

Dielectric Electro Active Polymer Artificial Muscles for Robotic Prosthetic Devices

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Abstract:

With the advancement in computing power and processor size, all the technology to control an artificial muscle just like a natural one is available. The problem remaining is the size and weight of artificial muscles, which make it almost impractical to be used as a prosthetic device for those who lost a limb.

Many promising materials are being researched that can be used as light weight, low powered artificial muscle. Such artificial muscles have physical properties similar to the natural ones. Dielectric Electro Active Polymer (D-EAP) as such a material is presented. The scope of this paper will be survey of fabrication techniques and analysis of D-EAP for artificial human arm.