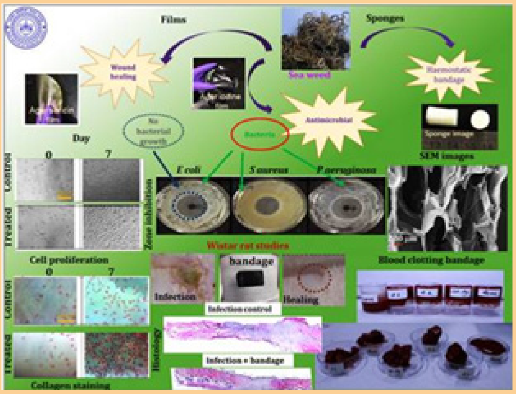
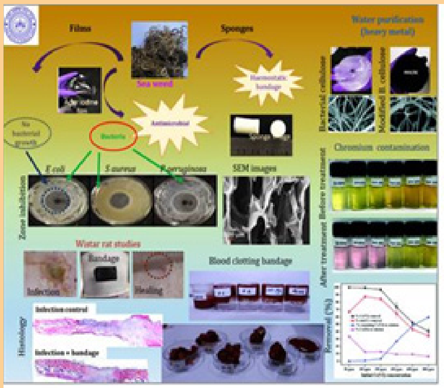
# Advanced Wound Dressing Material





**SCIENTISTS** from the Indian Institute of Technology (IIT), Kanpur, have developed an advanced, biodegradable, non-immunogenic wound dressing material based on agarose (a natural polymer derived from seaweed agar) and by adding several additive molecules like iodine and citric acid. This dressing material will help in the treatment of infected diabetic wounds and patients suffering from chronic wounds. This indigenously developed dressing is cost-effective.

*Source: PIB, Press release*

# New device to Reduce Frequency of Charging Electronic Gadgets

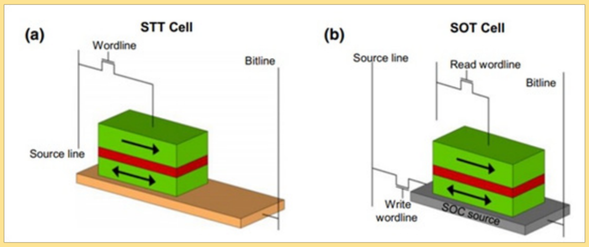



*Figure 1: Spintronics memories*

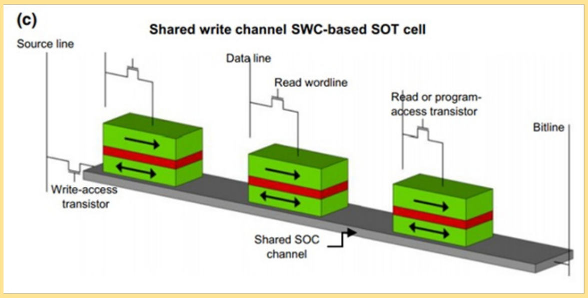
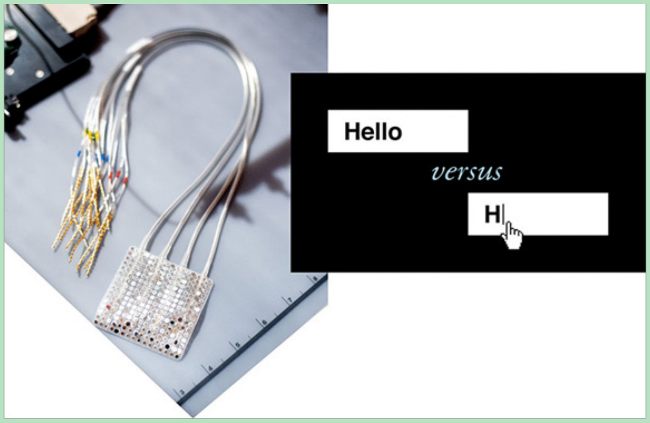



*Figure 2: Shared channel scheme for increasing the area efficiency*

**A** researcher at the Indian Institute of Technology (IIT), Delhi, in collaboration with the National University of Singapore (NUS) has designed a device for high-density magnetic memory. The proposed device may help reduce frequent charging of wireless electronic devices such as mobile phones and other Internet of Things (IoT) based devices. The work was published in *Physical Review Applied* journal."

*Source: IIT Delhi, Press release*

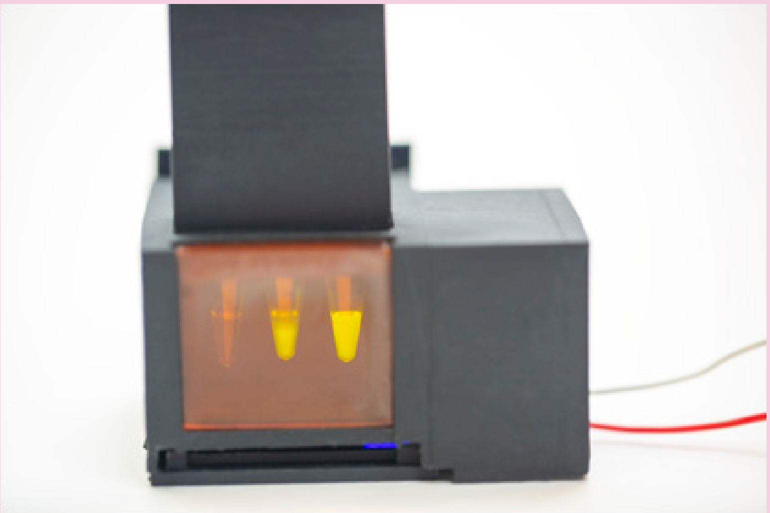
## "Neuroprosthesis" Restores Words to Man with Paralysis




**RESEARCHERS** at UC San Francisco have successfully developed a "speech neuroprosthesis" that allows people with paralysis to communicate even if they are unable to speak on their own. The technology has enabled a man with severe paralysis to communicate in sentences, translating signals from his brain to the vocal tract directly into words that appear as text on a screen. The study was published in the *New England Journal of Medicine.*

*Source: UC San Francisco, Press release*

## miSHERLOCK — A test that detects COVID-19 Variants in Saliva



*A CRISPR-based reaction within the diagnostic device produces a fluorescent signal in response to the presence of SARS-CoV-2 viral RNA in a patient's saliva within an hour. Credit: Wyss Institute at Harvard University*

**SCIENTISTS** from Wyss Institute for Biologically Inspired Engineering, Harvard University, the Massachusetts Institute of Technology (MIT), and several Boston-area hospitals have developed an inexpensive, CRISPR-based diagnostic device, known as minimally instrumented SHERLOCK (miSHERLOCK). The device helps to detect SARS-CoV-2 and its multiple variants using a sample of saliva at home. It gives results that can be read and checked by a smartphone application within an hour. It effectively recognised three different variants of SARS-CoV-2 in tests and can be quickly reconfigured to distinguish extra variations like Delta. The description of the diagnostic device was published in *Science Advances.*

*Source: Wyss Institute at Harvard University*