

## SUPPORTING INFORMATION

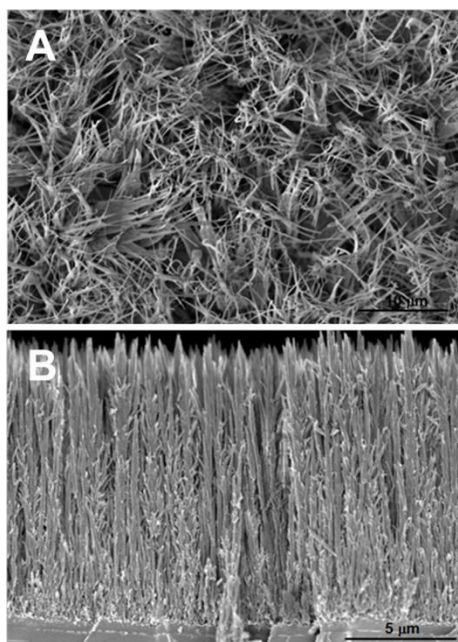
### **Polarized Raman Spectroscopy for Determining the Orientation of di-D-phenylalanine Molecules in a Nanotube**

Valentin Sereda<sup>1</sup>, Nicole M. Ralbovsky<sup>1</sup>, Milana C. Vasudev<sup>2</sup>, Rajesh R. Naik<sup>3</sup>, and Igor K. Lednev<sup>1\*</sup>

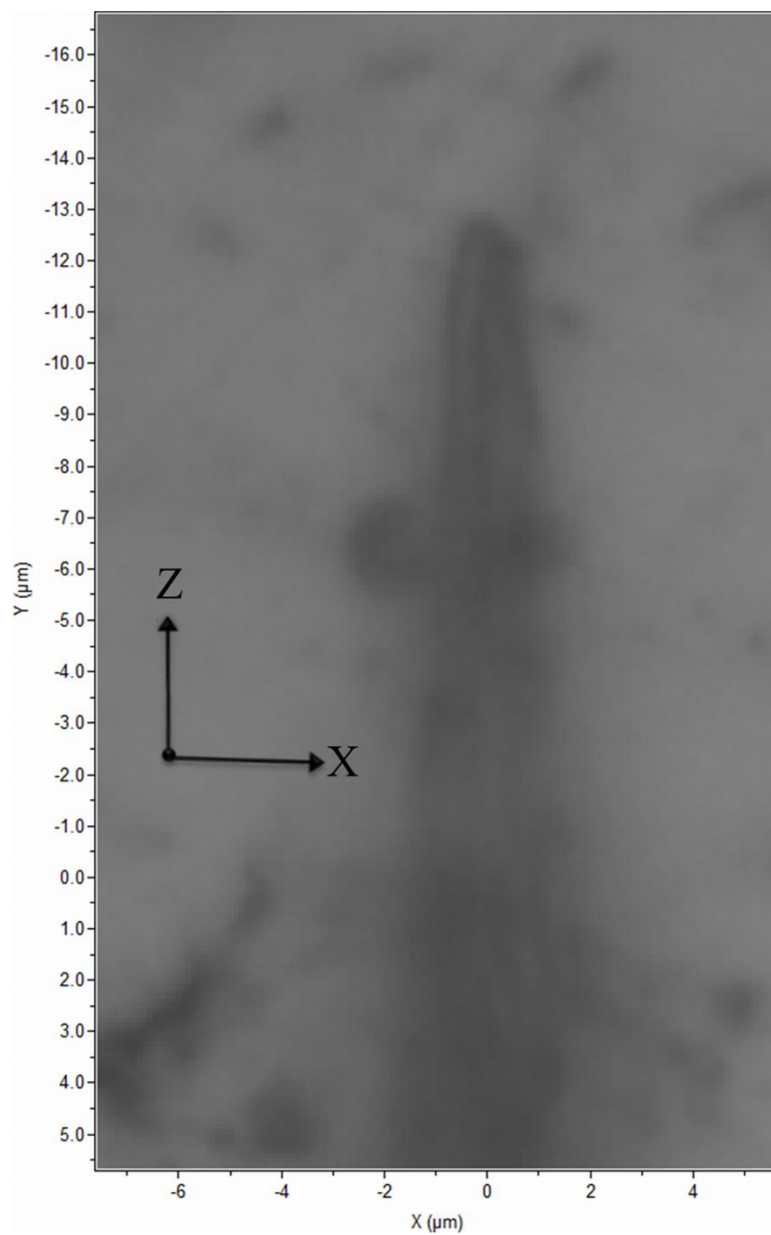
<sup>1</sup>*Department of Chemistry, University at Albany, SUNY, 1400 Washington Avenue, Albany, NY 12222, United States*

<sup>2</sup>*Department of Bioengineering, University of Massachusetts Dartmouth, 285 Old Westport Road, Dartmouth MA 02747, United States*

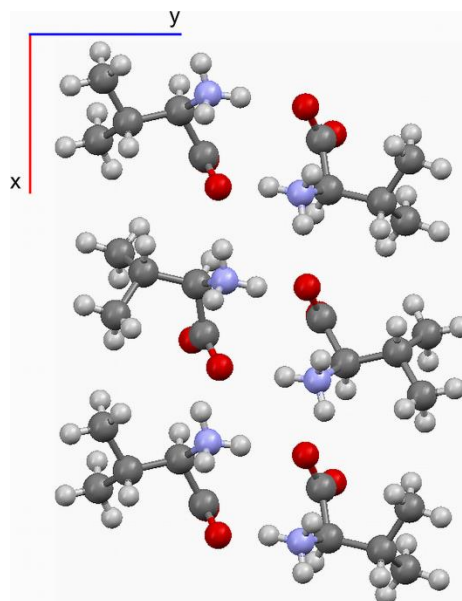
<sup>3</sup>*Soft Matter Materials Branch, Materials and Manufacturing Directorate, Wright-Patterson Air Force Base, Dayton, Ohio 45433, United States*



**Figure S1.** SEM images of vertical arrays of di-D-phenylalanine nanotubes obtained using under pulsed conditions with RF power (30 W), frequency (100 Hz), and duty cycle (25%). (A). Top view of nanotubes; (B). Cross-sectional views.



**Figure S2.** Bright-field microscope image of a bundle of nanotubes. The assigned coordinate system for the orientation of laser polarization relative to the sample is shown schematically.



**Figure S3.** The structure of the L-valine crystal shown in the projection along the z-axis. The small x, and y letters denote the crystallographic directions.