



ICCCM

Fachgruppe Bauchemie
Chemistry of Construction Materials Division

5th International Conference on the Chemistry of Construction Materials

September 8 - 10, 2025
Garching, Germany



www.gdch.de/icccm2025



▶ AIM OF THE CONFERENCE

The conference aims at providing an inspiring forum for scientists from university, research facilities and industry to present results, to discuss and to focus on the forthcoming challenges.

Interdisciplinary presentations in all fields of construction materials science will show the many different perspectives of the topic.

▶ SCIENTIFIC COMMITTEE

T. Gädt	Garching/DE
A. Gerdes	Karlsruhe/DE
A. Machner	Garching/DE
H. Manzano	Leioa/ES
A. Osburg	Weimar/DE
A. Perrot	Lorient/FR
A. Reinschmidt	Essen/DE
B. Rossbach	Burghausen/DE
G. Sant	Los Angeles/US
O. Weichold	Aachen/DE

Monday, September 8, 2025

8:30 **WORKSHOP I**
Solving cement chemistry problems with Python – a compact introduction to scientific programming in Python

separate registration required,
 costs including drinks and lunch: 35€

8:30 **WORKSHOP II**
EU-Taxonomy, ESG, Construction Chemistry – New pathways to sustainable infrastructure

separate registration required,
 costs including drinks and lunch: 35€

12:00 LUNCH TIME

5602 FMI / lecture hall 1

13:00 **OPENING**

5602 FMI / lecture hall 1

Invited Speaker Session

13:30 **KEY NOTE:**
Recent advances in the characterization of fresh-state properties of cement-based materials
 A. Perrot, Lorient Cedex/FR

5602 FMI / lecture hall 1

14:00 **KEY NOTE:**
Towards the understanding of the reactivity of amorphous aluminosilicates
 A. Machner, Garching/DE

Monday, September 8, 2025

5602 FMI / lecture hall 1

Chemistry of Inorganic Binders (CAC)

- 14:30 **Influence of silica fume and sodium silicate on the early hydration of calcium aluminate cement**
T. Schramm, Erlangen/DE, J. Neubauer, Erlangen/DE,
 F. Goetz-Neunhoeffler, Erlangen/DE
- 14:50 **Carbonation curing of blended cements**
E. Erkizia, Derio/ES, A. Prabhu, Derio/ES, J. A. Ibáñez, Derio/
 ES, J. Hervás, Leioa/ES, E. Epelde, Leioa/ES, J. J. Gaitero,
 Leioa/ES
- 15:10 **Influence of sodium hydroxide and citric acid on the hydration and microstructure of a calcium aluminate cement – calcite mixture**
P. Rost, Erlangen/DE, J. Neubauer, Erlangen/DE,
 F. Goetz-Neunhoeffler, Erlangen/DE
- 15:30 COFFEE BREAK
- 16:00 **Engineering calcium carbonate cement from CO₂ and calcium sulfate**
A. Van Driessche, Granada/ES, C. Pimentel, Madrid/ES,
 G. Montes-Hernandez, Grenoble/FR, P. Almarza-Cifuentes,
 Granada/ES, M. Kellermeier, Ludwigshafen/DE
- 16:20 **Carbonated Recycled Concrete Paste: Composition, Gel Formation, and Reactivity as SCM**
F. Niewöhner, Munich/DE, M. Krüger, Munich/DE,
 A. Machner, Munich/DE
- 16:40 **Understanding calcium carbonate crystallization pathways for concrete recycling**
M. Dehue, Grenoble/FR, V. Magnin, Grenoble/FR, M. Lanson,
 Grenoble/FR, J. L. Hazemann, Grenoble/FR, M. Zajac,
 Heidelberg/FR, A. Fernandez-Martinez, Grenoble/FR
- 17:00 **Influence of Carbonated Cement Paste on the Kinetics and Phase Development of OPC Hydration**
M. Singer, Erlangen/DE, L. Deffner, München/DE, T. Gädt,
 München/DE, D. Jansen, Erlangen/DE
- 17:20 **Heterogeneous nucleation of calcium carbonate in the cement pores**
D. Au, Gières/FR, A. Fernandez-Martinez, Gières/FR,
 A. Driessche, Granada/ES

Monday, September 8, 2025

5604 FMI / lecture hall 2

Properties of Fresh and Hardened Construction Materials (rheology and diverse)

- 14:30 **Structural build-up at rest in Portland Cement**
L. Michel, Zürich/CH, A. Sanner, Zürich/CH, R. Flatt, Zürich/
 CH, D. Kammer, Zürich/CH
- 14:50 **The structural build-up of C₃S paste during early hydration and its modelling**
Y. Ji, Berlin/DE, D. Stephan, Berlin/DE
- 15:10 **Shear-dependent rheological behavior of climate-neutral (“net zero”) cements containing calcined clays**
X. Wang, Garching/DE, J. Chen, Garching/DE, J. Plank,
 Garching/DE
- 15:30 COFFEE BREAK
- 16:00 **Rheological and Mechanical Characterization of Vaterite Calcined Clay Cement (VC3) as a Low-Carbon Binder**
M. H. Nofalah, Pamplona/ES, L. Kyriakou, Pamplona/ES,
 J. M. Fernández, Pamplona/ES, Í. Navarro-Blasco,
 Pamplona/ES, J. I. Álvarez, Pamplona/ES
- 16:20 **Rheology of systems containing calcined and untempered clay and interactions with biobased admixtures**
A. Mezhev, Berlin/DE, R. Lorenzoni, Berlin/DE,
 W. Schmidt, Berlin/DE
- 16:40 **Hydration Behavior and Strength Development of CAC Blends with Limestone and Slag**
F. Madeu, Garching/DE, Ö. Demirdoğan, Garching/DE,
 A. Hedzic, Erlangen/DE, T. Schramm, Erlangen/DE,
 F. Goetz-Neunhoeffler, Erlangen/DE
- 17:00 **An Effective and Practical Self-healing Concept for Cement-based Materials**
M. Wu, Aarhus/DK, J. Wang, Aarhus/DK
- 17:20 **Lignocellulose Lightweight Concrete Based on CSA - Hydration and Strength Dependence on CSA Type, Lignocellulose Type and Preconditioning**
C. Schröfl, Dresden/DE, M. Direske, Dresden/DE, J. Steger,
 Zierenberg/DE, D. Weichgrebe, Hannover/DE,
 V. Mechtcherine, Dresden/DE

Monday, September 8, 2025

5602 FMI / lecture hall 1

- 17:40 **Understanding the Effect of pH on the Kinetics of C-(A)-S-H Carbonation**
L. Mugambi, Trondheim/NO, M. Zajac, Leimen/DE,
 J. Jiji, Dijon/FR, A. Guillet, Dijon/FR, K. Park, Leimen/DE,
 M. Pedersen, Trondheim/NO
- 18:00 **Carbonation of alkali sulfate-activated blast-furnace slag**
C. Che, Rennes/FR, K. Hannawwi, Rennes/FR,
 A. Darquennes, Rennes/FR
- 18:20 **Poster and Get together**

Monday, September 8, 2025

5604 FMI / lecture hall 2

- 17:40 **Mechanical shear bond and 3D microstructural characteristics of the bonding zone of repair concretes on fractured surfaces**
C. Umbach, Kassel/DE, M. Fremder, Kassel/DE,
 B. Middendorf, Kassel/DE
- 18:00 **Rapid weathering of facade coatings to receive the eco-label "Blauer Engel"**
N. Krueger, Valley/DE, W. Hofbauer, Valley/DE
- 18:20 **Poster and Get together**

Tuesday, September 9, 2025

5602 FMI / lecture hall 1

Invited Speaker Session

- 8:30 **KEY NOTE:**
ZeroCAL: Eliminating carbon dioxide emissions from limestone's decomposition to decarbonize cement production
 G. Sant, Los Angeles/US

- 9:00 **KEY NOTE:**
Towards predictive design of cement with atomistic simulation methods
 H. Manzano, Leioa/ES

9:30 COFFEE BREAK

5602 FMI / lecture hall 1

Digitalization

- 10:00 **Unlocking the Future of Cement Quality Control? Exploring the Power of NIR Spectroscopy**
T. Bader, Duesseldorf/DE, J. Rickert, Duesseldorf/DE
- 10:20 **The Influence of Natural Clay Mineralogy on Calcined Clay Cement Mortar Properties: Insights from AI-Exploration**
T. Manninger, Vienna/AT, Stefan Krispel, Vienna/AT
- 10:40 **Atomistic and Mesoscale Modeling of Mechanical Properties of Geopolymers**
E. Duque-Redondo, Leioa/ES, E. Masoero, Milan/IT, F. Lolli, Austin/US
- 11:00 **Transforming product development: Data Science for accelerated screening in complex dry mix formulations**
J. Lebert, Walsrode/DE, B. Reiner, Collegeville/US, S. Kamdar, Collegeville/US, J. Storer, Midland/US, J. Neubauer, Walsrode/DE
- 11:20 **Circular B-I/O: Building Ecosystems for Bio-Based Concrete with AI-Driven Supply Streams**
T. Klewe, Berlin/DE, K. C. Kamashanju, Berlin/DE, W. Schmidt, Berlin/DE, S. Kruschwitz, Berlin/DE
- 11:40 **Automated segmentation of cracks in light microscopic images of concrete using machine learning**
J. Sartori, Weimar/DE, M. S. H. Alabassy, Weimar/DE, D. Erfurt, Weimar/DE, A. Osburg, Weimar/DE, H.-M. Ludwig, Weimar/DE
- 12:00 LUNCH & POSTERS

Tuesday, September 9, 2025

5602 FMI / lecture hall 1

Invited Speaker Session

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 G. Sant, Los Angeles/US

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Towards predictive design of cement with atomistic simulation methods
 H. Manzano, Leioa/ES

9:30 COFFEE BREAK

5604 FMI / lecture hall 2

CIB (Mg-binders)

- 10:00 **Hydration of magnesium carbonate cements – influence of the carbonate source**
F. Winnefeld, Dübendorf/CH, A. German, Dübendorf/CH, P. Montserrat-Torres, Dübendorf/CH, B. Lothenbach, Dübendorf/CH
- 10:20 **Synthesis and Carbonation of Mg(OH)₂**
S. Franke, Erlangen/DE, F. Bellmann, Weimar/DE, J. Neubauer, Erlangen/DE
- 10:40 **Evolution of porosity of MgO-based cements studied with ¹H NMR**
S. Mouhtadi, Dübendorf/CH, V. Hallet, Dübendorf/CH, M. Wyrzykowski, Dübendorf/CH, B. Lothenbach, Dübendorf/CH, F. Winnefeld, Dübendorf/CH
- 11:00 **CO₂-neutral Mg-binders based on olivine**
F. Rafalski, Erlangen/DE, F. Bellmann, Weimar/DE, J. Neubauer, Erlangen/DE
- 11:20 **Effect of additives on the rheology and kinetics of magnesium carbonate cement**
C. Bouchaud-Deliot, Dübendorf/CH, F. Winnefeld, Dübendorf/CH, B. Lothenbach, Dübendorf/CH
- 11:40 **Stability of hydrous carbonate-containing brucite in chloride solution**
V. Hallet, Dübendorf/CH, F. Winnefeld, Dübendorf/CH, B. Lothenbach, Dübendorf/CH
- 12:00 LUNCH & POSTERS

Tuesday, September 9, 2025

5602 FMI / lecture hall 1

Chemistry of Inorganic Binders (Composite cements)

- 13:00 **Structure and pozzolanic reactivity of kaolinite and bentonite co-calcined with limestone or Na_2SO_4 from ^{23}Na , ^{27}Al , and ^{29}Si NMR studies**
J. Skibsted, Aarhus/DK, S Nie, Aarhus/DK, S.-Y. Yang, Aarhus/DK
- 13:20 **A comparative study of cements blended with limestone and calcined smectitic and kaolinitic clays with focus on early hydration, sulfate demand, setting and workability**
M. Maier, Valley/DE, V. Schaller, Valley/DE, M. Panzer, Neubiberg/DE, S. Scherb, Neubiberg/DE, N. Beuntner, Neubiberg/DE
- 13:40 **Investigation of regional raw and secondary materials for the low-clinker cement production**
D. Qvaeschning, Wiesbaden/DE, A. Vogel, Weimar/DE, S. Mutke, Wiesbaden/DE
- 14:00 **The Impact of thermochemically modified Bauxite Residues on the microstructure of blended cements**
M. Wenzel, Aachen/DE, F. Georget, Aachen/DE, T. Matschei, Aachen/DE
- 14:20 **Comparison of the regular and modified R^3 test, including detailed analysis of the formed C-S-H phases with NMR**
L. Schnürer, Munich/DE, H. Eickhoff, Munich/DE, L. Deffner, Munich/DE, A. Machner, Munich/DE
- 14:40 **Exploring Early Hydration of Mechanochemical Activated Phyllosilicates as Supplementary Cementitious Materials in clinker free systems**
L. Ruckes, Valley/DE, M. Maier, Valley/DE
- 15:00 **Industrial scale mechanochemical activation of clays**
I. Rust, Karlsruhe/DE, D. Hinder, Karlsruhe/DE, M. Fylak, Karlstadt/DE, H. Möller, Ulm/DE
- 15:20 COFFEE BREAK

Tuesday, September 9, 2025

5604 FMI / lecture hall 2

Admixtures and Additives (plasticizers)

- 13:00 **Comparing the performance of copolymerization vs blending of PCE type superplasticisers**
A. Barquero, San Sebastian/ES, I. Herrero, San Sebastian/ES, H. Asensio, Derio/ES, E. Erkizia, Derio/ES, J. R. Leiza, San Sebastian/ES
- 13:20 **Effect of Polycarboxylate Ether Superplasticizers on the Morphology of Nano-Ettringite – A TEM Study in Cement Paste**
O. Rindle, Munich/DE, T. Gädt, Munich/DE
- 13:40 **The influence of superplasticisers on the recycling of gypsum**
C. Pritzel, Siegen/DE, F. Kakar, Siegen/DE, M. S. Killian, Siegen/DE
- 14:00 **Synthesis of starch-based flow agents and characterization of dispersing performance in alkali-activated binders**
S. Partschefeld, Weimar/DE, J. Aschoff, Weimar/DE, A. Osburg, Weimar/DE
- 14:20 **Design of Phosphate-Functionalized Superplasticizers for Their Application in LC^3 .**
A. Kurlevskaya, Zurich/CH, R. J. Flatt, Zurich/CH
- 14:40 **Synthesis and Rheological Characterisation of Poly(2-Methyl-2-Oxazoline)-PCEs in Ordinary Portland Cement Pastes**
T. Meyer, Karlsruhe/DE, M. Wilhelm, Karlsruhe/DE
- 15:00 **Alteration of OPC Hydration by PCE Compared to Other Admixtures**
T. Hirsch, Berlin/DE, D. Stephan, Berlin/DE
- 15:20 COFFEE BREAK

Tuesday, September 9, 2025

5602 FMI / lecture hall 1

Properties of Fresh and Hardened Construction Materials (methods)

- 16:00 **CarbO2crete - Development of an Accelerated Method to Study the Carbonation Process of Concrete**
J. Adolphs, Haan/DE, A. Schreiber, Haan/DE, J. Möllmer, Leipzig/DE
- 16:20 **Decolourisation Properties of Gypsum in Textile Wastewater**
M. Behringer, Munich/DE, H. Hilbig, Munich/DE, B. Helmreich, Munich/DE, A. Machner, Munich/DE
- 16:40 **Celitement - Spectroscopic Analysis of the C-S-H Binder**
D. Hinder, Eggenstein-Leopoldshafen/DE, M. Fylak, Karlstadt/DE, H. Möller, Ulm/DE, M. Lindén, Ulm/DE
- 17:00 **Impact of Alternative Binders on the Production and Properties of Calcium Silicate Masonry Units**
M. Laabs, Kassel/DE, Z. Istanbuly, Hannover/DE, W. Eden, Hannover/DE, T. Phan, Kassel/DE, B. Middendorf, Kassel/DE
- 17:20 **Ultrasound assisted production of a premix suspension of cement and fines for sustainable concrete manufacture**
C. Röbller, Weimar/DE, K. Korn, Cottbus/DE, P. Hesse, Cottbus/DE, S. Nune, Cottbus/DE, R. Remus, Cottbus/DE
- 17:40 **GENERAL ASSEMBLY of the GDCh Division of the Chemistry of Construction Materials**
 Agenda to be announced.
- MITGLIEDERVERSAMMLUNG der Fachgruppe Bauchemie**
 Tagesordnung wird noch bekanntgegeben
- 19:30 **Dinner at Augustiner**

Tuesday, September 9, 2025

5604 FMI / lecture hall 2

Chemistry of Inorganic Binders (cement production, geopolymer, gypsum)

- 16:00 **Electrochemical Production of Cementitious Precursors: A Pathway to Carbon-Neutral Cement Manufacturing**
M. Liebscher, Dresden/DE, P. V. Ly, Dresden/DE, A. R. Ramuglia, Dresden/DE, J. Scheel, Dresden/DE, T. Köberle, Dresden/DE, V. Mechtcherine, Dresden/DE, I. M. Weidinger, Dresden/DE
- 16:20 **Study on Spurrite Formation Mechanisms under High-CO₂ Concentration: Towards Implementation of Oxyfuel-Driven Cement Manufacturing**
C. Jacome, Siegen/DE, G. A. M. Di Cagno, Siegen/DE, T. Kowald, Siegen/DE, C. Pritzel, Siegen/DE, M. S. Killian, Siegen/DE
- 16:40 **Heterogeneous dynamics in aging phosphate-based geopolymer**
A. Viani, Modena/IT, D. Bernasconi, Turin/IT, L. Zárbybnická, Prague/CZ, F. Zontone, Grenoble/FR, A. Pavese, Turin/IT, F. Dallari, Padova/IT
- 17:00 **Influence of Silicate Oligomers on Workability and Setting time of Alkali-Activated Materials**
A. Wetzel, Kassel/DE, D. Kosenko, Kassel/DE, B. Middendorf, Kassel/DE
- 17:20 **Investigation of phosphate-based geopolymer structure by multinuclear/multidimensional solid-state NMR**
D. Bernasconi, Turin/IT, A. Viani, Modena/IT, P. Florian, Orleans/FR, F. Fayon, Orleans/FR, A. Pallini, Modena/IT, J. Vopalenski, Jjubljana/SI, S. Bordignon, Turin/IT, G. Paul, Alessandria/IT, A. Pedone, Modena/IT, R. Gobetto, Turin/IT, A. Pavese, Turin/IT
- 17:40 **GENERAL ASSEMBLY of the GDCh Division of the Chemistry of Construction Materials**
 Agenda to be announced.
- MITGLIEDERVERSAMMLUNG der Fachgruppe Bauchemie**
 Tagesordnung wird noch bekanntgegeben
- 19:30 **Dinner at Augustiner**

Wednesday, September 10, 2025

5602 FMI / lecture hall 1

- 8:30 **KEY NOTE:**
Cement – an indispensable binder for the construction industry: what will the future bring?
 D. Stephan, Berlin/DE

- 9:00 **KEY NOTE:**
Environmental Aspects of Construction Materials – Challenges and Pitfalls
 N. Zizkova, Brno/CZ

- 9:30 COFFEE BREAK

5602 FMI / lecture hall 1

Organic Building Materials

- 10:00 **The Potential of Bio-based Polyester Resins and Their Applications as Construction Material**
F. Weitenhagen, Aachen/DE, O. Weichold, Aachen/DE
- 10:20 **Osmotic processes in the cementitious material - reactive resin coating system**
F. Vogt, Weimar/DE, A. Osburg, Weimar/DE
- 10:40 **Amines Released from Materials into Air and Water**
A. Schmohl, Valley/DE
- 11:00 **Investigation of the influence of polymers on the deformation behaviour of cement stone, mortars and concretes in a defined service temperature range**
A. Flohr, Weimar/DE, S. D. Narayana, Weimar/DE, A. Osburg, Weimar/DE
- 11:20 **Keratin from agricultural waste as binder for ecological fibreboards**
L. Schmitz, Aachen/DE, O. Weichold, Aachen/DE
- 11:40 **Development of a Chitosan-Based Adhesive for Wood-Acrylic Glass Laminates**
P. Marten, Aachen/DE, O. Weichold, Aachen/DE
- 12:00 LUNCH & POSTERS

Wednesday, September 10, 2025

5602 FMI / lecture hall 1

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 D. Stephan, Berlin/DE

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 N. Zizkova, Brno/CZ

- 9:30 COFFEE BREAK

5604 FMI / lecture hall 2

Admixtures and Additives
(c3S hydration)

- 10:00 **On the possible mechanism of a C-S-H nucleator: polyDADMAC**
C. Labbez, Dijon/FR, A.-C. Guillet, Dijon/FR, K. Alloncle, Dijon/FR, S. Gauffinet, Dijon/FR
- 10:20 **Tricalcium silicate hydration in presence of HEMCs: A time resolved X-ray synchrotron investigation of kinetics and nanostructure.**
E. Qoku, Atlanta/US, D. Reuschle, Lake Jackson/US, T. Fitzgibbons, Lake Jackson/US, A. Wilkinson, Atlanta/US, K. Kurtis, Atlanta/US
- 10:40 **New admixture for controlling heat in concrete**
J. Unseld, Leimen/DE, L. Frunz, Leimen/DE, T. Müller, Leimen/DE
- 11:00 **Influence of Anionic Functionality of Superplasticizer on the Composition and Performance of Polymer-stabilized C-S-H Nanoseed Suspensions**
L. Deffner, Garching/DE, S. Kopf, Garching/DE, V. Stahl, Garching/DE, M. Singer, Erlangen/DE, D. Jansen, Erlangen/DE, T. Gädt, Garching/DE
- 11:20 **The role of polymer particle surface charge on the delay and depression mechanisms on the early OPC hydration**
J. Schreiber, Erlangen/DE, D. Jansen, Erlangen/DE, X. Kong, Beijing/CN
- 11:40 **Development of an Electrode-based methodology for measuring the Complexation of Calcium ions with Sucrose**
R. Käser, Zurich/CH, H. P. Ravindran, Villigen/CH, R. J. Flatt, Zurich/CH, A. Testino, Villigen/CH

Wednesday, September 10, 2025

5602 FMI / lecture hall 1

Admixtures and Additives (divers)

- 13:00 **Use of magnetic particles from residual materials for active rheology control of cement pastes**
L. Göbel, Weimar/DE, P. Heik, Weimar/DE,
 T. Echt, Weimar/DE, F. Ehle, Weimar/DE
- 13:20 **The Impact of Sodium Hexametaphosphate and Sodium Carbonate on M-S-H Nucleation**
A. Bastian, Konstanz/DE, C. Ruiz-Agudo, Konstanz/DE
- 13:40 **Response Surface Method (RSM) to investigate the effect of several chemical admixtures on workability and physical-chemical microstructure development of ternary binders**
A. Myftarago, Karlsruhe/DE, T. A. Bier, Freiberg/DE
- 14:00 **Effects of Different Alkanolamines in Cementitious Binders**
R. Kierat, Ludwigshafen/DE, P. Bazula, Ludwigshafen/DE,
 T. Gädt, Garching/DE
- 14:20 **Application of triethanolamine (TEA) technology for dry mixes - A case study with different cements and application technologies**
I. Kirchberger, Erlangen/DE, F. Goetz-Neunhoeffler,
 Erlangen/DE, J. Neubauer, Erlangen/DE
- 14:40 **Stability of Synthesized Capsules under Standard Concrete Mixing Conditions and in Concrete**
T. Echt, Weimar/DE, T. Wiegand, Weimar/DE,
 M. Nicolai, Weimar/DE, L. Göbel, Weimar/DE
- 15:00 **Effect of post-treatment on gypsum slag pozzolan cement binders and the role of the pozzolan**
C. A. E. Eicheler, Munich/DE, R. Beligni, Munich/DE,
 H. Hilbig, Munich/DE, A. Machner, Munich/DE
- 15:20 **Closing and Awards**

Wednesday, September 10, 2025

12:00 LUNCH & POSTERS

5604 FMI / lecture hall 2

Chemistry of Inorganic Binders (C3S + Modeling)

- 13:00 **Understanding the Nucleation and Growth of C-S-H: Insights from Multi-Step Precipitation and Structural Characterization**
A. Fernandez-Martinez, Grenoble/FR, C. Labbez, Dijon/FR,
 R. Besselink, Grenoble/FR, L. Bouzouaid, Dijon/FR,
 A. E. S. Van Driessche, Granada/ES, B. Lothenbach,
 Dubendorf/CH
- 13:20 **Effect of Al and Mg on the stability of crystalline calcium silicate hydrates**
B. Lothenbach, Duebendorf/CH, S. Mingione,
 Duebendorf/CH, D. Jansen, Erlangen/DE, F. Winnefeld,
 Duebendorf/CH
- 13:40 **Combined effect of gypsum and KOH on triclinic C₃S -Calculation of reaction rates from pore solution data and specific surfaces of C-S-H**
F. Becker, Erlangen/DE, J. Neubauer, Erlangen/DE,
 D. Wagner, Roetha/DE, F. Bellmann, Weimar/DE
- 14:00 **Investigations on Additive-Controlled Portlandite Nucleation**
S. Kopf, Garching/DE, T. Gädt, Garching/DE
- 14:20 **The formation of passivating layers during the reaction of CaO and silicate**
T. Sowoidnich, Weimar/DE, C. Rößler, Weimar/DE,
 D. Damidot, Douai/FR
- 14:40 **Deriving early hydration cement paste elastic properties using cement paste phase assemblages and microstructure modeling across scales**
E. Jäggle, Garching/DE, J. J. Timothy, Garching/DE,
 D. Jansen, Erlangen/DE, A. Machner, Garching/DE
- 15:00 **Modelling the Hydration of Slag in CEM III/A Paste**
D. Lahmann, Hamburg/DE, S. Kessler, Hamburg/DE
- 15:20 **Closing and Awards**

LIST OF POSTERS

- P001 **One-part hybrid cement: Preparation, early performance and phase composition**
H. Abdel-Gawwad, Berlin/DE, D. Stephan, Berlin/DE
- P002 **The effect of carbonates on transformation and formation of corrosion products**
M. Alisher, Dübendorf/CH, B. Lothenbach, Dübendorf /CH, F. E. Furcas, Dübendorf /CH
- P003 **The influence of superplasticizers on the multistep nucleation of C-S-H**
P. Almarza-Cifuentes, Granada/ES, C. Labbez, Dijon/FR, A. Van Driessche, Granada/ES
- P004 **Development of an acid activated geopolymer coating containing nanocrystalline anatase for photocatalytic activity**
J. Aschoff, Weimar/DE, St. Partschefeld, Weimar/DE, J. Schneider, Weimar/DE, A. Osburg, Weimar/DE
- P005 **Calorimetric Study on the Effect of Alkali and Alkaline Earth Metal Salts on Calcium Aluminate Cement Hydration**
A. Dönmez, Garching/DE, K.-Y. Chen, Garching/DE, T. Gädt, Garching/DE
- P006 **Polysaccharide based superplasticizers for calcium sulphate binders**
St. Heitmann, Weimar/DE, St. Partschefeld, Weimar/DE, A. Osburg, Weimar/DE
- P007 **Incorporation of Recycled Materials and By-Products to Raw Meal Mixtures: A Pathway towards a Sustainable Construction Industry**
C. Jacome, Siegen/DE, O. Maier, Neubeckum/DE, S. Ratzlaff, Neubeckum/DE
- P008 **Effect of carbonates on the solubility of lepidocrocite**
S. Khiari, Dübendorf/CH, F. Furcas, Dübendorf /CH, G. Miron, Villigen/CH, B. Lothenbach, Dübendorf /CH
- P009 **Reactive Coated Biochar Aggregates for the Production of Net-Zero Concrete**
M. Latifi, Kassel/DE, C. Umbach, Kassel/DE, B. Middendorf, Kassel/DE
- P010 **Enhancing Reactivity of Low-Carbon Binders: The Role of C-S-H Seeding in Sustainable Construction**
X. Li, Trostberg/DE, S. Friesen, Trostberg/DE
- P011 **Unlocking the potential of ordinary Portland cement with hydration control additive**
X. Li, Trostberg/DE, H. Grassl, Trostberg/DE, C. Hesse, Trostberg/DE

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D. Bernasconi, Turin/IT, A. Viani, Modena/IT, L. Zárybnická, Prague/CZ, S. Bordinon, Turin/IT, J. R. Godinho, Freiberg/DE, A. Maximenko, Krakow/PL, E. Borferchia, Turin/IT, R. Gobetto, Turin/IT, A. Pavese, Turin/IT
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D. Kosenko, Kassel/DE, A. Wetzel, Kassel/DE, B. Middendorf, Kassel/DE
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- P034 **Accelerated carbonation hardening of binders based on raw dolomite – a way to a new resource-efficient construction material with low CO₂ footprint.**
A. Stoklosa, München/DE, A. Machner, Munich/DE, H. Hilbig, Munich/DE
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M. Nicolai, Weimar/DE, L. Göbel, Weimar/DE
- P036 **Effect of superplasticizers on the workability and hydration of metaclay cements**
C. Hoffmann, Weimar/DE, T. Sowoidnich, Weimar/DE, C. Rößler, Weimar/DE, H. M. Ludwig, Weimar/DE
- P037 **Investigation of the Accelerating Effect of a C12A7-Based Admixture on the Early Strength of Low Clinker Cements**
Y. Zhang, München/DE, B. Avcioglu, München/DE
- P038 **Effect of Calcium Sulfate Sources on the Performance of Ternary OPC-CAC-C $\bar{S}$ and Quaternary OPC-CAC-Slag-C $\bar{S}$ Systems Cured at Different Temperatures**
Ö. Demirdoğan, Garching/DE, C. Meral Akgül, Ankara/TR
- P039 **The alumina-silica gel in carbonated cement paste: thermodynamic properties and impact of Ca/Si and Al/Si ratios**
J. Skibsted, Aarhus/DK, J. Song, Aarhus/DK, B. Lothenbach, Dübendorf/CH, M. Zajac, Leimen/DE
- P040 **Carbonation corrosion behavior of alkali sulfate-activated blast-furnace slag**
C. Che, Rennes/FR, K. Hannawwi, Rennes/FR, A. Darquennes, Rennes/FR
- P041 **Chloride-induced corrosion behavior of alkali sulfate-activated blast-furnace slag**
C. Che, Rennes/FR, K. Hannawwi, Rennes/FR, A. Darquennes, Rennes/FR
- P042 **Understanding the Effects of Soluble Sodium Salts on the Dissolution and Early Hydration Kinetics of Tricalcium Aluminate**
D. Axthammer, Trostberg/DE, S. Darouich, Stuttgart/DE, M. Collin, Garching/DE, R. Mishra, Ludwigshafen/DE, T. Lange, Garching/DE, J. Dengler, Trostberg/DE, T. Gädt, Garching/DE
- P043 **The Effect of functional Molecules on the Carbonation of Calcium hydroxide**
S. Skibbe, Munich/DE

- P044 **Influence of sodium citrate on C3S dissolution**
M. Collin, Munich/DE, A. Vohburger , Munich/DE,
 T. Gädt , Munich/DE
- P046 **Investigation of C3S and C2S Carbonation Mechanism, and the Influence of the Carbonation Process on other Calcium-containing Phases**
 M. Genovesi, Konstanz/DE, C. Ruiz-Agudo, Konstanz/DE
- P047 **Reducing the Carbon Footprint of Industrial Mortars: The Influence of GGBS and Ethylene Latex on Cementitious Adhesives**
M. E. Bouarroudj, Paris/FR, Y. Kaci, Paris/FR, R. Alfani, Paris/FR, B. Rossbach, Burghausen/DE, T. Halbach, Munich/DE
- P048 **CaloCem: Convenient Batch Processing of Cement Calorimetry Data**
M. Hofmann, Trostberg/DE, A. Jaglicic, Garching/DE, T. Gädt, Garching/DE
- P049 **Deriving early-age cement paste phase assemblage using cement dissolution modeling and thermodynamic calculations with GEMS**
E. Jägle, Garching/DE, J. J. Timothy, Garching/DE, D. Jansen, Erlangen/DE, A. Machner, Garching/DE

Monday, September 8, 2025 **19:00**

Get-together and Poster Session

Technical University Munich (TUM)
 TUM School of Computation,
 Information and Technology
 Foyer
 Boltzmannstr. 3
 85748 Garching, Germany

Included in registration fee, booking required upon registration

Tuesday, September 9, 2025 **19:30**

Conference Dinner

Augustiner Stammhaus
 Neuhauser Straße 27
 80331 München
www.augustiner-restaurant.com

Registration needed, places are limited

Participant: 85 € (including 19% VAT)
 Student: 60 € (including 19% VAT)

Prior registration is required.
 The registration fee includes food and drinks.

Technical University Munich (TUM)

TUM School of Computation,
Information and Technology
Friedrich L. Bauer Lecture Hall
Boltzmannstr. 3
85748 Garching, Germany

**TRAVEL****Garching Research Center****How to get there by public transport**

You can reach the Garching campus from Marienplatz in 25 minutes by subway (U6 to the Garching Research Center terminus).

From Munich Airport, take the S-Bahn S8 to Ismaning, then bus 230 or S1 to Neufahrn, then bus 690.

PARKING**Garching Research Center**

There are sufficient parking spaces available (see map page 30).

REGISTRATION

Please register online no later than **July 28, 2025**.

www.gdch.de/ICCCM2025

GESELLSCHAFT DEUTSCHER CHEMIKER e.V.

Event Team/ICCCM 2025

P.O.Box 90 04 40
D-60444 Frankfurt am Main
+49 69 7917-357
tg@gdch.de
www.gdch.de

All tickets and congress papers will be handed to the participants upon check-in at the registration desk.

The book of abstracts will only be available as a digital version. Participants are requested to wear their congress badges at all times for identification and admittance to the conference rooms.

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INFORMATION FOR AUTHORS**Lectures**

For your presentation we provide a PC (windows) and a data beamer.

Poster

Last-Minute-Posters can still be submitted online until **July 31, 2025**:

www.gdch.de/ICCCM2025

The poster session will take place in the foyer of the Conference Venue and will be presented during all the time of the conference.

The best posters will be awarded by Deutsche Bauchemie e.V..

Poster format: Portrait A0 (height: 118.9 cm, width: 84.1 cm)

▶ PARTICIPATION FEES^{*)}

GDCh-member and member of EuChemS-member societies	€ 350,-
Member, unemployed or retired	€ 190,-
Non-member	€ 400,-
Student ** (GDCh-member and member of EuChemS-member societies)	€ 80,-
Student** Non-member	€ 100,-
Gold member (with over 50 years of GDCh membership)	free of charge

*) The participation fees are not liable to value added tax (tax exemption additional § 4 Nr. 22a UStG.)

**) valid Student required

▶ CANCELLATION

Written cancellations received on or before **July 28, 2025** will be refunded less a 25,- Euro administration fee. After that date the full amount of the invoice has to be paid. Requests for refund will not be accepted; however, registration may be transferred to another member of your organisation. In this case, please send a note to GDCh, Event Team.

If the meeting is cancelled for whatever reason, fees paid will be refunded. Further recourse is excluded.

▶ BEVERAGES

Coffee, tea and soft drinks will be provided for free during the breaks.

▶ LUNCH

A small lunch will be provided on Tuesday and Wednesday.

▶ ACCOMMODATION

We strongly recommend that you book your stay immediately! Due to the IAA in Munich, the booking situation will be very limited.

We have requested call-off quotas (Abrufkontingente) from various hotels.

Please use the reference **"ICCCM 2025"** when booking with the following hotels:

B&B HOTEL München-Garching

Tel: +49 089 / 32709520

muenchen-garching@hotelbb.com

Arrival: September 8, 2025

Departure: September 11, 2025

Single room € 89 per night and room plus € 6,- Grab&Go breakfast per person/night (no buffet)

available (subject to availability) until August 8, 2025

Motel One München-Garching

muenchen-garching@motel-one.com

or directly to Ms Dilek Demirkesen

Arrival: September 8, 2025

Departure: September 11, 2025

€ 110 - € 176 per night and room plus € 17,90 breakfast per person/night

available (subject to availability) until June 16, 2025

Dorint Hotel München - Garching

+49 89 360380-0, reservierung.garching@dorint.com

Arrival: September 7, 2025

Departure: September 10, 2025

Single room € 189 per night and room (breakfast included)

available (subject to availability) until August 8, 2025

Hotel König Ludwig II.

hotel@hkl.de

Arrival: September 7, 2025

Departure: September 10, 2025

€ 412 - € 442 **per stay** incl. breakfast

available (subject to availability) until August 31, 2025

SOULMADE

Arrival: September 8, 2025
 Departure: September 10, 2025
 Price per night/room/person
 € 167,- EUR incl. breakfast
 available (subject to availability) until July 31, 2025
 no cash payments on site
 If you are interested in the SOULMADE please contact GDCh,
 c.kilb@gdch.de.

ibis Hotel München Parkstadt Schwabing

Arrival: September 7, 2025
 Departure: September 10, 2025
 € 85 - € 160 per night and room incl. € 15 breakfast per night
 available (subject to availability) until August 11, 2025
 If you are interested in the ibis Hotel please send the filled out
 form to the hotel via email: h5239-re@accor.com

Flemings Hotel München-Schwabing

Arrival: September 7, 2025
 Departure: September 10, 2025
 € 99 - € 159 per night and room incl. breakfast
 available (subject to availability) until July 7, 2025
 use **this link** for your reservation

PLAZA Premium München

Arrival: September 8, 2025
 Departure: September 10, 2025
 € 134 - € 144 per night and room incl. breakfast
 available (subject to availability) until July 7, 2025

Booking parties are responsible for all matters relating to
 reservations and payment for overnight stays. All information is
 provided without guarantee.

INFORMATION BEFORE AND AFTER THE CONFERENCE

GESELLSCHAFT DEUTSCHER CHEMIKER e.V.
 Caroline Kilb - Event Team
 P. O. Box 90 04 40
 60444 Frankfurt am Main

Varrentrappstr. 40-42
 60486 Frankfurt am Main

+49 69 7917-357
 c.kilb@gdch.de

**INFORMATION AND REGISTRATION
DURING THE CONFERENCE**

The conference office will be located in the foyer of the venue.

Opening hours:

Monday, September 8, 2025	8.00 - 16.00 hrs
Tuesday, September 9, 2025	8.00 - 16.00 hrs
Wednesday, September 10, 2025	8.00 - 10.00 hrs

DEADLINES

July 31, 2025	Last-Minute-Poster
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Technische Universität München Hochschul- und Forschungszentrum Garching

- 5100 Physik
5101 Physik I
5103 Betriebsgebäude II
5107 Physik II
5111 Siedlungswasserversorgung
5112 Walter Schottky Institut
5115 Zentrum für Nanotechnologie und Nanomaterialien
5117 Physik
5126 Centre for Advanced Laser Applications
5128 Zentrum für QuantumEngineering
- 5200 FRM II Forschungsneutronenquelle Heinz Maier-Leibnitz
5203 Bürogebäude (GRS-Altbau)
5204 Umformtechnik und Gießereiwesen
5212 Radiochemie München
5219 Verwaltung der TUM

- 5301 Institute for Advanced Study
5302 Centrum Baustoffe und Materialprüfung
5304 Mensa/Campus Cneipe C²
5305 Naturwissenschaftliche Didaktik und Bauchemie
- 5400 Chemie
5409 Entseignungszentrum
5410 Catalysis Research Center
5413 Bayerisches NMR-Zentrum
5414 Zentrum für Energie und Information
5415 Center for Functional Protein Assemblies
5416 Interimshörsäle II
5433 Entrepreneurship Center
- 5500 Maschinenwesen
5514 Kinderkrippe Sonnenkäufer
5530 Exzellenzzentrum
5531 Ingeborg Ortner-Kinderhaus
5532 StudiUM

- 5600 Mathematik und Informatik
5620 Interimshörsäle I
- 5700 Munich Institute of Biomedical Engineering
5901 Elektro- und Informationstechnik
- 5932 Siemens Technology Center Garching
5933 SAP SE
- 6100 Gebäudemanagement
6200 Werkfeuerwehr
7894 Newton
7895 Pascal
7896 Prandtl
7897 Curie
7898 Hertz
7910 Oskar-von-Miller-Turm
8120 Galileo

Zeichenerklärung

- Bibliothek
- Cafeteria/Imbiss
- Einkaufen
- Hotel
- Hörsaal
- Essen
- Radweg
- umzäuntes Gebiet
- im Bau befindliche Gebäude
- Bushaltestelle
- Parkplatz/Parkhaus
- U-Bahn
- Campusmitte
- Gebäudeeingang

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