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Advances in Cement Research

Editorial

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Calcium sulfoaluminate (CSA) cements receive increasing interest as environmentally friendly alternatives to Portland cements and for their technical properties (e.g. fast setting, high-early strength and shrinkage-compensation).

The papers in the themed issue were presented at the International Workshop on "Calcium Sulfoaluminate Cements" at the Sapienza University of Rome, October 2nd-4th 2023 organized by A. Telesca, M. Marroccoli, F. Winnefeld, B. Lothenbach, which brought together about 100 participants. The issue contains original research papers on CSA cements, belite ye'elimite-ferrite cements, alite-CSA cements and related materials invited by the Organizing Committee.

Yio et al. examine the feasibility of employing London clay (an abundant marine deposit in the London basin area) as alumina source for the production of viable BYF cements. *Telesca et al*. shows how waste materials can be incorporated in BC$A clinkers. *Kothari and Garg* utilize high-resolution, large area Raman imaging combined with XRD analysis for the identification of the phases in CSA systems. CSA cements are often used in blends with Portland cement, and *Jakob et al*. show that setting on demand can be achieved with a two-component approach in a ternary CSA–OPC–C$(calcium sulfate) system. The gaseous SO_2 atmosphere technology, in the presence of borax and potassium carbonate as doping agents, can be employed for the preservation of α' -C_2S in BYF clinkers, and *Abdalla et al*. report on the synthesis, phase composition, morphology, and hydration kinetics of such doped BYF clinkers produced on the lab-scale. Testing procedures for construction materials based on CSA cements may differ from those for materials based on Portland cements which is assessed by *Ambrose et al*. in their paper on standard test procedures applied to calcium sulfoaluminate based cements. The durability properties of ternary systems composed by CSA cements, OPC and various SCMs are investigated by *Canonico et al*.

Significant advances in the understanding and use of CSA cements have been made in the last years. As editors, it has been a pleasure to coordinate this themed issue, and we thank the referees for their timeous action and the contributors for their rapid and comprehensive response.