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(57) Abstract :
The present invention relates to an effectiveness of a cantilever bimorph piezoelectric energy harvester for different sources of vibration. A thin film lead zirconate titanate (PZT), energy harvesting micro electro mechanical system (MEMS) generator has been developed for high demands in powering the wireless sensor networks. The work has typically focused on single member cantilevered structure with transverse tip displacement at a known frequency. Results obtained from theoretical and experimental calculations are compared for an open circuit voltage. The experimental result shows that the generator possesses a maximum open circuit voltage of 10.00 V and power output of 2.4 μW when excited at a resonant frequency of 60 Hz with an acceleration of 4.50 ms-2 on DC motor. The output voltage and power output of the generator has also been compared for selected vibration sources under different acceleration levels.

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