Electric Current Rectifying Device That Is Completely in Liquid State

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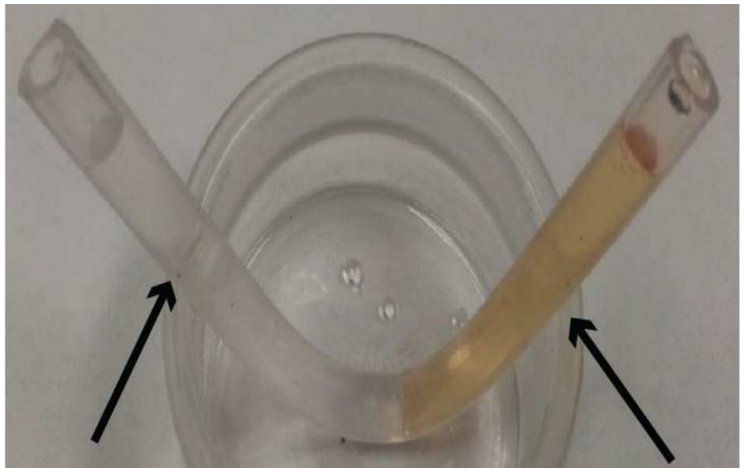
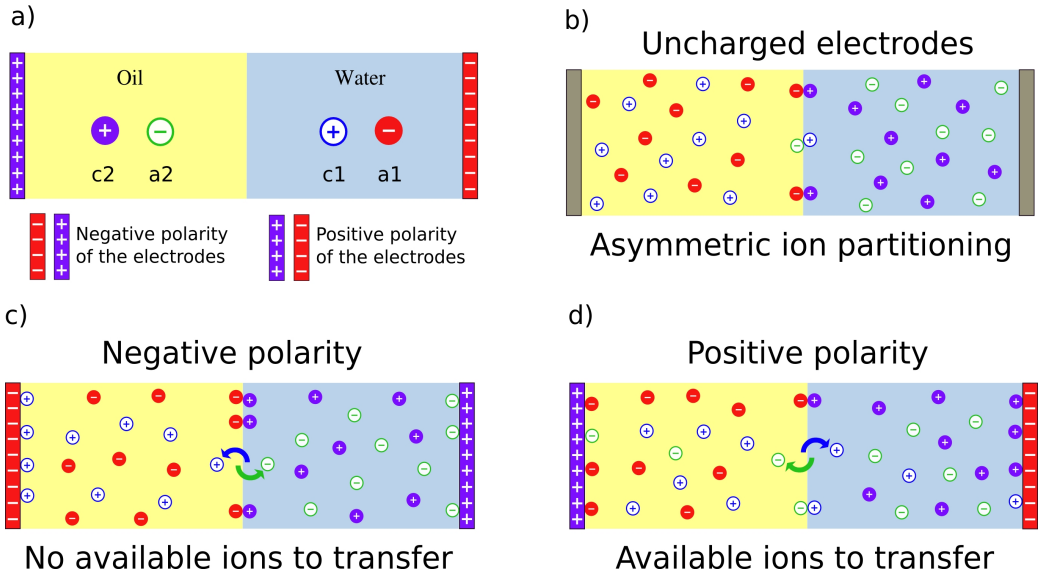
In recent years there has been an increasing interest in the development of electronic devices using non-conventional soft matter materials, as a novel alternative to traditional solid-state electronic devices. Traditional solid-state devices are often fragile and usually are made of non-biocompatible materials. The possibility of producing resilient nano-electronic devices opens a new avenue to develop novel technology.



Liquid 1 **Liquid 2**



We have designed and assembled an electric rectifying device based on an appropriate mixture of electrolytes that is completely in liquid state. The number of electric carriers depends on the polarity or direction of an electric field.

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