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Converting Biomechanical Energy into Electricity by Muscle Driven Nanogenerator

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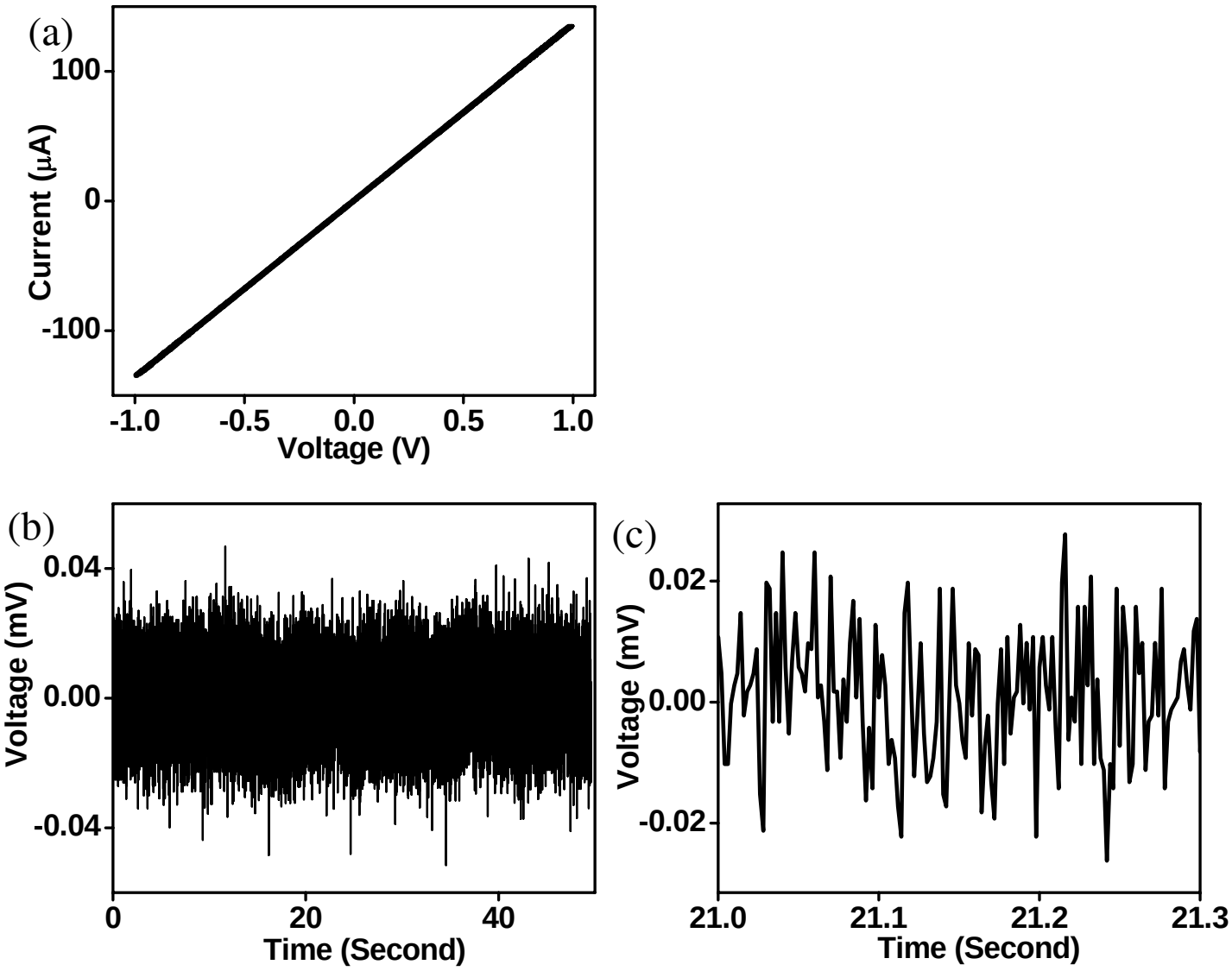

Figure S1 Performance of a SWG made using a carbon fiber instead of a ZnO wire. (a) A carbon fiber has the typical Ohmic I-V characteristic. (b) Output voltage of the SWG. (c) Enlarged curve in (b). No voltage was generated in response to any movement of the hamster.This study shows the piezoelectric property of the wire is required for SWG.

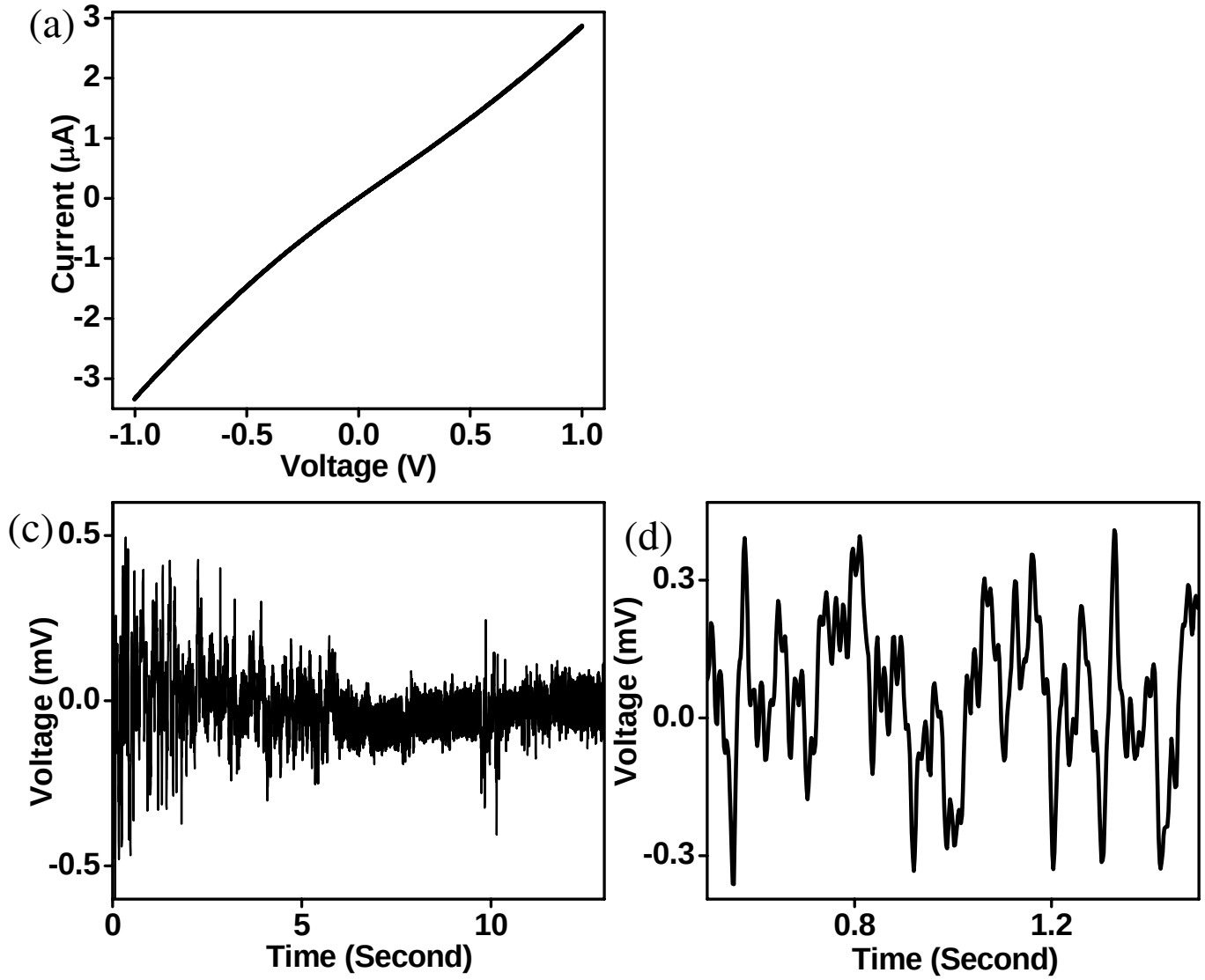

Figure S2. Performance of a SWG made using a Kevlar fiber coated with a polycrystalline ZnO film. (a) The I-V characteristic shows a quasi Ohmic behavior. (b) Output voltage of the SWG. (c) Enlarged curve in (b). No voltage was generated in response to any movement of the hamster.

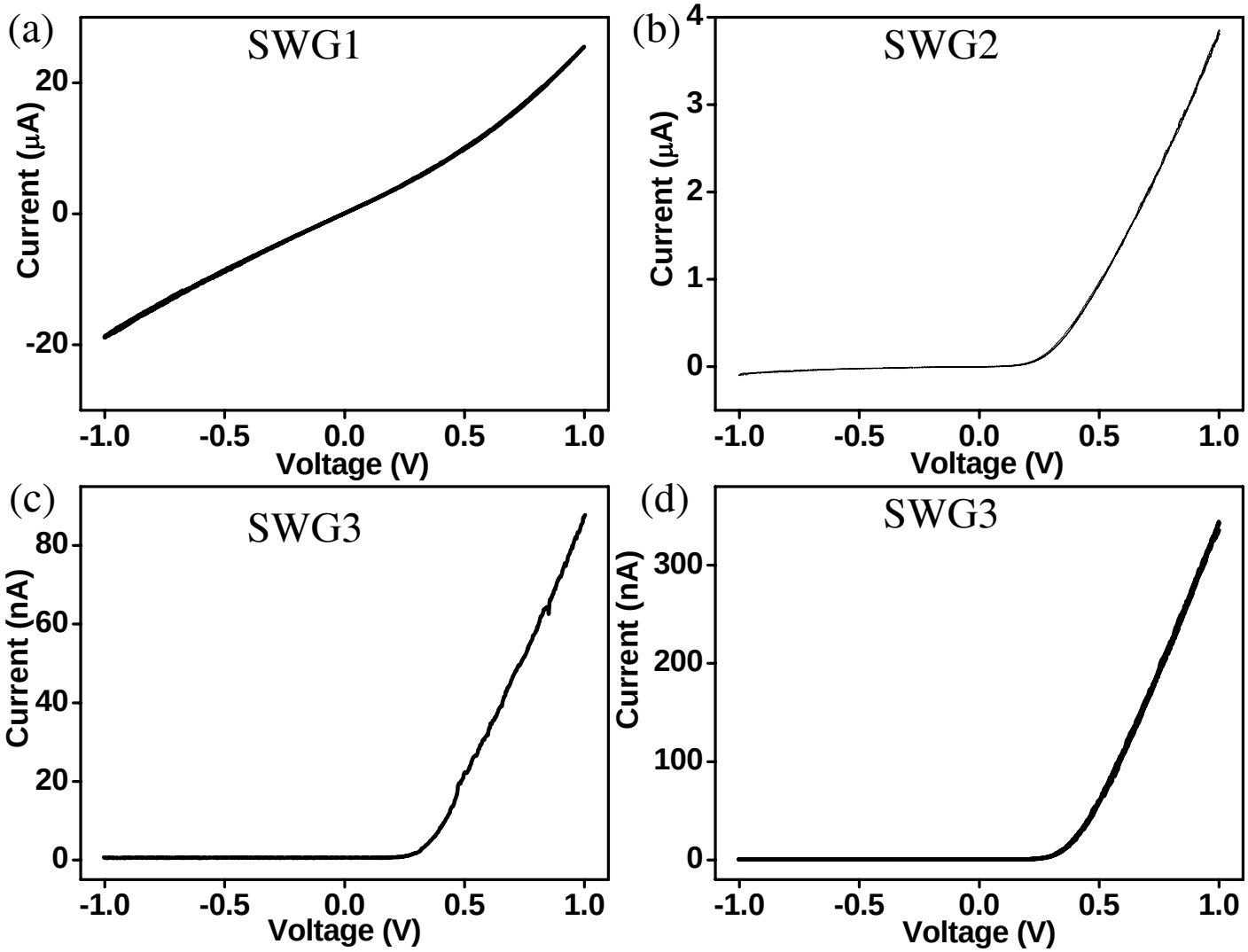

Figure S3 The I-V characteristics of the SWGs discussed in Figure 4. SWG1 shows Ohmic contact and does not effectively produce voltage power output.