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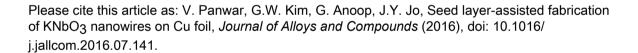
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ACCEPTED MANUSCRIPT

Seed layer-assisted fabrication of KNbO<sub>3</sub> nanowires on Cu foil

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**Abstract** 

We demonstrated the fabrication of a cost-effective nanogenerator based on ferroelectric

KNbO<sub>3</sub> nanowires grown on a seed layer/Cu foil via a hydrothermal process. We controlled the

concentration of both KOH and Nb<sub>2</sub>O<sub>5</sub> precursor solutions in order to manipulate the width and length

of the KNbO3 nanowires grown on the seed layer/Cu foil. We found that our KNbO3/Cu-based

nanogenerator can produce sensing voltages up to 100 mV under an applied force as low as 0.8 N.

Even at an extremely low force, our nanogenerator generates a sensing voltage, which can be used to

charge implantable devices inside human bodies.

Keywords: nanowires, KNbO<sub>3</sub>, copper foil, sensing voltage, nanogenerator

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