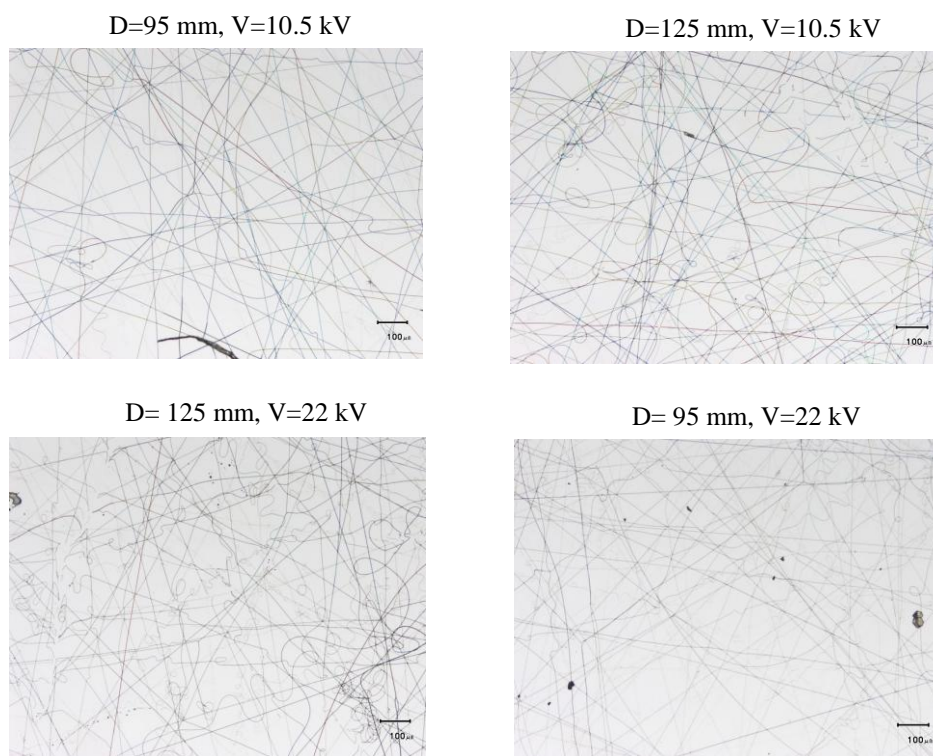


Supporting Information for:

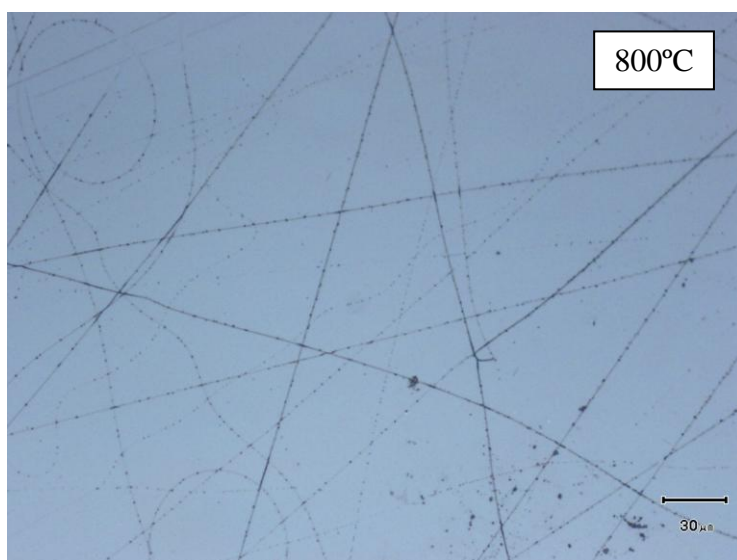
Epitaxial BaZrO₃ tracks by electrospinning of metalorganic fibers on single crystals

S1. Optical micrographs of as-spun fibers for different tip-to-collector distances (D) and applied voltages (V). Scale bar is 100 microns.



In general, finer fibers are obtained when applied voltage is increased. However, the effect of tip-to-collector distance is not so straightforward.

S2. Images of samples treated at 600 and 800°C obtained by optical microscopy.

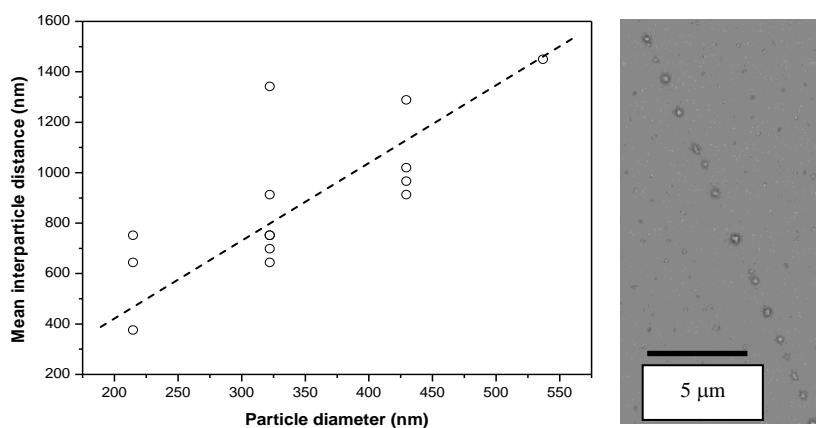


In the case of 800°C, particle tracks following the initial fiber axis are clearly observed.

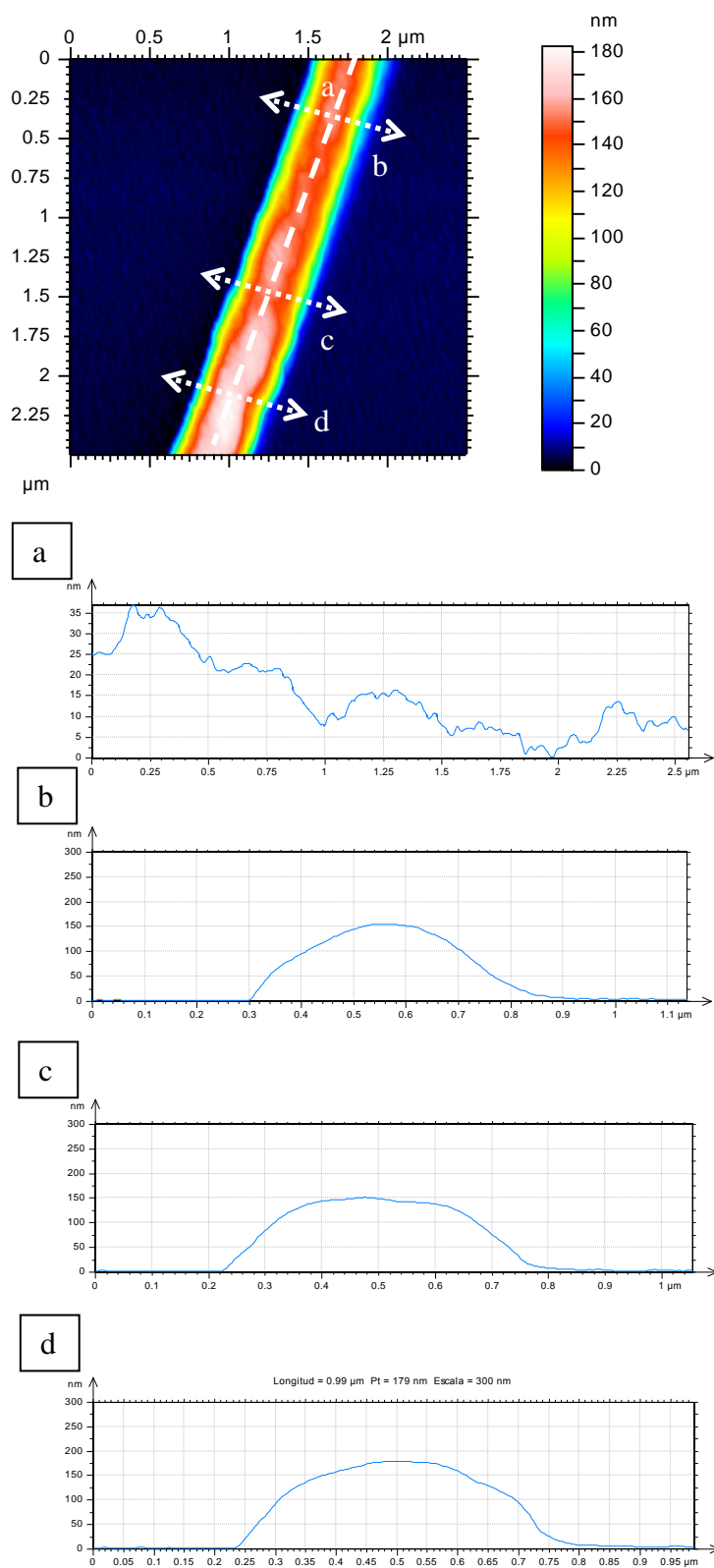
S3. Interparticle distance versus equivalent diameter

To ascertain the influence of the particle size in the distribution, we consider the interparticle spacing as the average distance to the two nearest neighbours and its dependence on the equivalent diameter, as determined from the SEM micrographs. This has been performed on a 15-particle straight track free from fiber intersections which could influence the particle size distribution. The resolution of the FESEM micrograph does not allow precise size measurement of the coalesced BZO particles. As a consequence, equivalent diameters have been taken in steps of 100 nm and the data grouped in each diameter class accordingly.

As the diameter increases, the interparticle spacing tends to become also larger in average. The large scattering in the data is attributed to the fact that the particle arrangement is not perfectly regular, as discussed above, and the volume can vary, as the depth profile of the particles cannot be determined from this image.



S4. Selected linear profiles in a AFM topographic analysis of a fiber at 600°C.



Fluctuations in the morphology of the fiber are observed both along and perpendicular to its axis, which might be responsible for the irregular oscillations of coarsened BZO crystals at 800°C.