Supplementary Information

Easily Deposited ZnO Nanorods on Siloxene Nanosheets: Investigation of Morphological Dielectric, Ferroelectric, and Energy Storage Properties.

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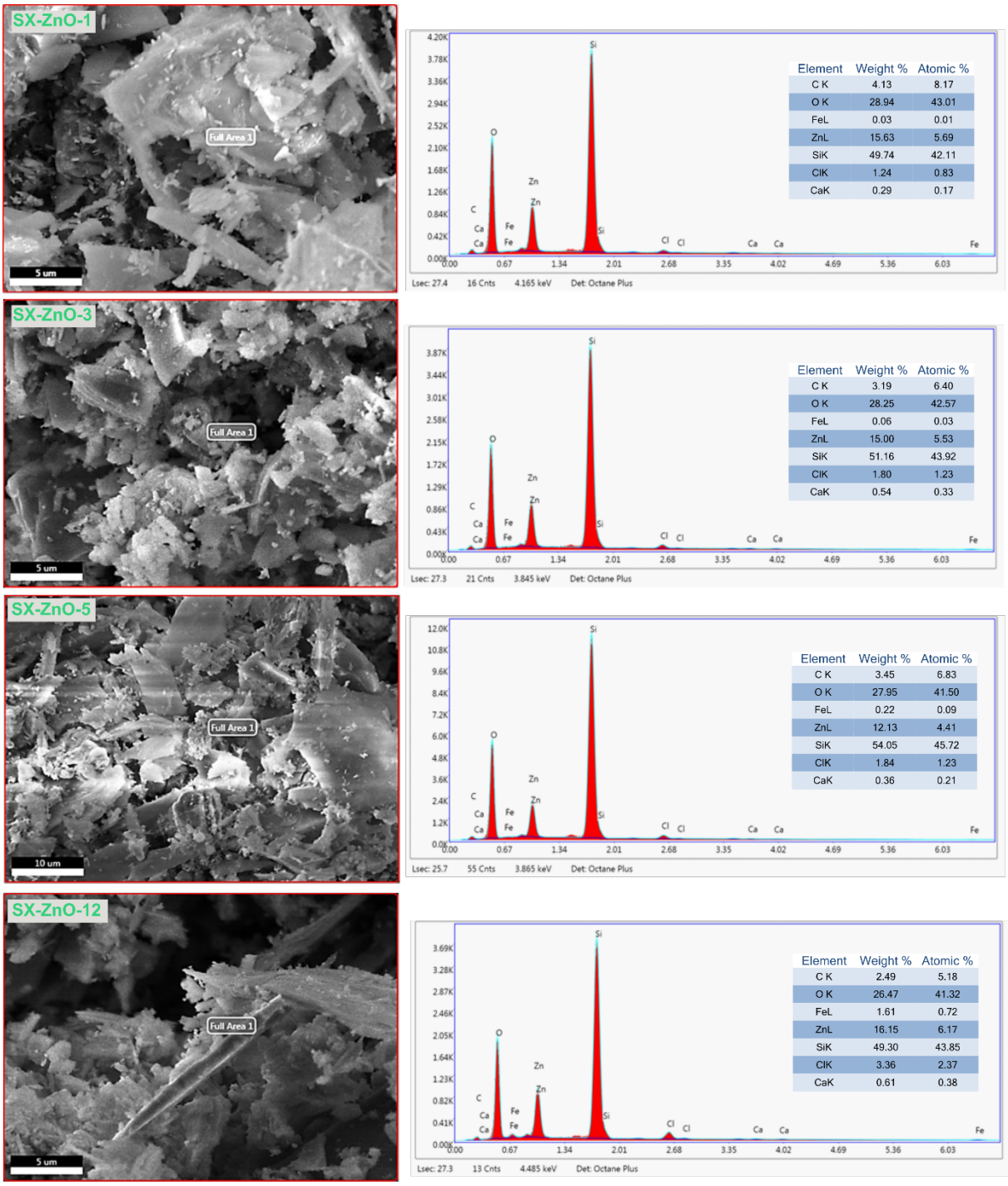

Figure S1: SEM images and EDS results of SX-ZnO nanocomposites.

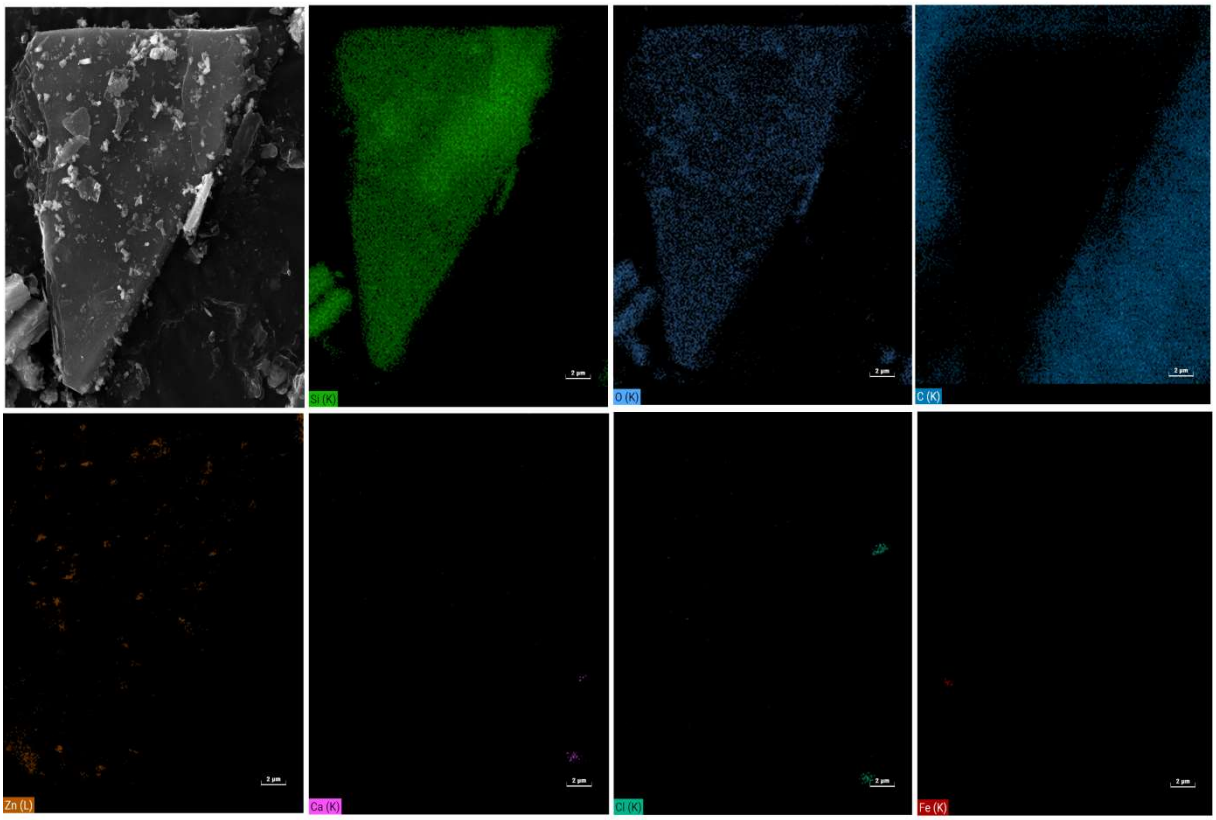

Figure S2: Elemental mapping analysis of SX-ZnO-3.

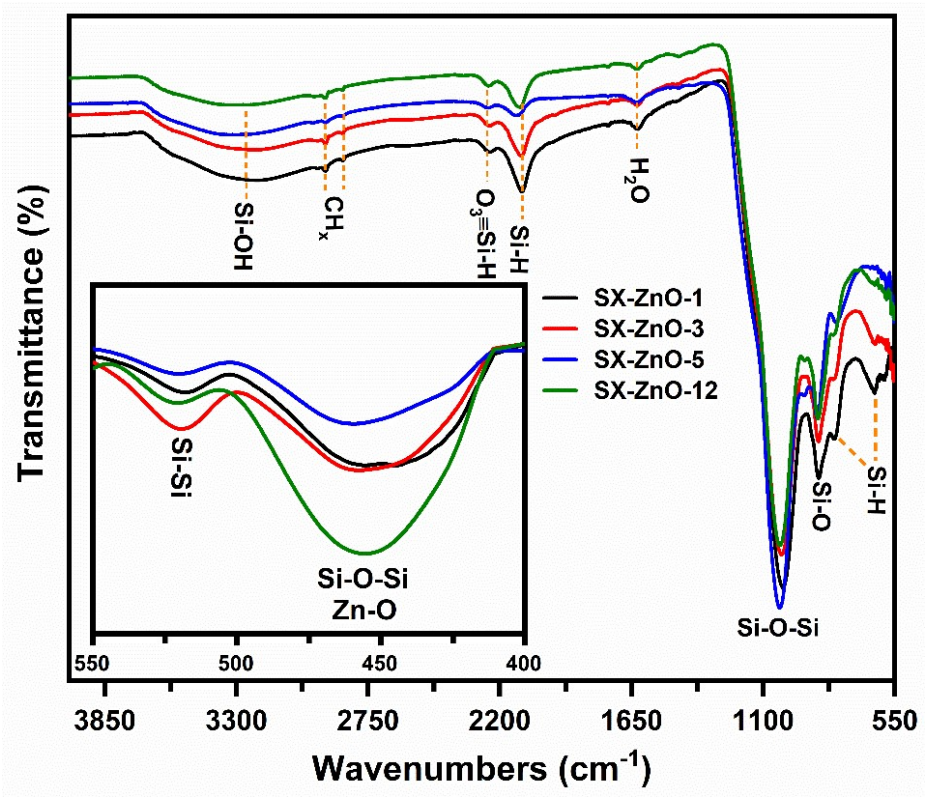

Figure S3: FTIR analysis of the samples.

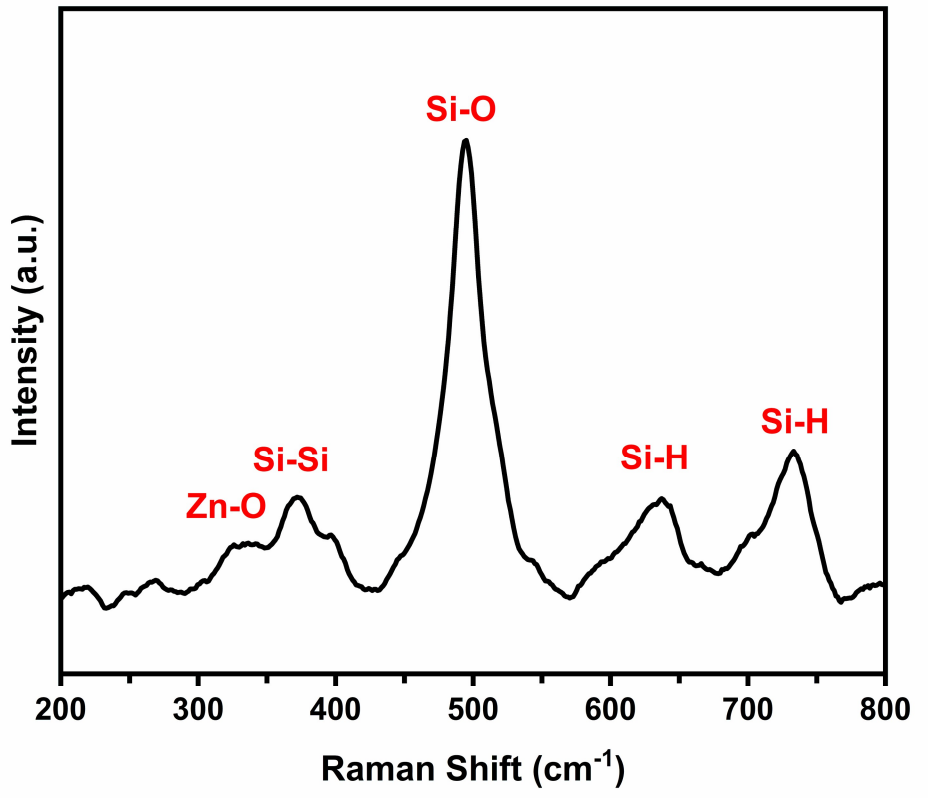

Figure S4: Raman spectrum of SX-ZnO-3.

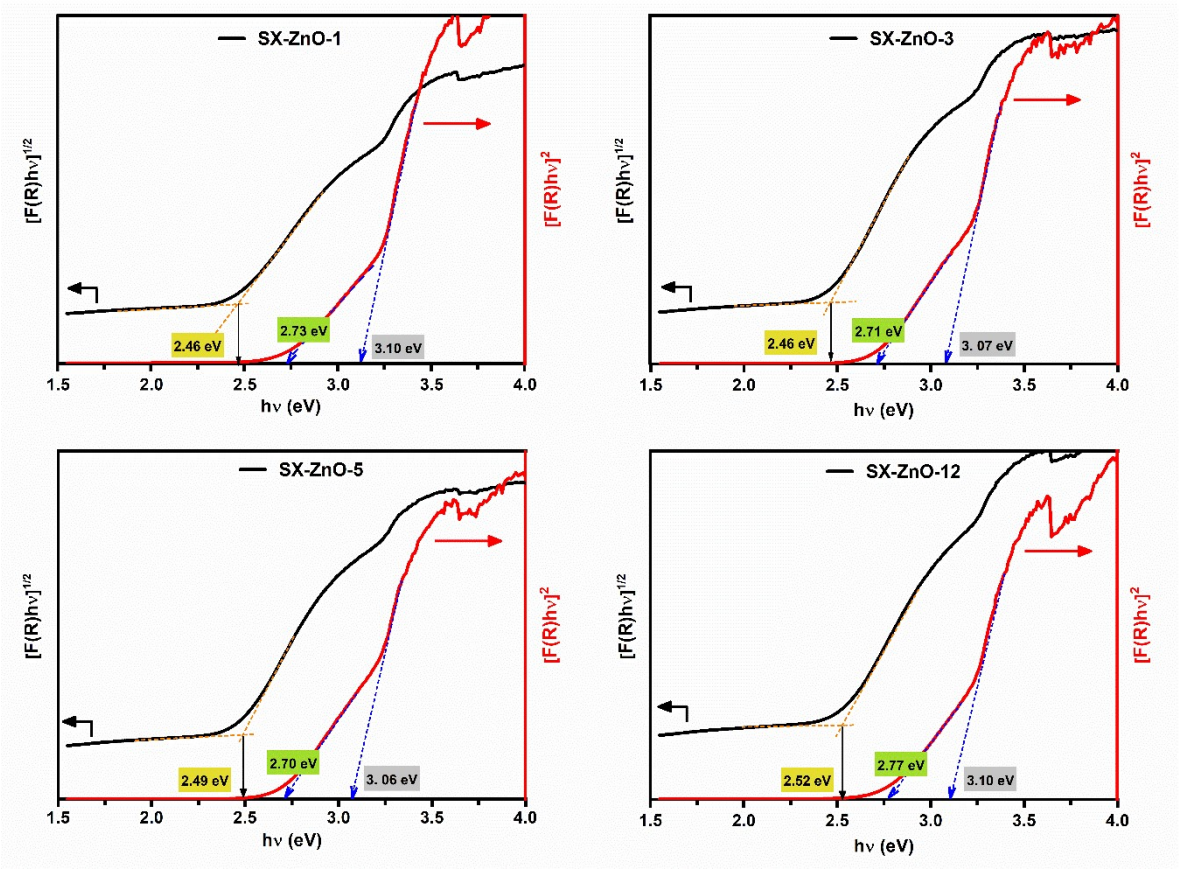

Figure S5: Optical band gaps of SX-ZnO composites.

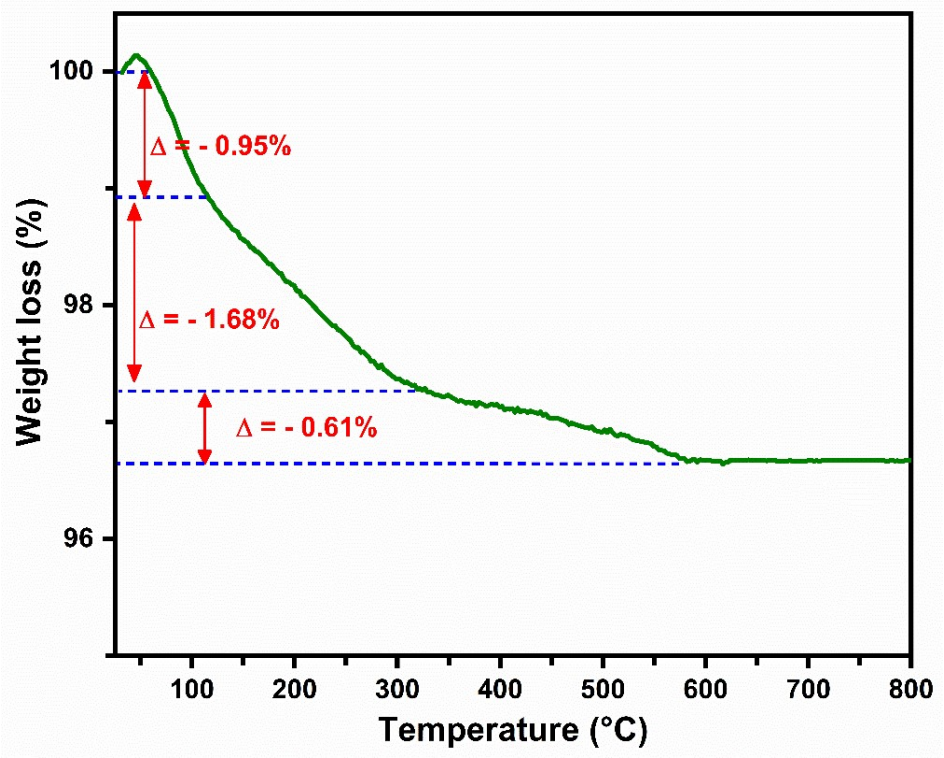

Figure S6: TGA curve of SX-ZnO-3.

S7: Determination of energy density properties

The stored energy density of the pellets are calculated from the following equation:

$$W_s = \int_{P_r}^{P_{max}} EdP \qquad (1)$$

where P_{max} is the maximum polarization and P_r is the remnant polarization from the P-E hysteresis loop.

The energy storage efficiency (η) is determined by the relation:

$$\eta = \frac{W_s}{W_{loss}+W_s} \qquad (2)$$

where W_{loss} represents the energy loss density which can be calculated from the integrated closed area during discharging process.