

## Acoustic energy harvesting using flexible panel and PVDF films: a preliminary study

### ABSTRACT

Acoustic energy harvesting from ambient noise utilizing flexural vibration of a flexible panel is investigated. A flexural vibration of a flexible panel is used to extract more energy from the ambient noise level where piezoelectric materials of PVDF films are attached at the plate edges. The energy harvesting can be obtained with a maximum output power of 120 pW at the sound pressure level of 97.3 dBA.

**Keyword:** Energy harvesting; Acoustic; Flexible panel; Piezoelectric