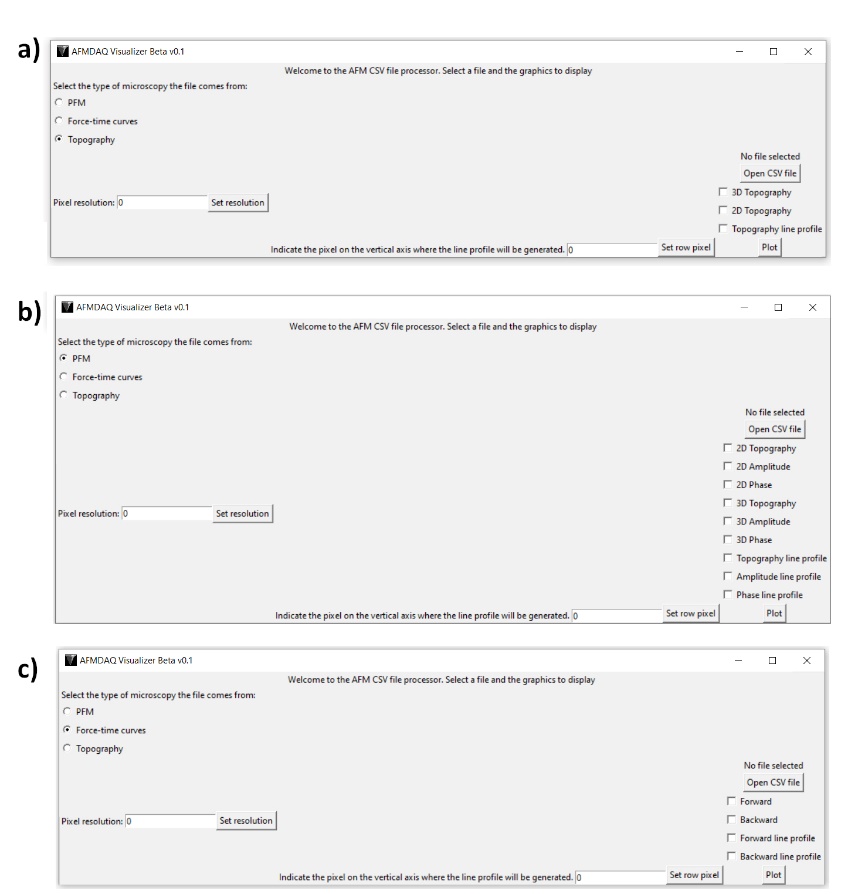
**AFMDAQ Visualizer: Software and guide to reconstruct and analyze images with raw external data acquisition from the atomic force microscopies**

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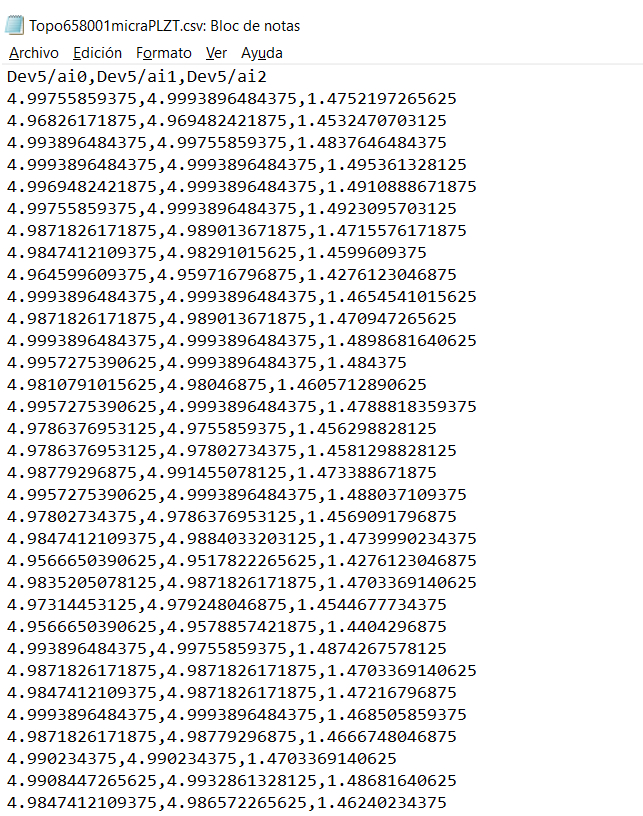
**Supporting information:**

The program AFMDAQ Visualizer contain the Topography, Piezoresponse force microscopy, and force-time curves options. For every option there are some images and curves that can be obtained as is shown in the figure S1.



**Figure S1**. AFMDAQ Visualizer GUI, a) options for topography, b) options for Piezoresponse force microscopy PFM, and c) options for Force-time curves.

Additionally, the AFMDAQ Acquisition and AFMDAQ Visualizer programs was used in the Bruker/Veeco/Digital Instruments Nanoscope IV Dimension 3100 AFM. This AFM was upgraded with a closed-loop x–y nanopositioning stage, nPoint, Inc. NPXY100. A signal access module (SAM) accessory was used for signal input/output to the AFM. Raw data of topography was obtained by using the NI USB-6356 DAQ. From this measurement a CSV file with 3 columns and 9606801 rows was obtained, first rows of this CVS file are shown in Figure S2.



**Figure S2**. Data obtained by using the AFMDAQ Acquisition software in the Bruker/Veeco/Digital Instruments Nanoscope IV Dimension 3100 AFM.

The 2D topography of 256 pixels x 256 pixels generated from the data observed in Figure S2 is showed in figure S3. The sample used is a PLZT thin film.



**Figure S3**. Topography of PLZT thin film, image reconstructed from the raw data obtained by using the AFMDAQ Acquisition software and process with the AFMDAQ Visualizer.