

Plagiarism Scan Report

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Intro :

I guess everyone must have watched the terminator movie. In terminator Genesys where a T-1000 terminator does not die even after getting shot at the eye because its artificial cells start regenerating making it nearly impossible to destroy.

On watching this movie, I start Imagining whether this is possible? if yes then how? Well, 1 answer to this question can be an artificial nerve cell.

And what if I say this technology is not that far away. Yes, Sweden researchers have recently built the world's first artificial neuron which is capable of mimicking/performing the function of an organic brain cell and that to including the ability to translate chemical signals into electrical impulses(0,1), through which they communicate to different body cells.

Demonstration of artificial Neuron :

Researchers demonstrated an artificial organic neuron integrating with a living plant and with artificial organic synapse. Both of the synapse and the neuron are made by researchers from the printed organic electrochemical transistors.

Organic semiconductors can conduct both electrons and ions, allowing them to imitate the ion-based method that plants use to generate pulses (action potentials). Even a tiny electric pulse of less than 0.6 V can trigger the plant to produce action potentials, which causes the leaves to close.

The electrical pulses generated from the artificial nerve cell can made the carnivorous Venus flytrap plant to close it's leaves.

Researchers statement :

Simone Fabiano the principal investigator in organic nanoelectronics at Linköping University said that ,they chose the Venus flytrap plant because it allows them to clearly demonstrate how they can steer the biological system with the artificial organic system and get plant to communicate in the same language.

Simone Fabiano agreed that they have discovered that the neuron-synapse link has a special kind of learning behaviour known as Hebbian learning. This synapse stores information, allowing signals to become more effective.

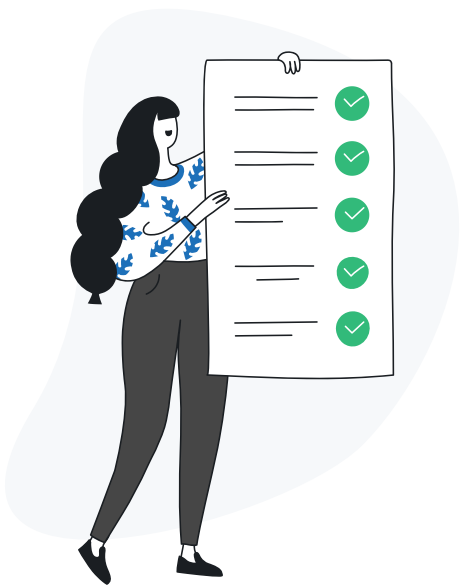
A post-doctoral researcher at the Laboratory of Organic Electronics , Chi-Yuan Yang said that they have created ion-based neurons that are similar to ours and can be linked to biological systems. Organic semiconductors have a number of benefits, including being biocompatible, biodegradable, soft, and formable. They just require a small amount of electricity to function, which is perfectly safe for both plants and vertebrates.

Expected Uses of artificial Neuron :

According to the researchers artificial neuron cells could be employed in delicate human surgeries, implantable devices for treating neurological illnesses, soft intelligent robotics, and to give real skin to robots.

Contributors :

The contributors to this amazing and advance research are : 'Knut and Alice Wallenberg Foundation', the



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