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Synthesis and Characterization of Alumina/Titania Nanofibers R.K. FEAVER, D.A. PERHAY, John Carroll University, A.F. LOTUS, E.T. BEN-DER, G.G. CHASE, R.D. RAMSIER, The University of Akron, N. STOJILOVIC, John Carroll University — Both alumina and titania nanofibers are promising materials for use in high-temperature applications. In an attempt to access the properties of these two materials systems simultaneously we synthesize alumina/titania nanofibers by electrospinning. We characterize their properties using different analytical methods (scanning electron microscopy, thermogravimetric analysis, X-ray diffraction, and infrared, and X-ray photoelectron spectroscopies). We compare the properties of these mixed fibers with pure alumina and pure titania nanofibers and investigate the effects of annealing.

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