

Zinc Vanadate Phosphor Based Triboelectric Nanogenerator

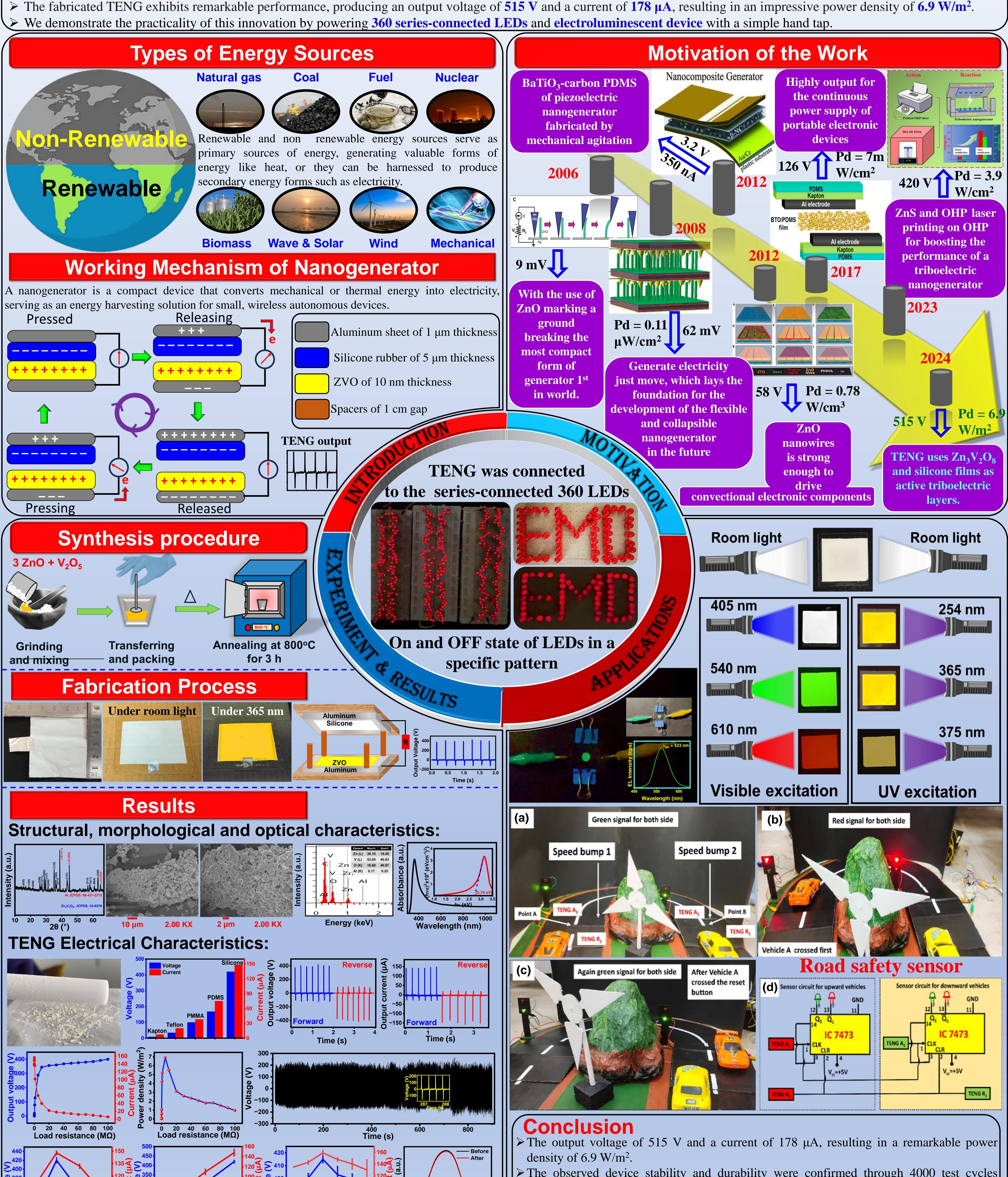
(A Novel Self-Powered Luminescent Device)
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HIGHLIGHTS

- \geq Zn₃V₂O₈ (ZVO) phosphor were successfully synthesized by a conventional solid-state approach for tribo-electric nanogenerator (TENG).
- > This work marks an important milestone in this journey by introducing phosphor material (ZVO), into TENG technology for the first time.



- The observed device stability and durability were confirmed through 4000 test cycles without any significant degradation.
- This groundbreaking research opens avenues for multifunctional applications and harnesses the potential of phosphor materials in energy harvesting and beyond, representing a significant milestone in TENG technology.

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Wavelength (nm)

0 5 10 15 20 25 Area of the device (cm²)

Frequency (Hz)

1.0

Spacing (cm)

1.5