Supplementary Information

Piezoelectric Paper Energy Harvesters Based on Microwave-Assisted Grown ZnO Rods

Maria Morais [1], Tiago Silva [1], Andreia dos Santos [2], Margarida António [1], Jorge Martins [1], Cristina Gaspar [2], Elvira Fortunato [1], Rodrigo Martins [1], Luís Pereira [1,2], Pedro Barquinha [1] and Ana Rovisco [1,*]

[1] CENIMAT|i3N, Department of Materials Science, School of Science and Technology, NOVA University Lisbon and CEMOP/UNINOVA, 2829-516 Caparica, Portugal
[2] ALMASCIENCE—Investigação e Desenvolvimento em Celulose para Aplicações Inteligentes e Sustentáveis, Campus da Caparica, 2829-516 Caparica, Portugal
* Correspondence: a.rovisco@fct.unl.pt

The Supplementary Information includes images of films of zinc oxide (ZnO)-based composites with different polymers, namely carboxymethyl cellulose (CMC) and ethylcellulose (EC), produced via coating techniques on indium tin oxide-coated PET (PET/ITO) substrates as well as on Whatman and Navigator papers, together with the results of cyclability tests of ZnO@EC-based harvesters. Figure S1 presents images of Whatman and Navigator papers embedded with ZnO@CMC and ZnO@EC composites, along with films of these composites coated on PET/ITO electrodes. Figure S2 shows the output voltage of devices based on ZnO@EC composites embedded in Whatman and Navigator paper substrates over 5000 compression cycles at 30 N and 2 Hz (area = 5 cm^2).

S1. Images of the Navigator and Whatman paper substrates with ZnO and cellulose derivatives composites

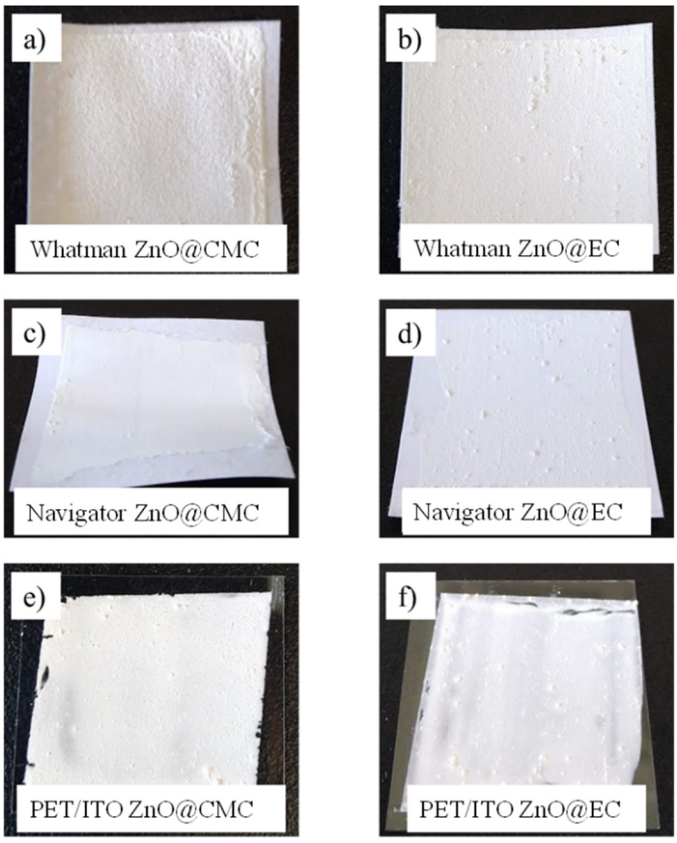

Figure S1. Images of the (2 × 2) cm^2 substrates with embedded composites explored to produce EHDs. Whatman paper embedded with (**a**) ZnO@CMC and (**b**) ZnO@EC. Navigator paper with embedded (**c**) ZnO@CMC and (**d**) ZnO@EC. PET/ITO substrate with (**e**) ZnO@CMC and (**f**) ZnO@EC.

S2. Stability Study: Cycling Measurements of the Whatman and Navigator ZnO@EC Based Nanogenerators

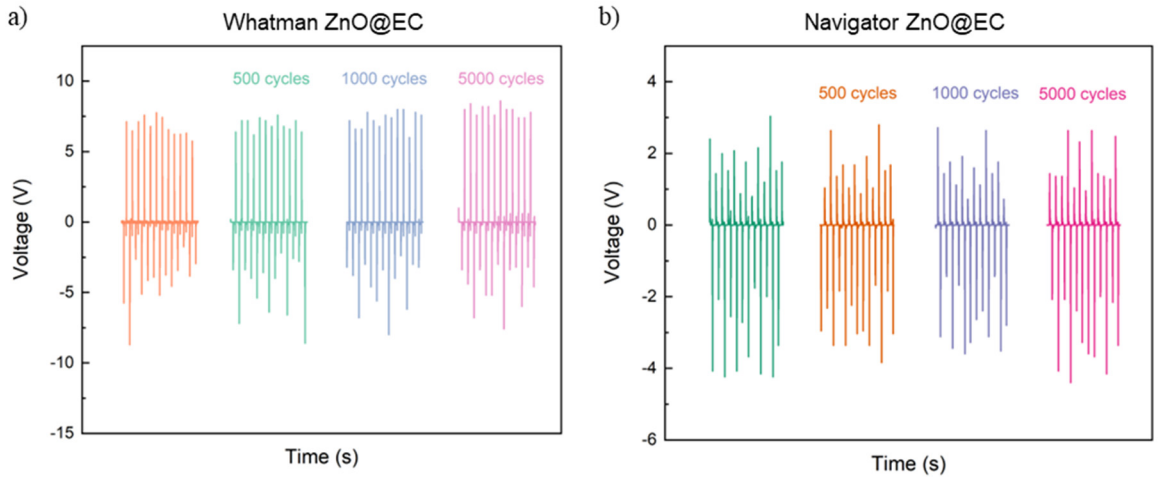

Figure S2. Output voltage of EHDs based on ZnO@EC composites embedded in (**a**) Whatman paper and (**b**) Navigator paper after 5000 compression cycles at 30 N and 2 Hz (area = 5 cm^2).