**Electronic Supplementary Information (ESI)** 

## Electroactive properties and piezo-tribo hybrid energy harvesting performances of PVDF-AlFeO<sub>3</sub> composites: Role of crystal symmetry and agglomeration of fillers

Abhishek Sasmal<sup>a,b</sup>, Sourav Maity<sup>a</sup>, A. Arockiarajan<sup>b,c</sup>, Shrabanee Sen<sup>\*a</sup>

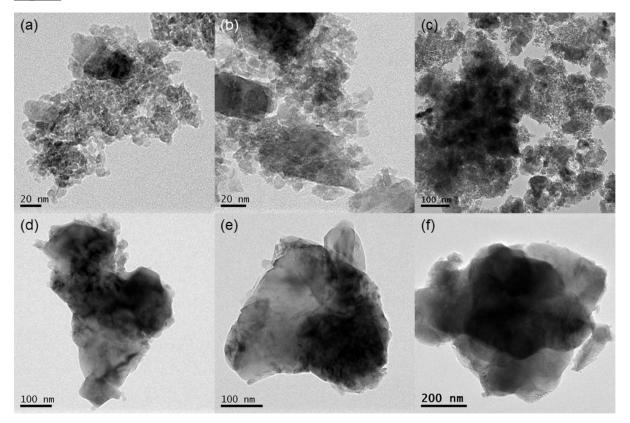
<sup>a</sup>Functional Materials and Devices Division, CSIR-Central Glass & Ceramic Research Institute, Kolkata – 700032, India

<sup>b</sup>Department of Applied Mechanics, Indian Institute of Technology Madras, Chennai – 600036, India

°Centre of Excellence in Ceramics Technologies for Futuristic Mobility, Indian Institute of Technology Madras (IIT Madras), Chennai, Tamil Nadu - 600036, India

\*E-mail ID: <a href="mailto:shrabanee@cgcri.res.in">shrabanee@cgcri.res.in</a>

<u>Fig. S1</u>



**Fig. S1.** Bright field TEM images of (a-c) AFRH and (d-f) AFOR particles taken at different portions of the TEM grid.



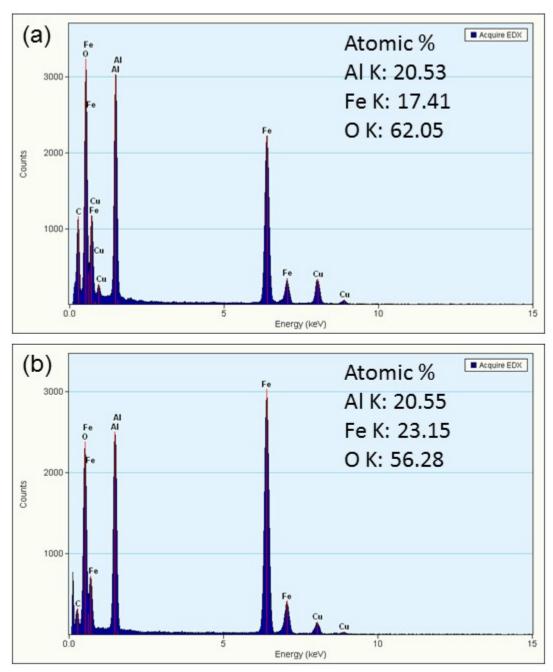


Fig. S2. EDX spectrum of (a) AFRH and (b) AFOR samples.

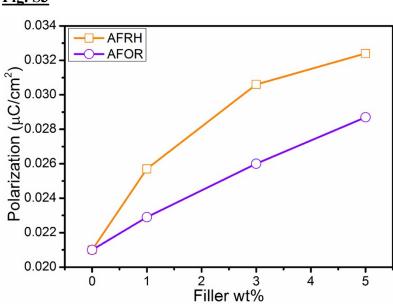


Fig. S3. Maximum polarization of all the composite films measured at  $\sim$ 25 kV/cm of an applied field.

<u>Fig. S4</u>

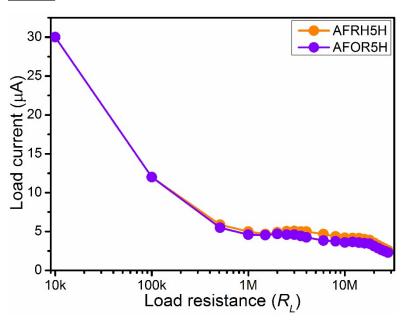


Fig. S4. Load resistance  $(R_L)$  dependent load current  $(I_L)$  from the AFRH5H and AFOR5H devices.

## <u>Fig. S3</u>