobsen
09:30 – 09:50 ETHZ: Corrosion-induced cracking of the concrete cover, Zhidong Zhang
09:50 – 10:10 Bauhaus Univ. Weimar: Growth and porosity of C-S-H phases – development of the ‘Sheet Growth Model’ and coupling with experimental data (1H NMR, SEM), Long Nguyen Tuan

10:10 – 10:50 Coffee Break and poster session

Presentations internal proposals

10:50 – 11:10 Univ. Leeds: Support for EPSRC Centre for Doctoral Training in Resilient Infrastructure from Materials to Systems (RIMS), Leon Black
11:10 – 11:30 PSI: CemGEMS: A user-friendly web app for thermodynamic calculations of cement hydration with GEMS and Cemdata’18, Dmitrii Kulik

Other presentations

11:40 – 12:10 Academic roadmap update, Karen Scrivener, EPFL

From 12:15 Lunch and poster session/ Akademie III

Wednesday April 25, 2018, afternoon-evening

13:30 – 15:30 Parallel meetings, Eawag Building
   Industrial Advisory Board, room B 24
   Scientific Committee, room C 24
15:30 – 16:00 Coffee Break
16:00 Visit NEST building
15:30 – 16:30 Steering Committee, room B24
18:30 Bus departs from Hotel Sonnental

From 19:15 Dinner in town, Restaurant Zunfthaus zur Waag, Zurich
   Address: Münsterhof 8, 8001 Zürich, Tel. 044 216 99 66

The bus will bring us back to the hotel around 21:30
Thursday, April 26, 2018, morning, Empa Akademie

08:30 – 08:40 Feedback from Steering Committee

08:35 – 08:40 Assembly

08:40 – 09:40 Core project 11 Project Ifsttar “Carbonation” final report, Mathieu Bertin, Ifsttar

09:40 – 09:50 CASH workshop report, Barbara Lothenbach

09:50 – 10:00 Call for candidates for a Round Robin on gas diffusivity in cementitious materials, Bruno Huet, LafargeHolcim.

10:00 – 10:30 Coffee Break

10:30 – 11:15 Core Project 14 “Frost” report, David Wahlbom, Lund University

11:15 – 12:00 Core Project 15 “Nucleation and growth” report, Lina Bouzouaid, Univ. Bourgogne-Dijon


12:20 – 12:25 Future events

- Nanocem Consortium Autumn meeting 2018, Dublin, Ireland, Christophe Charron, Eqiom-CRH
- Workshop “deterioration mechanisms”, November 2018, Fabrizio Moro, LafargeHolcim
- Hydration workshop “Tribute to Ellis Gartner”, June 2019, Switzerland, Karen Scrivener

Consortium meeting ends after lunch

From 12:30 Lunch / Akademie III

13:30 -16:00 Coordination meeting CP 14 “Frost”, room VE 202, Empa VE Building