

Answer on Question #51555, Physics, Solid State Physics

What are transducers? Explain the working principle of a piezoelectric transducer.

Answer:

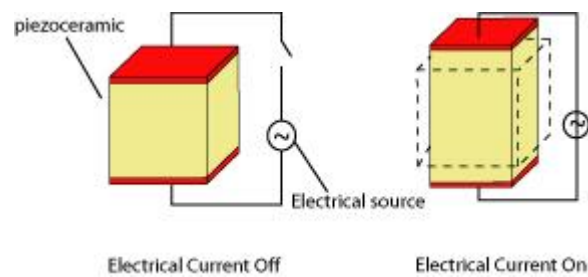


Fig.1

A piezoelectric transducer is a device that transforms one type of energy to another by taking advantage of the piezoelectric properties of certain crystals or other materials. When a piezoelectric material is subjected to stress or force, it generates an electrical potential or voltage proportional to the magnitude of the force. This makes this type of transducer ideal as a converter of mechanical energy or force into electric potential (see Fig.1).