

## **Woh Hup Distinguished Lecture**

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## LC3: A Breakthrough technology to reduce CO2 from cement based materials

Mon, 10 May 2021 16:00 to 17:30 SGT



Speaker
Professor Scrivener, Karen L.

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Biography: **Professor Scrivener** obtained her PhD at Imperial College in 1984. She worked for Lafarge in France for 6 years, before being appointed Professor and Head of the Laboratory of Construction Materials, at EPFL, Switzerland in 2001. Her research focusses on the understanding the chemistry and microstructure of cement-based materials and improving their sustainability. In 2003, she founded the research network Nanocem bringing together the leading Industrial companies (Cement and admixtures) with European academic institute to do research on Cementitious Materials. She was made a fellow of the UK Royal Academy of Engineering in 2014. In 2008, she came up with the idea for LC3 cement, which has the potential to cut CO2, emissions related to cement by more than 400 million tonnes a year.

Abstract: The cement industry contributes to ~8% of anthropogenic CO<sub>2</sub> emission. The use of supplementary cementitious materials (SCMs) has a huge potential to reduce carbon emissions and virgin resource consumption. There is, however, increasing obstacles for this strategy in many regions due to the limited availability of SCM. LC3 is an innovative blended Portland cement that includes addition of metakaolin (calcined kaolinite clay) and limestone. The major innovation in LC3 is to combine the use of abundantly available low-grade kaolinite clay with a further 15% of limestone, which together have a synergetic effect and reach a similar performance as OPC - CEM I. This lecture will update the state-of-the-art of research and industrialization of LC3 cement globally.

Host by: Professor Richard Liew PDU points: (pending)





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