

The sutures can precisely measure temperature—elevated temperatures indicate infection—and deliver heat to a wound site, which is known to aid healing. John Rogers, professor of materials science and engineering at the University of Illinois at Urbana-Champaign and inventor of the smart sutures, imagines that they could also be laden with devices that provide electrical stimulation to heal wounds. “Ultimately, the most value would be when you can release drugs from them in a programmed way,” he says. The researchers could do that by coating the electronic threads with drug-infused polymers, which would release the chemicals when triggered by heat or an electrical pulse.

The researchers first use chemicals to slice off an ultrathin film of silicon from a silicon wafer. With a rubber stamp, they lift off and transfer the nano-membranes to polymer or silk strips. Then they deposit metal electrodes and wires on top and encapsulate the entire device in an epoxy coating.

They have built two types of temperature sensors on the sutures. One is a silicon diode that shifts its current output with temperature; the other, a platinum nano-membrane resistor, changes its resistance with temperature. The micro-heaters, meanwhile, are simply gold filaments that heat up when current passes through them.

All the materials used in the devices are safe for use in the body, and the biggest challenge was to make the sutures flexible. Silicon is brittle, so making the nano-membranes as thin as possible and laying them out in a winding pattern was key for elasticity. Placing the silicon halfway between the top epoxy and bottom polymer surfaces of the suture is also crucial.

Therefore, it is safe to assume that Smart sutures may play a crucial role in the headway of Medical Technology.

Today's News

How can investment and lending super-charge fintech world?

The Indian start-up galaxy is making a mark around the world, after emerging as a comfortable home to the third-largest set of Unicorns globally. E-commerce along with Fintech platforms have been spearheading this progression. India's financial technology ecosystem has experienced unique growth as it counts on strategic partnerships along with the developing digital public infrastructure. Supported by increasing connectivity and digital public infrastructure like the India API stack fintech platforms are now transcending other tranches like insurance, investments and lending.

Fintech Beyond Payment Gateways - With manageable communication and transparency in transactions coupled with the pandemic accelerated digital growth innovations triggered a paradigm shift in the fintech marketplace. Fintechs are no longer payment gateways, they are now offering a whole range of services in one mobile application from opening a bank account to paying insurance at one click and a 2-minute onboarding process.

Source – CNBC

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Infosys Finacle unveils digital banking software for urban cooperative banks in India

Infosys Finacle, part of Infosys' wholly owned subsidiary EdgeVerve Systems, has announced its digital banking software-as-a-service offering for urban cooperative banks in India.

The platform has already seen adoption by three urban cooperative banks in India—Vidya Sahakari Bank, Urban Cooperative Bank, Bareilly, and Zoroastrian Cooperative Bank, according to an Infosys statement. The offering combines the functional spread of the Finacle solution suite, with complementary solutions and capabilities from Finacle business partners Saraswat Infotech Pvt. Ltd and Best of Breed Software Solutions.

Source – The Economic Times

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HDFC Bank to move to new digital bank IT platform

HDFC Bank on Thursday unveiled its longer-term digital banking plans. These involve building a new digital bank, rather than limit the solution to scaling up systems, and increased monitoring to address glitches. Earlier, HDFC Bank had said that it had drawn up short-, medium-, and long-term action plans to address digital banking outages for which it was pulled up by the RBI.

The bank is moving from traditional core banking to a new architecture that involves 'hollowing out' the core.

Source – The Times of India

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IndusInd Bank Launches Digital Lending Platform 'IndusEasyCredit': Check Benefits

Private lender IndusInd Bank announced the launch of a new digital lending platform 'IndusEasyCredit' on Thursday, June 17, in a bid to enable customers to meet their financial needs from their homes. According to a statement shared by IndusInd Bank, the digital platform will allow both existing and non-IndusInd Bank customers to avail personal loans or credit cards on a single platform through a comprehensive digital framework and a paperless manner.

The digital lending platform - 'IndusEasyCredit', is the first-of-its-kind proposition, as it offers a fully digital end-to-end process that leverages the power of the country's public digital infrastructure - 'Indiastack' to provide personal loans and credit cards in a presence less, paperless, and cashless manner. According to the statement, the stack leverages more than 35 interfaces to digitally verify employment information, KYC, and analyse bank statements. The stack also leverages advanced analytics and machine learning-based models to assess the eligibility in real-time.

Source – NDTV

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RBL Bank accelerates Digital Banking

The ongoing pandemic in India has led to a sharp increase in digital banking, and consequently, raised the expectations of consumers who want instant and personalised services. A large number of people staying at home are turning to digital channels, both online and mobile, to fulfil most of their banking requirements. As a result, traditional visits to branches and face-to-face interactions with bank staff have reduced.

Banks in India had already been making a push for cashless and contactless transactions before Covid-19. Since March 2020, however, banks have expanded their digital footprints across the banking space. They have been designing and deploying smarter and more innovative products and solutions through apps and websites, and meeting the growing consumer demand. Banks are using digital channels to offer a range of services, including onboarding new customers through video KYC, deposits and withdrawals, outward remittances, payment collections etc..

Source – Equity Bulls

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PhonePe unveils India's first Wallet with Auto Top-Up

Digital payments company PhonePe has launched India's first Wallet Auto Top-up feature using UPI e-mandates for its customers. This feature will help the PhonePe customers in setting up a UPI e-mandate once, after which PhonePe will automatically top up their wallet balance when it drops below a minimum level. This allows PhonePe customers to make multiple payments using their Wallet, without having to top up their wallet balance manually each time, saving a lot of time and effort.

Here are some benefits of using Wallet Auto Top-up: PhonePe Wallet is automatically topped up when the balance drops below a minimum amount. Much higher transaction success rate since users don't have to load their wallet each time the balance drops to zero. Steps promoting E-mandates are significant progress and will help leapfrog payments to the next level opening up a large number of use cases across businesses.

Source – Elets Online

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Standard Chartered launches digital solution to help businesses

Standard Chartered Bank has announced the launch of Softex solution - aimed at supporting clients in their software export processes that run through the bank's digital platform Straight2Bank.

The aim of Softex solution is to simplify the filing process for software exporters and simultaneously ensure regulatory compliance. The process begins with Software Technology Parks of India (STPI) filing and concludes with the Export Data Processing & Monitoring System (EDPMS) reconciliation with the bank and collection of export proceeds thereby automating the end to end process and reducing the manual touch points.

Source – The Economic Times

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BharatPe FY21 revenue jumps over six times to Rs 700 cr, targets to double it in FY22

Financial technology firm BharatPe has seen its revenue and transaction volume jump manifold in the financial year 2020-21, as the pandemic has forced people and businesses adopt digital transactions and fund-starved small businesses seeking more credit avenues like this start-up.

The company gives small-ticket fully unsecured loans averaging at Rs 75,000 to its merchant members.

Source – Outlook India

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