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Editorial

Commemorative issue: Harry Francis West Taylor (1923–2002)

This issue of *Cement and Concrete Research* is dedicated to H.F.W. (Hal) Taylor, who died at the end of 2002. For many years Hal was the leading light of cement chemistry. He was one of the founding editorial board members of this journal and a major contributor over many years. Hal's career and his many significant contributions to the field have already been described in the obituary, which appeared in *Cement and Concrete Research* 33 (5) (2003) 619–620 and in *IUCr Newsletter* 11 (4) (2003) 23.

In this special issue we bring together examples of current research by friends and colleagues of Hal mainly in areas in which he himself made major contributions. Everyone who had the privilege of working with Hal was struck by his tremendous generosity as a collaborator and by his unflagging enthusiasm—it was never too early or too late in the day for discussion with Hal about cement chemistry!

He came to the field of cement chemistry through his interest in the crystallography of silicate minerals. He contributed several early studies on the structures of crystalline calcium silicate hydrates, both naturally occurring and hydrothermally synthesized. He made many notable contributions to our thinking on C-S-H (the major hydrate phase in Portland cement pastes and concretes). In this issue, the papers of Chen et al., Nonat and Richardson on C-S-H, and of Bonaccorsi on the jennite, a crystalline calcium silicate hydrate, continue these lines of research.

Hal was also interested in and made extensive studies of hydrothermal reactions. This area is represented by the paper of Hong and Glasser, which summarizes phase relations in the $CaO–SiO_2–H_2O$ system up to 200 °C. Luke provided recent studies on pozzolanic-stabilized calcium silicate hydrate at 180 °C.

In addition to calcium silicate phases, Hal also studied the calcium aluminate hydrates—the structure for ettringite he published in 1970 with Alice Moore has been refined over the years, but is still the benchmark. Much later he made major contributions to understanding "delayed ettringite formation," a phenomenon that occurs in materials subject to elevated temperatures during curing. In this issue, the papers by Macphee and Barnet, Collet et al., Sahu and Thaulow, and Scherer relate to these areas in various ways. He was one of the first to identify hydrotalcite in blended (slag) cement pastes; continuing work is represented in this issue by Raki et al.

Hal was also concerned about environmental issues and with possible ways by which the environmental impact of cement and concrete could be reduced. Many papers in this issue deal with subjects related to cement durability and resistance to aggressive chemical reactions; and the article by Gartner makes an insightful study of the options available for producing cement with lower CO_2 emission in the future.

Here we have mentioned only a few papers from the varied assemblage included in this special issue, the coverage of which reaches across the field of cement and concrete research today. We hope it provides a fitting testimony to a much missed colleague.

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