Piezoelectric Polymer

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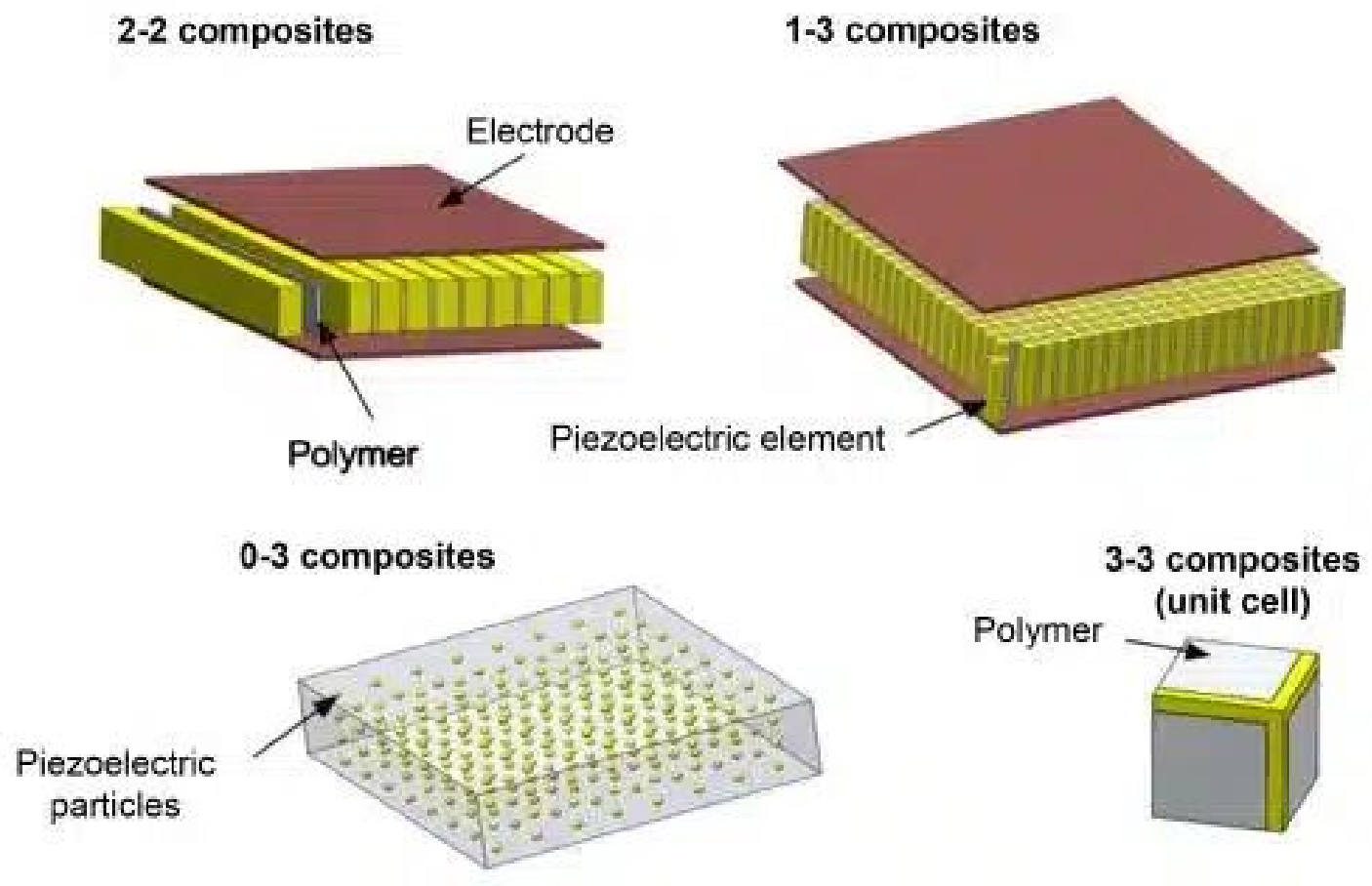

About Piezoelectric Polymer:

- These are polymers that can **generate electric charges** on the surface under pressure/strain thus convert **mechanical energy** into **electrical energy**.
- **Characteristics**
  - These polymers have much **higher piezoelectric stress constants** indicating that they are much better sensors than ceramics.
  - They have **low dielectric constant**, **low elastic stiffness**, and low density, which result in a high voltage sensitivity and low acoustic and mechanical impedance (crucial for medical and underwater applications).
  - Piezoelectric polymeric sensors and actuators offer the advantage of processing flexibility because they are **lightweight, tough, readily manufactured** into large areas, and can be cut and formed into complex shapes.

- Polymers also typically possess a high dielectric breakdown and high operating field strength, which means that they can withstand much **higher driving fields than ceramics.**

Q1: What is Electricity?

It is a physical phenomenon that is caused by the presence and movement of electric charges. It manifests itself in a variety of ways, such as static electricity, electric currents, and electromagnetic fields.
