

Seminar Series

Sponsored by
School of Materials Science and Engineering
Thursday, November 29, 2007
5:00 PM – Olin Hall – Room 200

Historical Overview and Current Issues with the Use of Alkoxysilanes for the Consolidation of Stone

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Abstract:

Alkoxysilanes have a long history in the consolidation of stone. Ethyl silicate was suggested already in 1861 to strengthen the deteriorated stone of the House of Parliament in London. This was a mere 15 years after it was first synthesized in 1846. Given this long history, it may be surprising that optimal formulations and conditions of use are still being explored by both scientists and practitioners. This presentation will trace the interesting history of alkoxysilanes as stone consolidants, discuss their fundamental properties that have made them attractive as consolidants, and finally, those properties that have made their use problematic.

Bio:

George Wheeler is the Director of Conservation in the Historic Preservation Program at Columbia University and Research Scientist at the Metropolitan Museum of Art. He is a leading expert in stone conservation and has published extensively in this area including his recent book, *Alkoxysilanes and the consolidation of stone*, published by the J.P. Getty Trust. He received his undergraduate degree in art history and physics from Muhlenberg College, a masters degree in art history from the City University of New York, a graduate certificate in art conservation from New York University, and a Ph.D. in chemistry also from NYU. He is a Fellow of the American Academy in Rome, the American Institute for Conservation, and the International Institute for Conservation.