

TRANSPORTATION RESEARCH RECORD

Journal of the Transportation Research Board, No. 2141

Contents

Foreword	vii
Small Changes Can Make a Great Difference Juan J. Gaitero, Igor Campillo, Paramita Mondal, and Surendra P. Shah	1
Comparative Study of the Effects of Microsilica and Nanosilica in Concrete Paramita Mondal, Surendra P. Shah, Laurence D. Marks, and Juan J. Gaitero	6
Performance of Cement Systems with Nano-SiO₂ Particles Produced by Using the Sol-Gel Method I. Flores, K. Sobolev, L. M. Torres-Martinez, E. L. Cuellar, P. L. Valdez, and E. Zarazua	10
Influence of Nano-SiO₂ Addition on Microstructure and Mechanical Properties of Cement Mortars for Ferrocement P. Hosseini, A. Booshehri, and S. Farshchi	15
Nanostructure and Microstructure of Cement Concrete Incorporating Multicementitious Composites Mohammad Iqbal Khan	21
Homogenization Model Examining the Effect of Nanosilica on Concrete Strength and Stiffness Jung J. Kim, Tai Fan, and Mahmoud Reda Taha	28
Nanoindentation of Alkali-Activated Fly Ash Jiří Němeček, Vít Šmilauer, Lubomír Kopecký, and Jitka Němečková	36