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Characterization of Electrospun Titania Nanofibers NICOLE SCHAFER, NICHOLAS BJELAC, NENAD STOJILOVIC, Physics Department, John Carroll University, SOO JIN PARK, GEORGE CHASE, Department of Chemical and Biomolecular Engineering, The University of Akron — Titania (TiO₂) nanofibers formed by electrospinning are characterized by a variety of techniques. Electrospinning is a simple, versatile, and inexpensive method for producing relatively long fibers whose diameters are typically on the order of several hundred nanometers. Titania is used in optical and electrical applications but is also photocatalytic and is suitable for use in high-temperature environments. In our experiments electrospun TiO₂ nanofibers are investigated using a range of techniques such as field-emission scanning electron microscopy (FESEM), atomic force microscopy (AFM), X-ray diffraction (XRD) and infrared (IR) spectroscopy.

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