The Energy Harvesting Cube

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The research team of the Centre proposes a theoretical and experimental study to the harvesting field, which is concretized in an energy harvesting cube structure .The harvesting energy cube is a demonstrator to evidence the energy retrieve from the environment and can be a good didactic and educational procedure. The use of multiple renewable sources takes advantage of any environment, fact which makes our device usable anywhere. On the other hand, we are aware that our total electrical power isn't enough for powering big consumers (like smartphones, or computers), but, as the different technologies that we use, are going to evolve and to become more productive, our project will evolve too and will become useful for a bigger range of devices. Energy harvesting is the generation of electricity from the environment, which can be used to power electronic and electric devices. Different technologies can be employed depending on the energy source. For movement, mechanical harvesters can be used (which can work from electrostatic, piezoelectric and electromagnetic movement). Other energy sources include light, heat, electro-magnetic transmission, biological energy sources and more. Some versions are now even printed. Coupled with new forms of energy storage and lower power electronics, these energy harvesters can negate the need for small batteries in many applications enabling new markets, such as wireless sensors that last for decades or charging of consumer electronics devices.

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