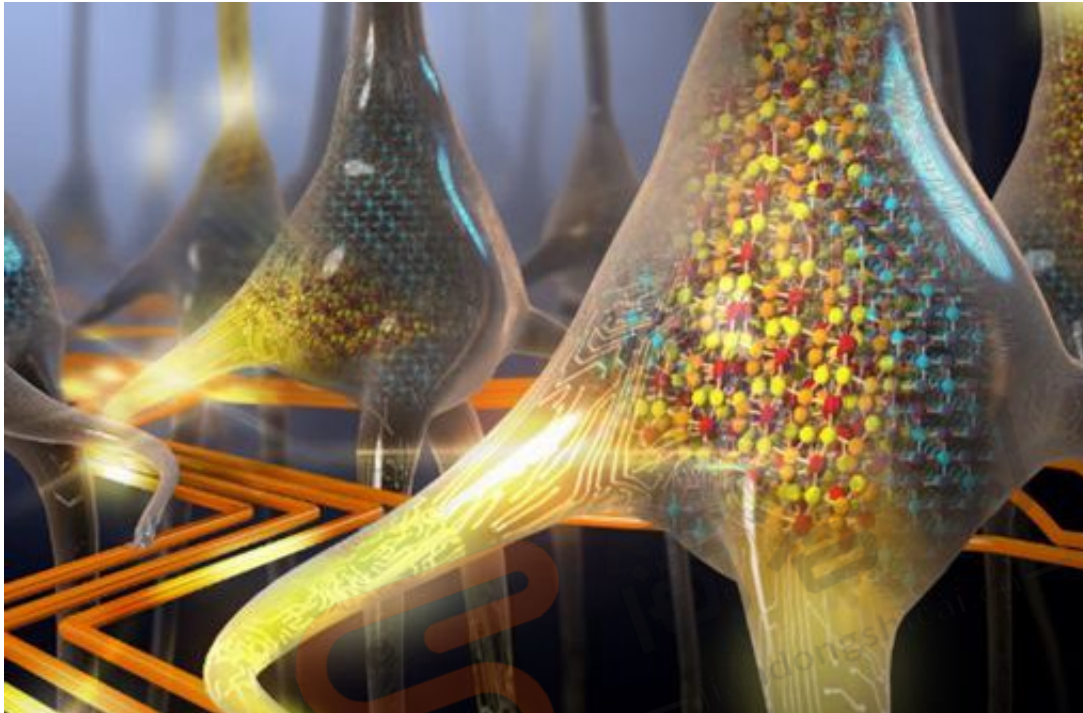


《IBM创造出世界上首个人造神经元》

导读:IBM使用随机相面材料发明世界上首个人造神经元。



For computer scientists, creation of neuromorphic systems — those inspired by and modeled after the way neurons in the human brain are structured — has been a longstanding goal. Now, in a significant step toward the development of neuromorphic technologies, a group of researchers IBM's research laboratory in Zurich have announced that they have built a working, artificial version of a neuron.

??
?IBM??

The invention, described in a paper published in the journal Nature Nanotechnology, consists of a small square of germanium antimony telluride held between two electrodes. Germanium antimony telluride, a common ingredient in optical disks, is what is known as phase-change material. This means it can change its phase from an amorphous insulator to a crystalline conductor when hit with a strong enough electric pulse — thus acting like both, a resistor and capacitor, and mimicking, to a certain extent, the behavior of biological neurons' lipid bilayer membrane.

??
??

“In the published demonstration, the team applied a series of electrical pulses to the artificial neurons, which resulted in the progressive crystallization of the phase-change material, ultimately causing the neuron to fire. In

"???" "???" ??????????????????????????????????????—????????????????????????????
 ??????????????????????????????"IBM????????????????????

???"IBM?????????????????????????"???"???
 ???

[illegible][illegible]