

Tri-boelectric Nanogenerator (TENG) Technology

October 27, 2025 • vajiramandravi.com



About Tri-boelectric Nanogenerator (TENG) Technology:

- It is a **self-powered**, feasible solution to convert **mechanical energy** into **electricity**.
- The electricity will get stored in a device fixed in the soles and can be used to operate small appliances
- **Features:** It is equipped with a **global positioning system (GPS)** and **radio frequency identification (RFID)** technologies, these shoes can help determine the location of personnel in real-time.
- **Applications**
 - The TENG technology can be used to track the location of **senior citizens suffering from Alzheimer's**, school children and climbers and can help monitor the attendance and work of workers in factories
 - These shoes can also accurately analyse the **movements of sportspersons** to improve their performance.
 - For trekking and **mountaineering enthusiasts**, the shoes provide reliable tracking during expeditions with their self-powered GPS feature, ensuring safety and efficient navigation.

Q1: What is Radio frequency ?

It refers to the rate of oscillation of electromagnetic radio waves in the range of 3 kHz to 300 GHz, as well as the alternating currents carrying the radio signals. This is the frequency band that is used for communications transmission and broadcasting.

Source: IIT Indore develops shoes that generate electricity, track location in real time for Armed forces

Source: <https://vajiramandravi.com/current-affairs/tri-boelectric-nanogenerator-teng-technology/>

© Vajiram & Ravi. For personal use only.