Supplementary material

Distribution of carbon nanotubes in fresh ordinary Portland cement pastes: understanding from a two-phase perspective

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Calculation of specific extinction coefficient

To determine ε, the suspension with C_t = 0.0026wt% and surfactant concentration was prepared and diluted with factors of 2, 3, 4, 5. These suspensions were subjected to ultrasonication until their ABS reaches the maximum. With such low C_t, sufficient surfactant and ultrasonication, the CNTs in these suspensions are regarded as fully dispersed. To obtain ε in the unit of ml mg-1cm-1, the measured ABS was then plotted against CNT concentration, c (mg/ml), in Figure S1. The data was fitted with a function of ABS = ε l c, where l = 1 cm is the path length of the UV cuvette. ε is found to be 50 ml mg-1cm-1 as shown in Figure S1.
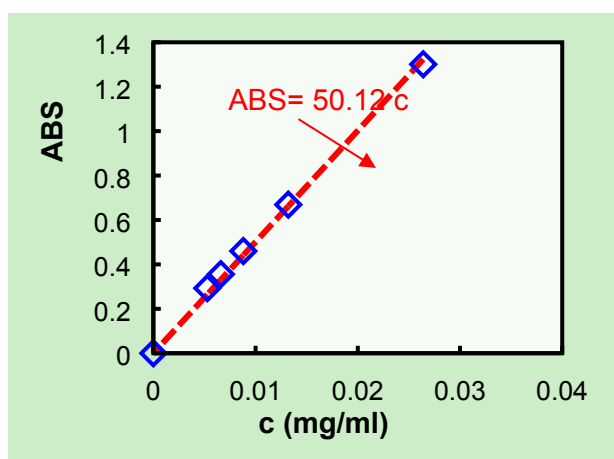

Figure S1, ABS vs CNT concentration (c) and the fitted linear relationship (dashline).